

JOINT VENTURES AMONG  
HEALTH CARE PROVIDERS IN FLORIDA

VOLUME I

JANUARY 1991

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STATE OF FLORIDA  
HEALTH CARE  
COST  
CONTAINMENT  
BOARD

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**STATE OF FLORIDA  
HEALTH CARE COST CONTAINMENT BOARD**

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**CONDUCTED BY THE STATE OF FLORIDA  
HEALTH CARE COST CONTAINMENT BOARD  
IN CONJUNCTION WITH  
THE DEPARTMENT OF ECONOMICS AND  
THE DEPARTMENT OF FINANCE  
FLORIDA STATE UNIVERSITY**

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## PREFACE

The Legislature, under Chapter 89-354, Section 6, Laws of Florida, directed the Health Care Cost Containment Board (Board) to conduct a special study of ownership or compensation arrangements, i.e., "Joint Ventures", between persons providing health care. Persons are defined to include real persons as well as most all business associations. The specific study requirements under the enabling legislation include:

- (1) Identification of relationships between persons who provide health care and make referrals for which payment may be made.
- (2) Identification of the scope of such arrangements and the means by which persons who provide health care refer patients under such arrangements.
- (3) Analysis of the potential of such ownership or compensation to influence referrals by persons who provide health care where inappropriate utilization of health care services may occur.
- (4) Evaluation of the impact of such arrangements on access of health care, quality of health care, and costs to the health care system.
- (5) Recommendations as may be appropriate on the effectiveness of disclosure requirements contained in s. 455.25, Florida Statutes.
- (6) Recommendations to strengthen the enforcement of the anti-kickback authority in Florida health care statutes, including, but not limited to, the need for an interagency system of coordination, consumer education, and regulation of persons providing health care.
- (7) Recommendations for regulation by the state on an interagency system of coordination to regulate the impact of joint ventures on costs of health care, access to health care, and quality of health care, including, but not limited to, the procedural mechanisms for patient referrals between persons providing health care.

The study program, begun in the Fall of 1989, was assisted by a Technical Advisory Panel (TAP) for the entire course of the study. The TAP, established in accordance with legislative provisions, is comprised of representatives from physicians, the hospital industry, health care purchasers, including the insurance industry, state agencies responsible for the enforcement of anti-kickback authority, and other appropriate industry groups. Appendix E lists the TAP membership as of this date. Researchers at the Florida State University (FSU), under an intergovernmental services contract with the Board, provided technical assistance necessary to meet the study requirements. The researchers responsible for the study are Jean M. Mitchell, Ph.D., FSU Department of Economics and Elton Scott, Ph.D., FSU Department of Finance. Suzanne Parker, Ph.D., FSU Survey Research Lab, supervised the data collection process. The interviews of industry leaders and regulators were conducted by Melissa Ahern, Ph.D., Florida International University.

The Board is required to complete by February 1, 1991, the final study report containing "specific data-based" conclusions on the type of joint ventures and recommendations for regulations concerning the enforcement of anti-kickback authority. The recommendations for regulations must be applicable to both governmental and nongovernmental reimbursement of health care services. The Board is required to provide copies of the final report to the Legislature and Governor.

This report represents Volume I of the three phase study. This volume contains a literature review, results of interviews of health care industry leaders, and the results of health care facility surveys on the scope and nature of joint venture arrangements. Volume II will report on the impact of joint ventures on access, utilization, and costs to the health care system. Volume III will focus on the adequacy of the existing disclosure requirements and anti-kickback authority in the Florida Health Care Statutes. Volume III will also evaluate alternative policy recommendations.

Volume I is organized as follows. The first section provides an overview of the issue, summarizes existing state and federal initiatives pertaining to joint ventures among health care providers and reviews the relevant literature on this subject. The data collection procedures are described in section two. The study methodology is summarized in section three. The results of the data analysis on the characteristics of owners and the scope of joint venture arrangements are reported in section four. Finally, four appendices provide detailed information on the existing literature on joint ventures, existing federal and state regulation, current Florida law, and the interviews with industry leaders.

## EXECUTIVE SUMMARY

This report summarizes results from the first phase of the special study on the impact of joint ventures among health care providers in Florida as mandated in Chapter 89-354, Section 6, Laws of Florida. The report is the first of three volumes; it provides a review of literature on joint ventures amongst health care providers and describes results on the scope and nature of joint venture ownership arrangements amongst Florida health care providers. The second volume will provide results on the impact of joint ventures on utilization, costs, and quality of health care services as well as on access to health care services. The third volume will report the effectiveness of current regulation and provide study recommendations.

In order to collect the pertinent data, questionnaires were mailed to all Florida licensed ambulatory surgical facilities, clinical laboratories, home health agencies, acute care hospitals, nursing homes, psychiatric hospitals, and radiation therapy centers. Additionally, questionnaires were sent to all diagnostic imaging centers, durable medical equipment suppliers, and physical therapy/rehabilitation centers that could be identified from third-party payer records and from major telephone directories. The questionnaires required these entities to identify owners who are health providers in Florida and to provide information for their 1989 fiscal year regarding access, utilization and costs as well as list charges for selected common services. A second questionnaire has been developed to obtain information on physician practices. These questionnaires will be mailed to a sample of 500 physicians who were identified as owners of health care entities and to a matched sample of 500 physicians who were not so identified. Results of these physician surveys will be used to compare utilization, costs, and access for patients of physicians involved in joint ventures to patients of comparable physicians who are not involved in joint ventures.

The effects of joint ventures on the costs, access and quality of health services, as well as the regulatory aspects of joint ventures were explored through open-ended interviews with a select panel of experts in the health care industry. This panel included physicians and hospital representatives from Florida, industry representatives as well as policy and research experts. The details of the interviews with industry leaders are reported in Appendix D.

On the question of costs, panelists generally agreed that joint ventures result in higher health care costs due primarily to the overutilization of services. Concerning the issue of access to health care, it was the consensus of the panelists that joint ventures reduce access, especially for the poor. With

respect to quality, some panelists maintain that joint ventures result in overutilization of services which in turn adversely affects quality. On the question of the regulation of joint ventures, the panelists advocated a range of alternative approaches.

Appendix A contains a detailed review of the relevant literature. This literature review reveals that empirical analyses of joint venture arrangements among health care providers are based on limited data sources. Much of the published information on joint ventures in the health care sector report on fraud and abuse associated with specific health care providers. The limited information and the lack of empirical investigations of joint ventures for all health care providers, may understate the scope and impact of these arrangements. This limitation hampers the development of regulatory policies for these arrangements. Regulation based on such limited evidence may be inadequate to eliminate fraud and abuse, excessive utilization or charges, and anticompetitive arrangements. Nevertheless, regulations enacted on the basis of anecdotal evidence may be too restrictive and as a result may unnecessarily constrain some providers.

Results from a study by the U.S. Department of Health and Human Services Office of the Inspector General (OIG), is of particular importance for this investigation. To date, the OIG study is the most comprehensive study of the effects of joint ventures; these results show that, on average, physicians involved in joint ventures order more tests or services for their Medicare patients and that their Medicare patients were charged more for such services. The study reports some state-by-state data. Of the eight states covered by the study, Florida had the highest percentage of physicians involved in joint ventures. Medicare patients of physician owners in Florida received 40 percent more lab tests, 12 percent more diagnostic imaging tests, and utilized 16 percent more durable medical equipment than the general population of Florida Medicare beneficiaries. All of these utilization differences were statistically significant.

This review further reveals that most of the literature on joint ventures in the health care industry debates the pros and cons of these arrangements. Some evidence on joint ventures tends to be anecdotal or limited by the scope of the sample used to reach the conclusions. Empirical results on physician responses to financial incentives where they own equipment or benefit from profits generated by referrals or tests clearly show that, on average, these physicians have substantially higher utilization rates for such services and that they also charge more per service. Currently, the study by the federal Office of the Inspector General represents the most comprehensive empirical study of the issue. Nevertheless, the conclusions drawn from these results may understate the extent of overutilization and

higher charges because the study did not use a true control group. The current study will provide a more complete picture; the study will use comprehensive data from an extensive range of providers.

Questionnaires were sent to 3,075 health care entities; as of this date completed responses have been received from 75% (2,319) of these entities. Response rates vary significantly by entity type. These rates range from 78% to 96% for the eight groups of licensed entities, but are less than 60% for the three nonlicensed groups (diagnostic imaging centers, durable medical equipment suppliers, and physical therapy/rehabilitation centers). Low response rates can be largely attributed to nonresponding, nonlicensed entities in Broward and Dade Counties. Further inquiries will indicate whether the nonresponding entities are more or less likely to be joint ventured.

Investigations into the complex structures that have evolved to interlock health care provider owners reveal that it is extremely difficult to identify the investing health care providers. Some of these arrangements involve multiple layers of entities, some of which are not-for-profit corporations, with other entities being for-profit corporations and limited partnerships. The situation is further complicated because the physician owners of the for-profit entities also serve on the board of directors of the related not-for-profit joint venture partner. Two examples of such complex arrangements are presented in Exhibits A and B.

Of the completed responses received to date, more than 40% of the responding entities (more than 938 of the 2,319 respondents) have joint venture ownership arrangements. Over 40 percent of these joint ventured entities have only nonphysician health care professionals as health care provider owners.

Over 40 percent of responding joint ventured entities have physicians as owners and the remaining responding joint ventured entities have other health care entities as owners. The reported proportions of entities with physicians as owners understate the actual proportion of physician-owned entities because some owners that are identified as health care entities are physician professional associations or corporations with physician stockholders. Further, parent corporations of wholly owned subsidiaries were not classified as health care providers because the ownership information is not complete. Yet some of these parent corporations are essentially holding companies that are owned wholly or partially by Florida physicians and by nonphysician health care providers (see Exhibit B in the report).

The 938 responding joint ventured entities identified 6,586 individual health care provider owners. These individual owners include 5,166 (78.4%) physician owners (this includes 175

immediate family members of physician), 440 (6.7%) health care entity owners (including physician professional associations), 350 (5.3%) health care administrator owners, with the remaining 630 health care provider owners being licensed physical therapists (158 or 2.4%), nurses (116 or 1.8%), and other health care professionals.

The 5,166 physician owners were further analyzed to determine the kinds of entities that physicians have chosen to invest in. The investments of choice for most of these physicians are diagnostic imaging centers (2,258 or 43.7%), clinical laboratories (871 or 16.9%), ambulatory surgical facilities (601 or 11.6%), durable medical equipment suppliers (386 or 7.5%), and physical therapy/rehabilitation centers (366 or 7.1%). The remaining 684 (13.2%) have chosen various other entity types as investments. Nearly 90 percent of these physician owners were identified as being in a position to make referrals to the entities that they have chosen as investments.

The physician owners were further analyzed to determine which specialty groups are represented by these physician owners. These physician owners were predominantly in four specialty categories: internal medicine specialties (1,839 or 35.6%), surgery (918 or 17.8%), general practice (623 or 12.1%), and obstetrics/gynecology (379 or 7.3%). These physician specialists have invested in entities that they would typically refer patients to for diagnostic tests (diagnostic imaging centers and clinical laboratories) or they have invested in ambulatory surgical facilities where their patients might have surgery. Further, specialists investing in other entity types tended to be in specialties that could refer patients to the entities.

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## I. INTRODUCTION

Significant policy changes have occurred in the health care sector during the last decade. Among the most important changes are the Medicare prospective payment system for hospital inpatient services, intensified competition and the emergence of alternative delivery systems, physician payment reforms, a rapidly growing elderly population, and the development of new technologies which can be delivered in non-hospital settings. These changes are also the primary reasons why physician entrepreneurialism has become increasingly prevalent in recent years. Physicians have invested in and/or receive compensation from health care entities to which they make referrals. Physicians have established such financial arrangements, commonly referred to as "joint ventures" with hospitals, diagnostic labs, radiologic imaging centers, walk-in clinics, ambulatory surgical centers, home health agencies, physical therapy centers, lithotripsy centers, dialysis units, substance abuse treatment centers and other facilities providing health care services or equipment.

Physician ownership of facilities to which they make referrals has the potential for conflicts of interest, higher costs and excessive utilization of services. Recently, this issue has attracted considerable attention in the medical literature, the media and from federal policymakers. As part of the Reconciliation Act of 1989, Congress restricted such arrangements between physicians and clinical labs. This new law, originally introduced by Pete Stark as the "Ethics in Patient Referrals Act", becomes effective January 1, 1992. The law prohibits a physician from referring Medicare patients to clinical laboratories in which the physician (or an immediate family member) has ownership or from which the physician receives compensation tied to patient referrals.

### Statement of the Issue

The ethics of physician involvement in joint ventures with health care entities to which they make referrals has been the subject of considerable debate (Dobson, Todd, and Manuel, 1986). Under the ethical standards of the profession, physicians making referrals are expected to place the medical needs of their patients above their own financial interests. Since joint ventures are now widespread, critics maintain that the nature of these entrepreneurial relationships between health care providers may generate conflicts of interest. In particular, critics question the effect of joint ventures on medical decision making regarding utilization, costs, access, and the quality of health care services.

The potential conflict of interest can be illustrated by the case of an investor-owned ambulatory surgical center which faces intense competition for patients (Relman, 1985). To effectively compete, these centers frequently offer ownership interests to surgeons and other physicians that perform surgery. While each physician's profit share is not directly determined by the number of referrals he or she sends to this facility, profits clearly depend on the total number of referrals.

Most freestanding diagnostic imaging centers are joint ventures (Relman, 1985). In this situation, hospitals, radiologists and referring physicians benefit from having an investment interest in this type of facility. Referring physicians may send their patients to the imaging center for a computerized axial tomography (CAT) or magnetic resonance imaging (MRI) scan, while the radiologist at the center may recommend followup testing. These examples indicate how the practice of self-referrals could foster conflicts of interest in the medical profession.

On the other hand, proponents of joint ventures maintain that these arrangements are necessary adjustments to the major changes that have occurred in the health care sector during the last decade. Potential benefits of joint ventures include economies of scale and scope, increased ability to compete, a more varied demographic mix of patients, and improved access to capital financing, and diversification of project risks (Rosenfeld, 1984). For example, hospital-physician joint ventures may enable both hospitals and physicians to attract more private pay patients and thereby lower the average costs of treating large numbers of Medicare patients. Equity capital raised as a consequence of joint ventures may enable hospitals to avoid issuing long term debt when financing capital projects. For physicians and other providers, these arrangements may also reduce the risks of undertaking such capital investment projects alone.

News and magazine articles have focused on joint venture arrangements ranging from physician investments in health care facilities to financial arrangements between hospitals and physicians for the provision of home health services. Articles from the Wall Street Journal, Money, as well as several Florida newspapers, point out that joint ventures have added to the cost of health care. The increase in cost is attributed to higher charges and higher utilization of services. These articles do not comment or provide any evidence regarding the impact of joint ventures on quality. A number of articles note, however, that when a provider makes a referral to a joint-ventured facility, the quality of services is not considered by consumers.

These articles have also portrayed joint ventures as mechanisms to reduce the risks associated with capital intensive

projects. These arrangements are also believed to yield economies of scale in production. The articles have further suggested that health care providers may enter joint ventures as a strategy to remain competitive. In addition, proponents of joint ventures are quoted in these articles as suggesting that it is most natural for physicians to invest in health care facilities since they are most knowledgeable about the health care industry.

The effects of joint ventures on the costs, access and quality of health services, as well as the regulatory aspects of joint ventures were explored through open-ended interviews with a select panel of experts in the health care industry. This panel included physicians and hospital representatives from Florida, industry representatives and policy and research experts. The details of the interviews with industry leaders are reported in Appendix D.

On the question of costs, panelists generally agreed that joint ventures result in higher health care costs due primarily to the overutilization of services. One panelist indicated, however, that joint ventures based on capitated payment arrangements (such as joint ventures among health maintenance organizations) do not induce overutilization. Instead, such arrangements induce cost-effective care because their payment arrangement is capitated, whereas most joint ventures are established under the fee-for-service payment system.

Concerning the issue of access to health care, it was the consensus of the panelists that joint ventures reduce access, especially for the poor. Decreased access occurs because higher utilization results in higher costs for services. Some panelists contend, however, that in rural areas joint ventures could improve access if providers invested in costly technology currently not available in these areas. With respect to quality, some panelists maintain that joint ventures result in overutilization of services which in turn adversely affects quality. On the question of the regulation of joint ventures, the panelists advocated a range of alternative approaches. These options will be explored further in Volume III of this study.

Appendix A contains a detailed review of the relevant literature. This review reveals that empirical analyses of joint venture arrangements among health care providers are based on limited data sources. Much of the published information on joint ventures in the health care sector report on fraud and abuse associated with specific health care providers. The limited information and the lack of empirical investigations of joint ventures for all health care providers, may understate the scope and impact of these arrangements. This limitation hampers the development of regulatory policies for these arrangements. Regulation based on such limited evidence may be inadequate to

eliminate fraud and abuse, excessive utilization or charges, and anticompetitive arrangements. Nevertheless, regulations enacted on the basis of anecdotal or insufficient evidence may be too restrictive and as a consequence may unnecessarily constrain some providers.

Articles in trade publications can be grouped into two general categories. Many articles focus on the profit opportunities that await health care providers who enter into joint venture arrangements. These articles point to abnormal profit opportunities as well as reductions in business risk for health care providers who are in joint ventures. Such articles point out that joint ventures allow providers to obtain referrals and control markets in a manner that is not available without joint venture arrangements. Other more recent articles in some trade publications have pointed out the anticompetitive effects of joint ventures in the health care industry.

An exhaustive review of empirical studies of the effects of financial incentives reveals that, on average, providers respond to financial incentives in ways that increase the providers' compensation. Hospitals sponsoring joint ventures with physicians were found to increase admissions; these arrangements also lead to higher utilization and revenues from laboratories and radiology units. Physicians in fee-for-service arrangements were found to order greater numbers of tests and to order more expensive, high-profit tests. Physicians in walk-in clinics were found, on average, to respond to a change in compensation method, which provided bonuses based on gross revenues, by increasing both the number of visits as well as the numbers of lab tests and x-rays per patient. This higher utilization of services resulted in charges that were almost 20% higher per month.

The New England Journal of Medicine, in December 1990, published a study that compared frequencies of, and charges for, imaging procedures ordered by a sample of over 6,400 physicians. Physicians with their own imaging equipment located in their offices were compared to physicians who referred their patients to radiologists for imaging procedures. The physicians who owned imaging equipment, on average, ordered from four to 4.5 times more procedures. The charges for these procedures were, on average, from 4.5 to 7.5 times more per procedure than fees charged per procedure for patients of radiologist-referring physicians. These findings, along with the results cited above, show that physicians who have financial interests at stake respond by increasing utilization and charges to their patients.

Results from a study by the U.S. Office of the Inspector General (OIG) is of particular importance for this study. To date, the OIG study is the most comprehensive study of the effects of joint ventures; these results show that, on average, physicians involved in joint ventures order more tests or

services for their Medicare patients and that their Medicare patients were charged more for such services. The study reports some state-by-state data. Of the eight states covered by the study, Florida had the highest percentage of physicians involved in joint ventures. Medicare patients of physician owners in Florida received 40 percent more lab tests, 12 percent more diagnostic imaging tests, and utilized 16 percent more durable medical equipment than the general population of Medicare beneficiaries. All of these utilization differences were statistically significant.

This review reveals that most of the literature on joint ventures in the health care industry debates the pros and cons of these arrangements. Some evidence on joint ventures tends to be anecdotal or limited by the scope of the sample used to reach the conclusions. Empirical results on physician responses to financial incentives where they own equipment or benefit from profits generated by referrals or tests clearly show that, on average, these physicians have substantially higher utilization rates for such services and that they also charge more per service. Currently, the study by the federal Office of the Inspector General represents the most comprehensive empirical study of the issue. Nevertheless, the conclusions drawn from these results may understate the extent of overutilization and higher charges because the study did not use a true control group. The current study will provide a more complete picture; the study will use comprehensive data from an extensive range of providers.

## II. Survey Design and Data Collection Procedures

Currently, information regarding the ownership of entities which provide health care services in Florida is not reported to the state. Thus, questionnaires were developed to gather the data on ownership, access, quality, utilization and the costs of health care services in Florida. The questionnaires were developed by the researchers with the assistance of the Survey Research Laboratory at Florida State University, the Board staff and the Technical Advisory Panel. The resulting survey forms were subsequently approved by the Board. The surveys were designed to obtain data from the provider populations where joint venture arrangements are likely to exist. The survey form requested each facility to identify owners who are health care professionals, owners who are immediate family members of health care professionals, and owners who are health care entities (including professional associations). The questionnaire further elicited information on the type of services provided, utilization, list charges for procedures, staffing, and expenses.

In establishing the types of entities to be surveyed, the level of funding for the study eliminated consideration of some types of health care providers where joint venture arrangements are likely to exist. Other factors such as the number of facilities and the type of services provided also influenced the decision to exclude some health care entities from the populations ultimately surveyed. The provider groups considered but excluded include pharmacies, diet centers, substance abuse treatment centers, adult congregate living facilities, lithotripsy centers, dialysis centers, orthotics/prosthetics businesses and home infusion therapy centers which are not affiliated with a home health agency. Indeed, a study examining the ownership of these entity types should provide further insights as to the scope and nature of these arrangements. The types of facilities surveyed include acute care hospitals, specialty hospitals, home health agencies, nursing homes, ambulatory surgical centers, clinical laboratories, diagnostic imaging centers, radiation therapy centers, physical therapy/rehabilitation centers, durable medical equipment suppliers, and mental health treatment centers.

Mailing lists were obtained from the Office of Licensure and Certification at the Department of Health and Rehabilitative Services for provider groups which are licensed by the state. Licensed facilities include: hospitals, nursing homes, home health agencies, ambulatory surgical centers, clinical laboratories, rehabilitation centers, and mental health treatment centers. The list of freestanding radiation therapy centers was obtained from the Bureau of Radiation Control.

Mailing lists for durable medical equipment suppliers, physical therapy centers, and diagnostic imaging centers were constructed from other sources because these facilities are not licensed by the State of Florida. The mailing list for diagnostic imaging centers was developed from two sources: 1) claims submitted by health care providers to Blue Cross-Blue Shield for imaging procedures, ultrasonography, nuclear medicine, and radiography performed (either the global fee or the technical charge for the procedure); and 2) providers who billed the Medicaid program for CAT scans performed during 1989 (either the global fee or the technical component). The mailing list for durable medical equipment was also constructed from claims submitted to the Medicaid program as well as Blue Cross-Blue Shield. The names and mailing addresses of physical therapy centers were tabulated from the facilities listed under "Physical Therapy/Rehabilitation Services" in the yellow pages of all major telephone directories in the state.

The survey process involved three mailings staged over a three-month period. The first request was addressed to the Chief Executive Officer of each entity. The cover letter stated that this survey is part of a study mandated by the Legislature under Chapter 89-354, Section 6, Laws of Florida, and that all facilities are required to comply. The initial survey was mailed to each facility over a two week period beginning the 15th of August 1990. The entities were requested to return a completed survey within four weeks from receipt of the questionnaire.

A second survey form was mailed to all entities whose completed responses had not been received within six weeks from the date of the initial mailing. The cover letter in this followup stated that this was the second request for information. This initial followup letter further indicated that the completed survey should be returned no later than ten days after receipt of the second questionnaire packet.

A third survey form was mailed to all entities whose responses had not been received within three weeks of the date of the second mailing. The cover letter in this second followup mailing stated that this was the third request for information. This second followup letter informed the Chief Executive Officer that the completed survey form should be returned no later than one week after receipt of the third questionnaire packet.

### III. Methods of Analysis

It is important to emphasize that the results presented in this report are preliminary as the data are incomplete. This point is reiterated throughout the interpretation and discussion of the results. The analysis of the data begins with a report on the number of entities surveyed in each group and the corresponding response rates. These statistics are also reported by geographic region to identify if the nonrespondents are located in certain areas of the state. The four geographic regions are: NORTH FLORIDA (HRS districts 1, 2, 3, and 4), WESTERN PENINSULA (HRS districts 5, 6, and 8); CENTRAL & EASTERN PENINSULA (HRS districts 7 and 9); and SOUTHEAST PENINSULA (HRS districts 10 and 11).

These response rates are important for at least two reasons. First, the reliability and implications of the data are determined by the proportion of completed responses. Low response rates limit the conclusions and generalizations that can be drawn regarding the prevalence and nature of joint ventures for each entity type. Second, it is unclear as to whether nonresponding entities are more or less likely to be involved in joint ventures. Thus, one must consider the response rates when interpreting the data; ignoring these response rates may lead one to draw erroneous conclusions regarding the prevalence, scope and nature of joint ventures among health care providers in Florida.

Descriptive statistics are employed to evaluate the scope and nature of joint ventures among health care providers. Outcomes on ownership data are categorized and summarized in tabular form. Variables which may be classified into a relatively limited number of categories are reported in frequency distribution tables. After examining the distribution of these discrete variables, sets of relationships among two or more of these variables are reported. Contingency table analysis (crosstabulation) is used to evaluate the statistical significance of the relationships among the variables.

The analysis begins by examining the composition of owners who are either health care professionals or health care entities. Throughout the analysis, health care professional owners include those individuals who have one or more immediate family members with an ownership interest in one or more of the health care facilities surveyed. Following this initial description of the data, the characteristics of physician owners are examined more closely. First, the frequency distribution of physician owners is reported by each entity type. These statistics indicate the facility types physicians are most likely to invest in. The analysis then proceeds to identify the specialty mix of physician investors. The frequency distribution of all physician owners identified thus far from the facility surveys is reported

according to the following major specialty classifications: general practice, obstetrics/gynecology, internal medicine, surgery, pediatrics, psychiatry, neurology, radiology, oncology, pathology, anesthesiology, ophthalmology, podiatry, chiropractics, dentistry and other. The specialty mix of physician investors is also reported by each entity type.

The next stage of the analysis reports for each entity type preliminary estimates identifying the scope of ownership arrangements that have been established. The possibilities include: 1) PHYSICIAN OWNED -- this category identifies the number of facilities owned either by physicians only or by physicians in conjunction with immediate family members, other health care professionals, and/or health care entities; 2) NONPHYSICIAN HEALTH CARE PROFESSIONAL -- this category identifies the number of facilities owned by one or more nonphysician health care professionals and/or their immediate family members; 3) HEALTH CARE ENTITY -- this category identifies the number of facilities owned by health care entities, including physician professional associations; 4) ENTITY & PROFESSIONAL -- this category identifies the number of facilities jointly owned by health care entities and nonphysician health care professionals; 5) SUBSIDIARIES -- this category identifies the number of facilities that are wholly owned subsidiaries of a parent organization; and 6) NOT AVAILABLE -- this category identifies the number of facilities which are owned by nonhealth care professionals as well as those for which ownership information is incomplete.

#### IV. Empirical Results

##### A. Survey Response Rates

Surveys were mailed to 4,150 health care providers located in the state of Florida. Throughout the data collection phase of the project, health care entities on the initial mailing lists were classified as "return to sender" or "not applicable". The majority of the "return to sender" and "not applicable" entities were concentrated in three nonlicensed provider groups: durable medical equipment, diagnostic imaging facilities, and physical therapy/rehabilitation centers. Examples of specific problems are discussed in turn.

First, many of the durable medical equipment surveys were labelled "return to sender" due to either a change of address or because the business was no longer operational. In addition, other entities which received the survey form for durable medical equipment suppliers were orthotics-prosthetics businesses. These entities specialize in the construction of artificial limbs and braces and therefore are not comparable to general durable medical equipment suppliers. Hence, these entities were deemed "not applicable".

Second, many of the entities on the initial diagnostic imaging mailing list were classified as "not applicable" because they are physicians' offices. This situation arose because many physician group practice associations operate under an alternative name which appears to be a freestanding facility where x-rays and other imaging procedures are performed. In particular, many of the ineligibles were obstetrical-gynecological physician group practices that use ultrasound equipment in the office. A similar situation occurred with cardiology physician group practices that have EKG and other stress test equipment in the office. Other imaging facilities were classified as "not applicable" because they were billing offices.

Similar difficulties occurred in surveying physical therapy centers. Some orthopedists employ physical therapists to render physical therapy services within the physician's office. Since the provision of physical therapy services is not legally separate from the physician's practice, these entities were classified as "not applicable".

Difficulties were also encountered in surveying clinical laboratories. The HRS Office of Licensure and Certification does not distinguish and separately license either labs located within physicians' offices or blood plasma centers. The former are not freestanding facilities, whereas the latter do not perform any clinical laboratory tests. Hence, these entities were classified

as "not applicable". A number of clinical labs and home health agencies were deemed ineligible because the entity was a satellite facility of a larger main lab or agency. In such cases, the financial data for branch labs or home health agencies are not recorded separately, but rather are included in the financial records of the main facility. Thus, the information for the satellite facilities was reported on the survey form submitted by the main laboratory or home health agency. Finally, entities were exempt from completing the survey if the facility was not operational during 1989.

After deleting the "not applicable" and "return to sender" facilities from the mailing lists, there are 3,075 eligible entities. Table 1 shows the response rates by health care entity type. At the time of this analysis, 75.4 percent or 2319 entities, had filed a completed survey. A Chi-square test was performed to determine whether a systematic relationship exists between the response rates by entity type. The Chi-square test of statistical significance compares the expected cell frequencies if no relationship is present to the actual frequencies found. The Chi-square statistic is highly significant, implying that the response rates are systematically related across entity groups. (The computed Chi-square is 89.71, while the critical Chi-square at the five percent level is 22.36.)

A more detailed examination of Table 1 shows that over 90 percent of the ambulatory surgical facilities, hospitals, nursing homes and psychiatric hospitals have filed a completed survey. The response rates for ambulatory surgical facilities, clinical laboratories, mental health treatment centers, home health agencies, and radiation therapy centers are also high. Except for radiation therapy centers, over 75 percent of the facilities in each of these groups completed the questionnaire; the response rate for radiation therapy centers is approximately 68 percent.

The three groups with the lowest response rates are diagnostic imaging centers, durable medical equipment suppliers, and physical therapy/rehabilitation centers. Only 56.6 percent (163) of the diagnostic imaging facilities, 59.8 percent (333) of the durable medical equipment suppliers, and 60.8 percent (242) of the physical therapy/rehabilitation centers returned completed surveys. Altogether, these three groups account for 505 or nearly 67 percent of the nonrespondents. Although the response rates for all three groups are close to 60 percent, the percentage of facilities reporting is relatively low in comparison to the other entity types.

At this juncture, it is not possible to state whether the nonrespondents are more or less likely to be involved in joint venture arrangements. Thus, a brief telephone survey is being conducted with the nonrespondents from these three entity groups

Table 1. Survey Response Rates by Health Care Entity Type

ENTITY TYPE & NUMBER OF FACILITIES	NUMBER OF SURVEYS COMPLETED	NUMBER OF SURVEYS OUTSTANDING	RESPONSE RATE <sup>a</sup>
AMBULATORY SURGICAL FACILITIES (N=75)	68	7	90.7%
CLINICAL LABORATORIES (N=274)	216	58	78.8%
COMMUNITY MENTAL HEALTH CENTERS (N=47)	40	7	85.1%
DIAGNOSTIC IMAGING CENTERS (N=288)	163	125	56.6%
DURABLE MEDICAL (N=557) EQUIPMENT SUPPLIERS	333	224	59.8%
HOME HEALTH AGENCIES (N=573)	445	128	77.7%
HOSPITALS (N=248)	233	15	94.0%
NURSING HOMES (N=525)	505	20	96.2%
PHYSICAL THERAPY/ REHABILITATION CENTERS (N=398)	242	156	60.8%
PSYCHIATRIC HOSPITALS (N=46)	44	2	95.7%
RADIATION THERAPY CENTERS (N=44)	30	14	68.2%
TOTAL (N=3075)	2319	756	75.4%

**Notes:**

<sup>a</sup>These response rates were tested for statistically significant variations across entity groups using a Chi-square goodness of fit test. The results show the response rates vary systematically across entity groups at the 1% level.

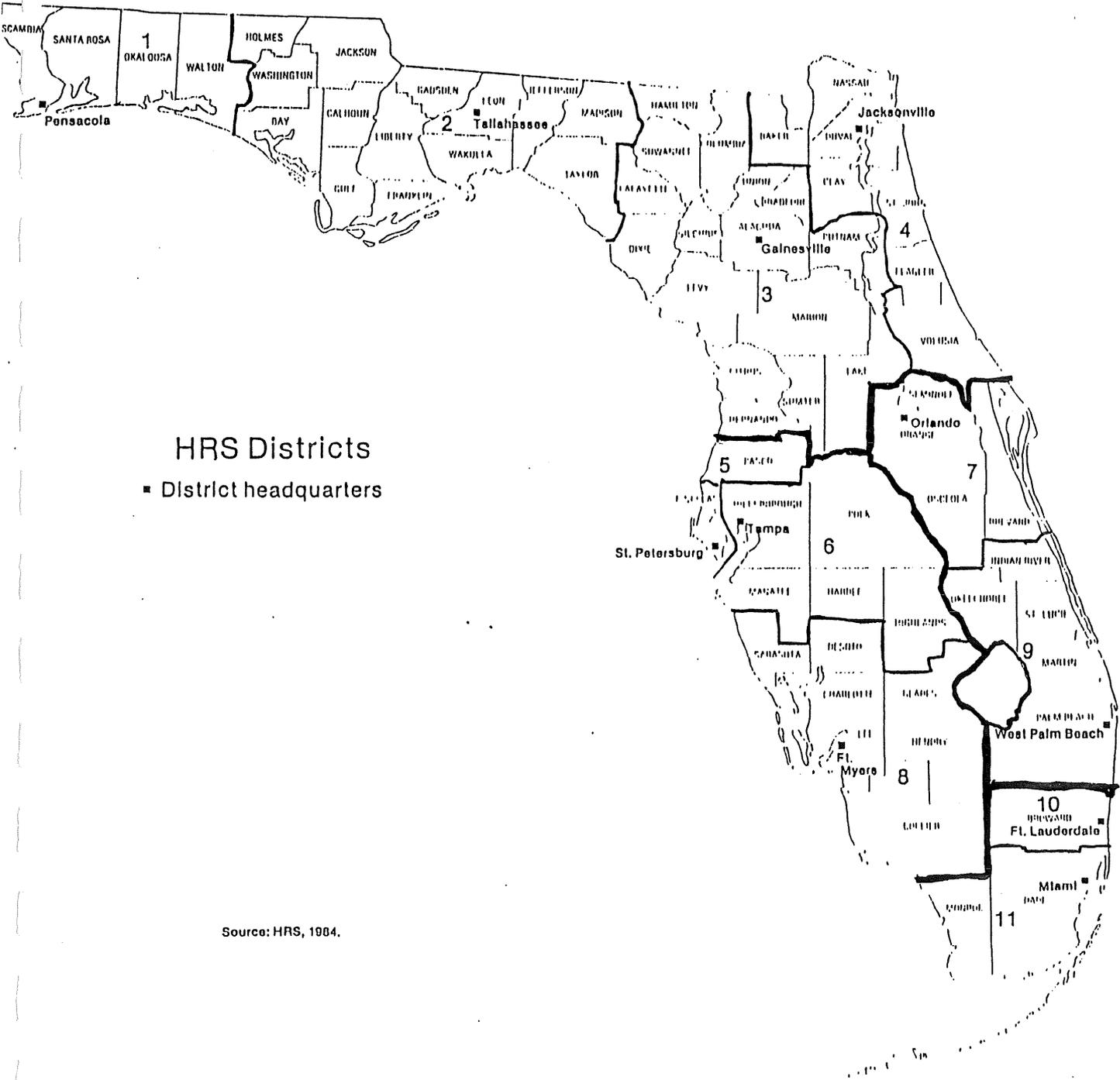
to ascertain why these facilities failed to file a survey. The telephone survey contains questions to elicit ownership information, in particular identifying whether the owners are physicians, other health care professionals, or health care entities. This data will be analyzed to ascertain the prevalence of joint venture arrangements among the nonrespondents in these three entity groups. This analysis will provide some insights as to both the magnitude and direction of the bias associated with the nonrespondents in these three entity groups.

The overall response rate for each entity type may also be misleading if the nonrespondents are concentrated in particular geographic regions of the state. To evaluate whether this is the case, the response rates are analyzed by four geographic regions. North Florida is comprised of HRS districts 1, 2, 3 and 4; the Western Peninsula includes HRS districts 5, 6 and 8; the Central and Eastern Peninsula region encompasses HRS districts 7 and 9; the Southeast Peninsula is comprised of HRS districts 10 and 11. The HRS districts and the four geographic regions are identified on the map of Florida displayed in Figure 1.

The response rates by entity type within each of the four geographic regions are reported in Table 2. The overall response rates by geographic region reported in the last row of Table 2 show that approximately 80 percent of the entities in North Florida, the Western Peninsula, and the Central & Eastern Peninsula have completed the questionnaire. In contrast, only 65 percent (544) of the 837 facilities located in the Southeast Peninsula have returned a completed response. By implication, 38.7 percent of the nonresponding entities (293 of 756) are located in the Southeast Peninsula region. A Chi-square test of significance was performed to ascertain whether the overall response rate varies systematically by region. The results indicate that the likelihood the observed variations by region occur by chance is less than one in 100. (The observed Chi-square statistic is 16.68).

Additional points of interest are revealed by this analysis. First, entity types with high overall response rates generally exhibit comparable response rates within each of the four geographic regions. A different pattern exists among the diagnostic imaging facilities, durable medical equipment suppliers, and physical therapy centers, where most of the nonrespondents are concentrated. For each of these entity types, the response rates vary substantially by geographic region. Failure to consider these regional variations when evaluating the results may lead one to draw erroneous conclusions regarding the geographic distribution of joint-ventured facilities. For this reason, the response rates for these three entity types by geographic region are examined in more detail.

FIGURE 1



HRS Districts

■ District headquarters

Source: HRS, 1984.

Table 2. Response Rates by Entity Type and Geographic Region<sup>a,b</sup>

ENTITY TYPE & NUMBER OF FACILITIES	GEOGRAPHIC REGION			
	NORTH FLORIDA	WESTERN PENINSULA	CENTRAL & EASTERN PENINSULA	SOUTHEAST PENINSULA
AMBULATORY SURGICAL FACILITIES (N=75)	13/14 (92.9%)	32/35 (91.4%)	12/14 (85.7%)	11/12 (91.7%)
CLINICAL LABORATORIES (N=274)	54/62 (87.1%)	66/88 (75.0%)	37/45 (82.2%)	59/79 (74.7%)
COMMUNITY MENTAL HEALTH CENTERS (N=47)	10/14 (71.4%)	14/14 (100.0%)	9/9 (100.0%)	7/10 (70.0%)
DIAGNOSTIC IMAGING CENTERS (N=288)	28/47 (59.6%)	52/74 (70.3%)	42/73 (57.5%)	42/94 (44.7%)
DURABLE MEDICAL EQUIPMENT SUPPLIERS (N=557)	75/116 (64.7%)	94/146 (64.4%)	54/80 (67.5%)	110/215 (51.2%)
HOME HEALTH AGENCIES (N=573)	97/128 (75.8%)	133/168 (79.2%)	99/120 (82.5%)	116/157 (73.9%)
HOSPITALS (N=248)	71/77 (92.2%)	64/66 (97.0%)	44/45 (97.8%)	53/60 (88.3%)
NURSING HOMES (N=525)	141/146 (96.6%)	183/191 (95.8%)	104/106 (98.1%)	77/82 (93.9%)
PHYSICAL THERAPY/ REHABILITATION CENTERS (N=398)	67/100 (67.0%)	68/101 (67.3%)	49/84 (58.3%)	58/113 (51.3%)
PSYCHIATRIC HOSPITALS (N=46)	14/14 (100.0%)	11/11 (100.0%)	12/12 (100.0%)	7/9 (77.8%)
RADIATION THERAPY CENTERS (N=44)	9/12 (75.0%)	14/18 (77.8%)	3/8 (37.5%)	4/6 (66.7%)
TOTAL	579/730 (79.3%)	731/913 (80.1%)	465/596 (78.0%)	544/837 (65.0%)

**Notes:**

<sup>a</sup>The numbers reported in the first line of each row represent the number of completed responses by entity type in each geographic region relative to the total number of entities located within the same geographic region. The second line of each row is the response rate or percentage of completed responses.

<sup>b</sup>NORTH FLORIDA includes HRS districts 1,2,3 and 4; the WESTERN PENINSULA includes HRS districts 5,6, and 8; the CENTRAL and EASTERN PENINSULA includes HRS districts 7 and 9, and THE SOUTHEAST PENINSULA covers HRS districts 10 and 11.

The response rates for diagnostic imaging facilities by geographic region displayed in Table 2 indicate that the Southeast Peninsula has the lowest response rate; only 44.7 percent (42 of the 94) diagnostic imaging facilities in the Southeast region have filed completed questionnaires. In fact, the 52 nonrespondents in the Southeast Peninsula region exceed the combined number of nonrespondents in the North Florida and Western Peninsula regions. Thus, nearly 34 percent (52) of the 125 imaging centers that have not returned surveys are located in the Southeast Peninsula region.

A similar pattern emerges in the case of durable medical equipment businesses. Approximately 65 percent of the suppliers located in North Florida, the Western Peninsula, and the Central/Eastern regions have returned a completed survey. In contrast, only 51.2 percent (110) of the 215 durable medical equipment suppliers operating in the Southeast Peninsula region have responded to the survey. Thus, nearly 47 percent (105) of the 224 nonresponding durable medical equipment businesses are located in the Southeast Peninsula.

The distribution of nonrespondents by region for physical therapy centers resembles the pattern that exists among durable medical equipment businesses. Again, the results indicate that the Southeast Peninsula has the lowest response rate of the four regions; only 51.3 percent (58) of the 113 physical therapy centers located in this geographic region have completed the questionnaire. Moreover, physical therapy centers located in the southeastern section of the state account for over 35 percent of the 156 nonrespondents for this entity type.

#### B. The Structure of Joint Venture Arrangements

Identifying the individual owners of entities providing health care services is a difficult task because sometimes the ownership structure is very complex. If the entity is established as a corporation owned directly by individuals, or as a partnership with a number of limited partners and a general partner who directly own the facility, then these individual owners can be readily identified. On the other hand, if the ownership structure of a health care entity involves several layers of corporations or partnerships, it can be difficult to identify the individual owners of the ultimate parent organization. Failure to recognize the complexity of some joint ventures and subsequently obtain data on the owners of the ultimate parent organization will result in an understatement of the prevalence and scope of joint venture arrangements. Two examples of joint ventures that exist among health care providers in Florida are described below to provide some insights as to the complexity of these arrangements. While the names used for the organizations in these examples have been changed, the structure of the existing ownership arrangements is described accurately.

The ownership structure of Case A is illustrated in exhibit A. Three paths of ownership arrangements can be traced to JMM MEDICAL CARE, INC., a not-for-profit corporation, with approximately 100 physicians on the board of directors. First, JMM MEDICAL CARE, INC. is the parent corporation of JMM

FOUNDATION, a not-for-profit hospital, which operates under the name FHB HOSPITAL.

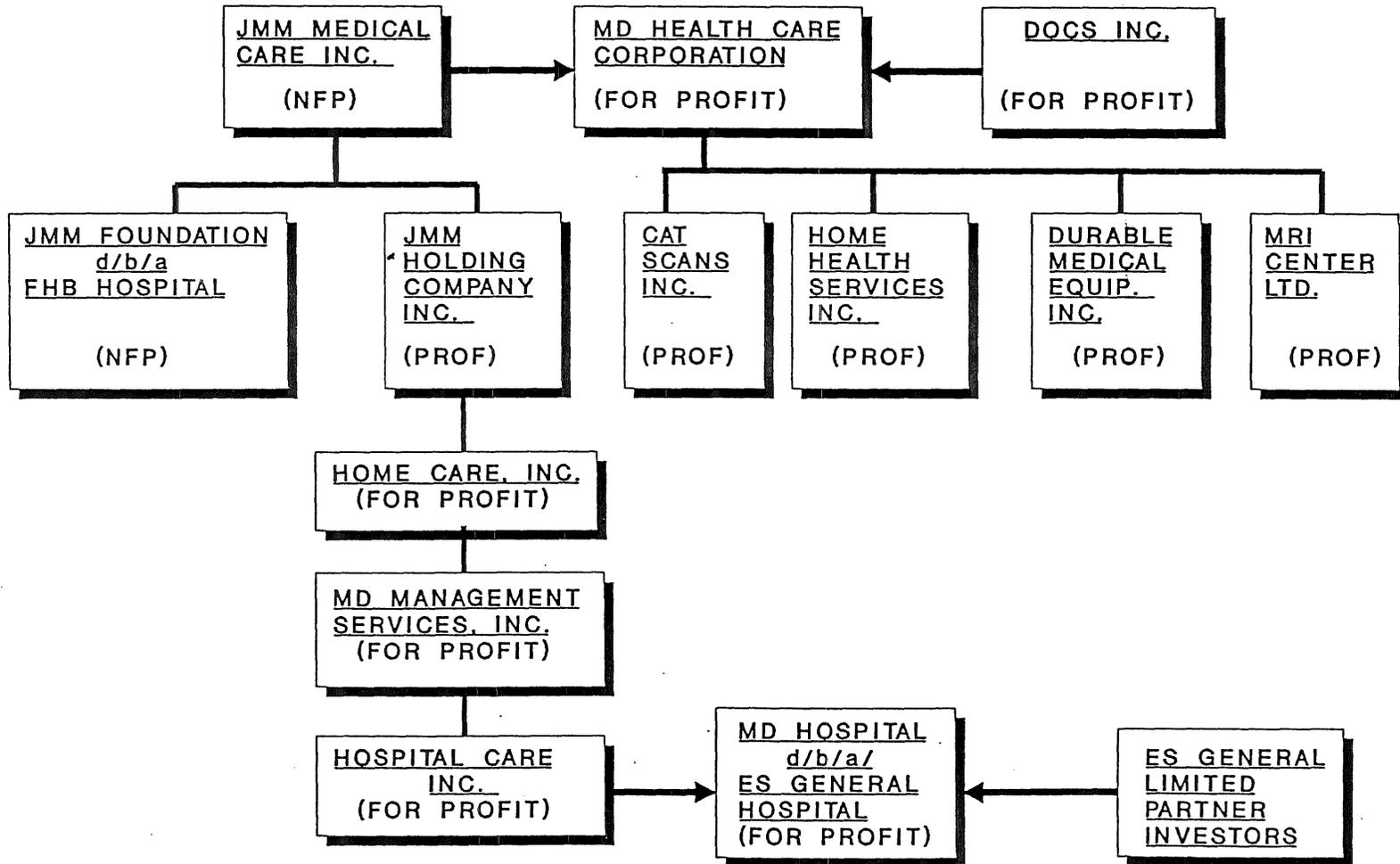
The second ownership arrangement involving JMM MEDICAL CARE, INC. is more complex. JMM MEDICAL CARE, INC. and a corporation with approximately 100 physician investors, known as DOCS INC., jointly own a for-profit entity called MD HEALTH CARE CORPORATION. Many of the physician owners of DOCS INC. serve as directors of JMM MEDICAL CARE, INC. The structure of the joint venture becomes even more complicated because MD HEALTH CARE CORPORATION in turn owns four health care providers: CAT SCANS INC., HOME HEALTH SERVICES INC., DURABLE MEDICAL EQUIPMENT INC., and MRI CENTER, LTD. Each of these health care entities is a for-profit corporation.

The third ownership path is also a complex arrangement. The not-for-profit company (JMM MEDICAL CARE, INC.) owns a for-profit holding company known as JMM HOLDING COMPANY, INC. This holding company in turn owns three for-profit businesses: a home health agency (HOME CARE, INC.), a management company (MD MANAGEMENT SERVICES, INC.) and a third corporation known as HOSPITAL CARE, INC. The ownership path continues as HOSPITAL CARE, INC. is the general partner in a joint venture with ES GENERAL LIMITED PARTNER INVESTORS. Together, this general partner and these limited partners jointly own MD HOSPITAL, a for-profit institution which operates under an alternative name, ES GENERAL HOSPITAL. Furthermore, although not apparent from the chart presented in exhibit A, several of the limited partner shares of ES GENERAL are owned by DOCS INC. -- the corporation which has over one hundred physician investors.

A second example highlighting the complexity of joint venture arrangements among health care providers is presented in exhibit B. The corporation MD ASSOCIATES owns four health care entities that provide services in Florida: an ambulatory surgical facility (AMSURG, INC.), a clinical laboratory (LAB TEST, INC.), a diagnostic imaging center (IMAGING, INC.) and a durable medical equipment business (MEDICAL EQUIPMENT, INC.). MD ASSOCIATES is a joint venture between two corporations: HCSURG, INC. and VMM SERVICES, INC. While the ownership structure of HCSURG, INC. remains to be determined, VMM SERVICES has over 200 individual corporate owners. Each of these individual corporations has a single stockholder who is a physician.

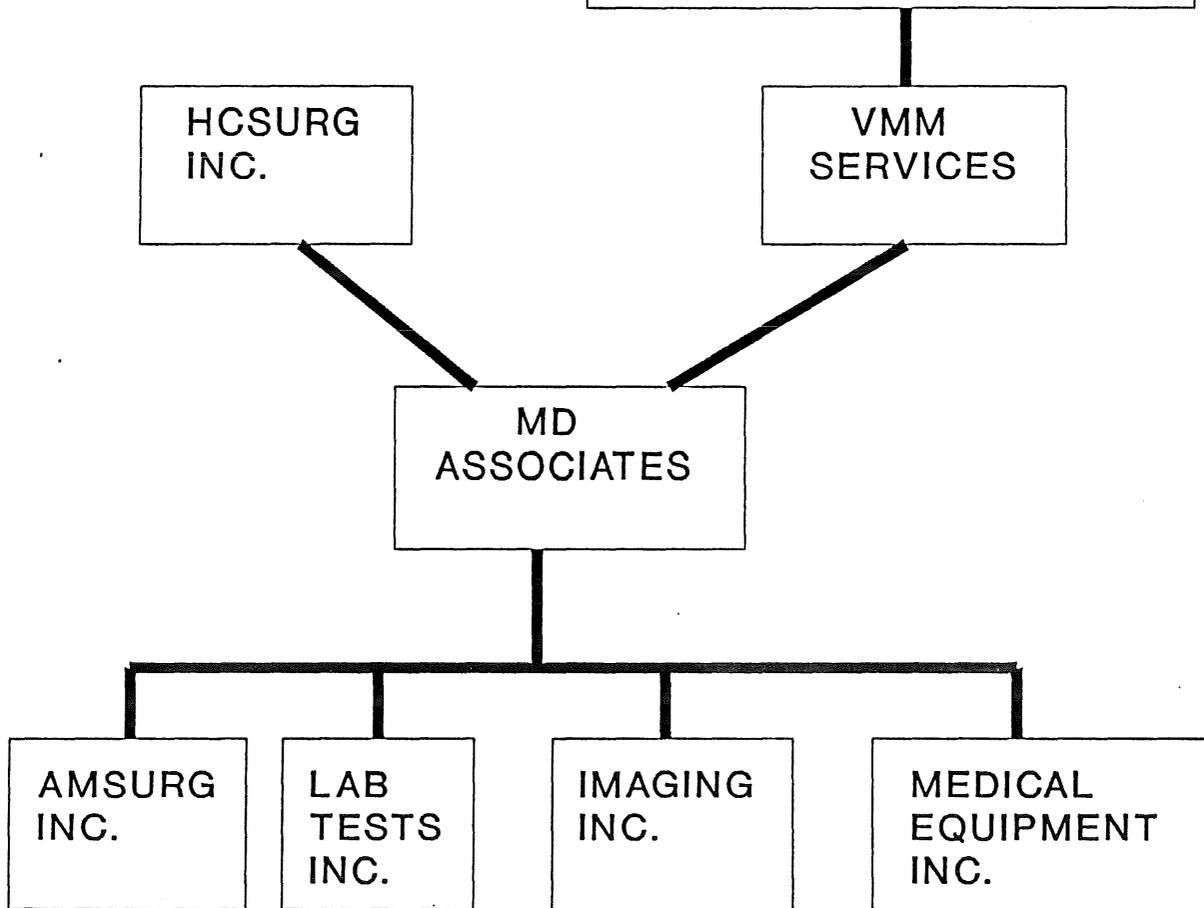
These examples illustrate the problems encountered in determining the ultimate beneficial owners of subsidiary health care entities. Currently further inquiries have been made to examine those situations where the ultimate owners have not been clearly identified. The results of these further inquiries will be reported in Volume II.

# EXHIBIT A



# EXHIBIT B

200 separate, individual corporations - each with a single owner who is a physician.



### C. Characteristics of Physician Owners

The composition of owners who are either health care professionals or health care entities is presented in Table 3. Of the 6,586 health care professionals who are identified in the survey responses as owners, 78.4 percent or 5,166 are physicians. Another 6.7 percent or 440 of the total owners identified are health care entities. Approximately half of these health care entity owners are physician professional associations. Except for health care administrators, the remaining groups of health care professionals each account for less than three percent of all owners identified. The characteristics of physician owners are examined in greater detail since the overwhelming majority of health care professional owners are physicians.

Table 4 indicates the frequency of physician owners of the health care entities surveyed. Nearly 44 percent or 2,258 of the 5,166 physician owners have an investment interest in a diagnostic imaging center. Approximately 17 percent (871) of these physician owners have invested in clinical laboratories, while close to twelve percent of these physician owners have financial interests in ambulatory surgical facilities. The remainder of the physician owners have investment interests in durable medical equipment businesses, home health agencies, hospitals, nursing homes, physical therapy/rehabilitation centers and radiation therapy centers. The frequency and percentage of total physician owners for each of these entity types are: durable medical equipment - 386 (7.5%), home health agencies - 260 (5.5%), hospitals - 238 (4.8%), nursing homes - 66 (1.7%), physical therapy/rehabilitation centers - 366 (7.1%) and radiation therapy centers - 120 (2.3%).

It would be cumbersome to examine the characteristics of physician owners according to the detailed specialty designations currently used by the American Medical Association. Therefore, these detailed specialty designations have been grouped into thirteen categories. Since podiatrists, chiropractors, and dentists may be owners who refer patients, these practitioners are included in the physician specialty classification. Table 5 provides a description of the physician specialty groups.

Table 6 shows the number of physician owners by specialty group and the proportion who may refer to the facility in which they have an investment interest. The last row of Table 6 shows that 85 percent of the 5,166 physician owners may make referrals to the facility in which they have an ownership interest. The only specialties with a relatively low proportion of such referring physicians are radiology and pathology. This is not surprising because physicians in these specialties tend to provide services on a consultation basis, and therefore are generally not in a position to refer patients to their own

Table 3. Composition of Owners Who Are Health Care Professionals or Health Care Entities<sup>a</sup>

OWNER TYPE	FREQUENCY	PERCENTAGE OF TOTAL OWNERS
PHYSICIAN <sup>b</sup>	5166	78.4%
HEALTH CARE ENTITIES (INCLUDES PROFESSIONAL ASSOCIATIONS)	440	6.7%
NURSES (R.N.s OR L.P.N.s)	116	1.8%
PHYSICAL THERAPISTS	158	2.4%
OTHER THERAPISTS	97	1.5%
LICENSED TECHNICIANS	71	1.1%
HEALTH CARE ADMINISTRATORS	350	5.3%
PHARMACISTS	66	1.0%
ATTORNEY, CPA, BUSINESSMAN	122	1.8%
TOTAL	6586	100.0%

NOTES: <sup>a</sup>Health Care Professionals includes those individuals who have one or more immediate family members with ownership interests.

<sup>b</sup>This category includes medical doctors, osteopaths, chiropractors, podiatrists and dentists.

Table 4. Frequency of Physician Owners of Health Care Entities<sup>a</sup>

ENTITY TYPE	FREQUENCY	PERCENTAGE OF TOTAL PHYSICIANS OWNERS
AMBULATORY SURGICAL FACILITIES	601	11.6%
CLINICAL LABORATORIES	871	16.9%
DIAGNOSTIC IMAGING CENTERS	2258	43.7%
DURABLE MEDICAL EQUIPMENT SUPPLIERS	386	7.5%
HOME HEALTH AGENCIES	260	5.0%
HOSPITALS	238	4.6%
NURSING HOMES	66	1.3%
PHYSICAL THERAPY/ REHABILITATION CENTERS	366	7.1%
RADIATION THERAPY CENTERS	120	2.3%
TOTAL <sup>b</sup>	5166	100.0%

NOTES: <sup>a</sup>Physician owners include immediate family members of physicians who have ownership interests in these health care entities. Of the 5,166 physician owners, 175 or 3.4 percent are physicians with immediate family members who are owners.

<sup>b</sup>Physicians include medical doctors, osteopaths, chiropractors, podiatrists and dentists.

Table 5. Description of Physician Specialty Groups

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GENERAL PRACTICE	-	Detailed specialties are family practice and general practice.
OB/GYN	-	Detailed specialties are obstetrics, gynecology, or obstetrics-gynecology.
INTERNAL MEDICINE	-	Detailed specialties are general internal medicine, allergy, diabetes, endocrinology, hematology, infectious disease, immunology, nephrology, rheumatology, arthritis, otolaryngology, urology, cardiology, pulmonary, gastroenterology, and neoplastic disease.
SURGERY	-	Detailed specialties are general surgery and specialized surgery areas: abdominal, cardiovascular, colon-rectal, hand, head-neck, neurological, orthopedic, plastic, thoracic, traumatic, and urological.
PEDIATRICS	-	Detailed specialty is pediatrics.
PSYCHIATRY	-	Detailed specialty is psychiatry.
NEUROLOGY	-	Detailed specialty is neurology.
ONCOLOGY	-	Detailed specialties are oncology, pediatric oncology, and therapeutic radiology.
RADIOLOGY	-	Detailed specialties are radiology, diagnostic radiology, nuclear medicine, and therapeutic radiology.
PATHOLOGY	-	Detailed specialties are pathology and clinical pathology.
ANESTHESIOLOGY	-	Detailed specialty is anesthesiology.
OPHTHALMOLOGY	-	Detailed specialty is ophthalmology.
DENTISTRY	-	Detailed specialty is dentistry.
PODIATRY	-	Detailed specialty is podiatry.
CHIROPRACTICS	-	Detailed specialty is chiropractics.
OTHER	-	Detailed specialties are dermatology, bloodbanking, critical care, emergency medicine, laryngology, neonatal, otology, occupational medicine, physical medicine, histology, and proctology.

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Table 6. Percentage of Physician Owners Who May Refer to the Health Care Facility in Which They Have an Investment Interest

SPECIALTY GROUP	NUMBER OF PHYSICIAN OWNERS	PERCENT OF TOTAL PHYSICIAN OWNERS	PERCENTAGE OF PHYSICIANS WHO MAY REFER
GENERAL PRACTICE	623	12.1%	90.5%
OB/GYN	379	7.3%	94.2%
INTERNAL MEDICINE	1839	35.6%	89.7%
SURGERY	918	17.8%	93.6%
PEDIATRICS	69	1.3%	76.8%
PSYCHIATRY	27	.5%	96.3%
NEUROLOGY	184	3.6%	92.4%
ONCOLOGY	142	2.7%	81.0%
RADIOLOGY	302	5.8%	34.1%
PATHOLOGY	107	2.1%	30.8%
OPHTHALMOLOGY	117	2.3%	93.2%
DENTISTRY	15	.3%	93.3%
ANESTHESIOLOGY	34	.7%	70.6%
PODIATRY	16	.3%	87.5%
CHIROPRACTICS	9	.2%	66.7%
OTHER	385	7.5%	89.9%
TOTAL	5166	100.0%	86.0%

Notes: <sup>a</sup>Physicians include medical doctors, osteopaths, chiropractors, podiatrists and dentists. Physician owners include immediate family members of physicians who have ownership interests in these health care entities. Of the 5,166 physician owners, 175 or 3.4% are physicians with immediate family members who are owners.

facilities. (Pathologists practice in clinical laboratories and radiologists interpret x-rays and scans at imaging centers.) Moreover, these two specialties account for less than eight percent of all physician owners.

The other 92 percent of physician owners are concentrated in specialties which are likely to refer their patients for surgery, diagnostic testing, and other ancillary services or equipment (see column 3 of Table 6.) More than 85 percent of the physician owners in the following specialties may refer patients to the facility in which they have an investment interest: general practice (90.5 %), ob/gyn (94.2%), internal medicine (89.7%), surgery (93.6%), psychiatry (96.3%), neurology (92.4%), ophthalmology (93.2%), dentistry (93.3%), podiatry (87.5%) and "other" (89.9%). Table 7 characterizes physician owners by investment choice and specialty. The composition of physician owners for each entity type, except for nursing homes, is examined in detail.

Of the 601 physician owners of ambulatory surgical facilities (see column one of Table 7), 63.7 percent are specialists (i.e. obstetricians, gynecologists, surgeons and ophthalmologists) who are in a position to both refer patients and perform surgery or related ancillary services at these centers. The remaining 36.3 percent of physician owners of these facilities are concentrated in specialties which are likely to refer patients to the physician owners who perform surgical procedures.

The results reported in column two of Table 7 show the specialties of physicians who have investment interests in clinical laboratories. Approximately ten percent of the physician owners of labs are pathologists, the specialists who supervise laboratory testing. By implication, over 90 percent of the physicians who have invested in labs are specialists, other than pathologists, who are in a position to refer their patients to these facilities for testing. More than 70 percent of these specialists are general practitioners (18.4 %) and internal medicine specialists (52.1%).

The characteristics of physician owners of diagnostic imaging centers are reported in the third column of Table 7. This type of joint venture is the one most frequently chosen by physician investors. Again, physician owners are concentrated in those specialty areas that are in a position to refer their patients to imaging centers for services. Less than ten percent of the physician owners are radiologists, the specialists who interpret x-rays and scans at imaging centers. The majority of the physician investors are in specialties that are likely to refer patients to these facilities for x-rays, CAT scans, MRI scans, or other imaging procedures. Physician owners of imaging facilities include general practitioners (12.2%), obstetricians/gynecologists (7.2%), internists (34.6%), surgeons (16.6%) and neurologists (5.7%).

Table 7. Physician Owners by Investment Choice and Specialty

SPECIALTY GROUP	(1) AMBULA- TORY SURGICAL FACILITY	(2) CLINICAL LABORATORY	(3) DIAGNOS- TIC IMAGING CENTER	(4) DURABLE MEDICAL EQUIPMENT	(5) HOME HEALTH AGENCY
TOTAL PHYSICIAN OWNERS	601	871	2258	386	260
<u>Percentage of Physician Owners by Specialty</u>					
GENERAL MEDICINE	2.7%	18.4%	12.2%	18.1%	7.7%
OB/GYN	20.7%	4.7%	7.2%	3.6%	.8%
INTERNAL MEDICINE	22.8%	52.1%	34.6%	37.8%	47.3%
SURGERY	30.9%	7.0%	16.6%	14.0%	21.9%
NEUROLOGY	.7%	1.1%	5.7%	1.0%	4.2%
ONCOLOGY	.3%	1.8%	2.5%	2.1%	5.0%
RADIOLOGY	.5%	.7%	9.8%	3.6%	5.0%
PATHOLOGY	.5%	10.3%	.1%	.8%	.8%
OPHTHALMOLOGY	12.8%	.3%	.4%	2.1%	.8%
OTHDOCTOR <sup>a</sup>	8.8%	3.4%	10.8%	16.8%	6.5%

Notes: <sup>a</sup>OTHDOCTOR -- This category includes pediatrics, psychiatry, anesthesiology, dentistry, podiatry, chiropractors and the specialties listed in the "OTHER" classification in Table 5.

(CONTINUED)

Table 7. Physician Owners by Investment Choice and Specialty  
(Continued)

SPECIALTY GROUP	(6) HOSPITAL	(7) NURSING HOME	(8) PHYSICAL THERAPY REHABILITATION CENTER	(9) RADIATION THERAPY
TOTAL PHYSICIAN OWNERS	238	66	366	120
<u>Percentage of Physician Owners by Specialty</u>				
GENERAL MEDICINE	13.4%	16.7%	8.5%	5.8%
OB/GYN	10.9%	6.1%	2.2%	1.7%
INTERNAL MEDICINE	31.9%	19.7%	20.2%	28.3%
SURGERY	21.8%	7.6%	32.5%	7.5%
NEUROLOGY	1.3%	1.5%	6.3%	---
ONCOLOGY	2.1%	---	.5%	32.5%
RADIOLOGY	2.1%	3.0%	3.6%	20.0%
PATHOLOGY	1.3%	---	.3%	1.7%
OPHTHALMOLOGY	4.6%	3.0%	1.1%	---
OTHDOCTOR <sup>a</sup>	10.5%	42.4%	24.9%	2.5%

Notes: <sup>a</sup>OTHDOCTOR -- This category includes pediatrics, psychiatry, anesthesiology, dentistry, podiatry, chiropractors and the specialties listed in the "OTHER" classification in Table 5.

The specialties of physician owners of durable medical equipment businesses, reported in column four of Table 7, resemble those of imaging facilities and clinical labs. The physician owners of durable medical equipment businesses are in a position to refer their patients to the entities they own for equipment and oxygen supplies. Approximately 70 percent of the owners are in three specialty groups: general medicine (18.1%), internal medicine (37.8%) and surgery (14.0%). The specialties of physician owners of home health agencies are also shown in Table 7. Here again, physician investors are generally specialists who may refer their patients to home care providers for services. The majority of the physician owners specialize in either internal medicine (47.3%) or surgery (21.9%).

Examination of the physicians who have investment interests in hospitals (see Table 7 column 6) reveals that these owners are specialists who are in a position to refer and treat patients in hospitals. Of the 238 physicians identified thus far as having an investment interest in hospitals, 13.4 percent are general practitioners, 10.9 percent are either obstetricians or gynecologists, 31.9 percent are internal medicine specialists and 21.8 percent are surgeons.

The specialty mix of physician owners of physical therapy centers is consistent with the results for the other entity types. Again, physician owners of physical therapy facilities are specialists who may refer their patients for treatments. Not surprisingly, most of the owners of physical therapy centers are orthopedic surgeons (32.5%). The remaining physician owners are internists (20.2%), general practitioners (8.5%), neurologists (6.3%) and other less common specialties - OTHDOCTOR (42.4%).

Finally, the specialty composition of physician owners of radiation therapy centers is reported in the last column of Table 7. More than 80 percent of the physician investors in these facilities are concentrated in three specialty groups that treat cancer patients: oncology (32.5%), internal medicine (28.3%) and radiology (20.0%).

#### D. The Scope of Joint Ventures Among Health Care Providers

The above discussion links characteristics of individual health care professionals to the types of entities that these individuals have chosen as investments. This section of the analysis examines the extent and nature of such ownership arrangements. Preliminary evidence regarding the scope of ownership arrangements among the health care entities that responded to the survey are presented in Table 8. Before examining the results in Table 8 in detail, it is important to emphasize that the ownership data reported here are incomplete. Hence, these preliminary results underestimate the prevalence and scope of joint venture arrangements among health care providers in Florida. These

Table 8. OWNERSHIP COMBINATIONS OF RESPONDING FLORIDA HEALTH CARE ENTITIES

ENTITY TYPE	TOTAL NUMBER OF FACILITIES RESPONDING	JOINT VENTURED FACILITIES				OTHER FACILITIES (These may or may not be joint ventured.)	
		PHYSICIAN AND/OR PHYSICIANS IN COMBINATION WITH OTHERS	NONPHYSICIAN HEALTH CARE PROFESSIONAL ONLY	NONPHYSICIAN HEALTH CARE PROFESSIONAL AND ENTITY	HEALTH CARE ENTITY ONLY	WHOLLY OWNED SUBSIDIARY	REMAINING FACILITIES (Including those with incomplete information)
Ambulatory Surgical Facilities	68	45 (66.2%)	--	--	11 (16.2%)	1 (1.5%)	11 (16.2%)
Clinical Laboratories	216	73 (33.8%)	22 (10.2%)	4 (1.9%)	7 (3.2%)	14 (6.5%)	96 (44.4%)
Diagnostic Imaging Center	163	122 (74.8%)	8 (4.9%)	--	6 (3.7%)	4 (2.5%)	23 (14.1%)
Durable Medical Equipment Suppliers	333	37 (11.1%)	79 (23.7%)	4 (1.2%)	10 (3.0%)	27 (8.1%)	176 (52.8%)
Home Health Agencies	445	18 (4.0%)	80 (20.0%)	--	23 (5.2%)	142 (31.9%)	182 (40.9%)
Hospitals	233	9 (3.9%)	2 (.9%)	2 (.9%)	15 (6.4%)	86 (36.9%)	119 (51.1%)
Nursing Homes	505	21 (4.2%)	84 (16.6%)	1 (.2%)	46 (9.1%)	197 (39.0%)	156 (30.9%)
Physical Therapy Centers	242	55 (22.7%)	119 (49.2%)	4 (1.7%)	9 (3.7%)	10 (4.1%)	45 (18.6%)
Psychiatric Hospitals	44	-- (6.8%)	3	-- (11.4%)	5 (65.9%)	29 (15.9%)	7 (15.9%)
Radiation Therapy Centers	30	13 (43.3%)	--	--	1 (3.3%)	3 (10.0%)	13 (43.3%)
TOTAL (excludes 40 CMHFs)	2,279 100%	393 (17.2%)	397 (17.4%)	15 (0.7%)	133 (5.8%)	513 (22.5%)	828 (36.3%)

statistics represent a lower bound estimate of the prevalence and scope of joint venture arrangements for at least two reasons.

First, the results in Table 8 do not reflect detailed ownership information on those facilities which are wholly owned subsidiaries of parent organizations. Information on the nature of ownership interests in the parent organizations identified by survey respondents is currently being collected. As indicated in Table 8, such parent organization ownership arrangements occur frequently among home health agencies, hospitals, and nursing homes.

Second, the prevalence of physician owned facilities is also underestimated because some of the health care entity owners are physician professional associations or corporations whose stockholders are physicians or other health care professionals. Information on these physician and other health care professional owners is currently being collected from the entities through followup surveys.

The preliminary estimates reported in Table 8 identify the following ownership arrangements: 1) physician owners--this category includes all ownership arrangements involving physicians; 2) nonphysician health care professionals only; 3) nonphysician health care professionals and health care entities; 4) health care entities only; 5) wholly owned subsidiaries; and 6) not determined.

The preliminary evidence reported in Table 8 suggests that for the responding entities about two thirds of these ambulatory surgical facilities and nearly three fourths (74.8%) of these diagnostic imaging centers are owned either in part or wholly by physicians. About a third of the responding clinical laboratories, more than 20 percent of the responding physical therapy centers, and more than 40 percent of the radiation therapy centers also have physician owners. The results further suggest that, relative to these entity types, only a small proportion of durable medical equipment businesses, home health agencies, hospitals (both acute care and psychiatric) are owned by physicians. The prevalence and scope of physician ownership for these latter facility types is probably understated, however, as the ownership data on the parent corporations of these entity types are not complete.

Of the 68 ambulatory surgical facilities that responded to the survey, 82 percent have health care professionals and/or health care entities as owners. Approximately 66 percent or 45 of the 68 facilities are owned either in part or wholly by physicians. Moreover, 34 of the 45 ambulatory surgical facilities with physician investors have only physicians as health care provider owners.

Examination of the ownership information for clinical laboratories shows that nearly 49 percent of these facilities have

health care professionals and/or health care entities. Physicians have investment interests in close to 34 percent of the 216 clinical labs that responded to the survey. Furthermore, although not reported explicitly in Table 8, about 24 percent or 50 of the 216 labs indicate they have only physicians as health care provider owners.

The preliminary data on diagnostic imaging centers suggest that at least 74.8 percent of these entities who filed a completed questionnaire have physician investors. Of these 163 responses, 43 percent (70) reported that all of their health care provider owners are physicians. Many of the other 52 imaging centers which have some physician owners are joint venture arrangements between a group of physicians and a hospital.

The estimates for durable medical equipment businesses suggest that at least 11.1 percent of these companies are either wholly or partially owned by physicians. As mentioned previously, these percentages represent a lower bound estimate of the extent of physician ownership of these entities as the ownership data are incomplete. For example, approximately eight percent of durable medical equipment businesses are wholly owned by a parent organization, whose stockholders are a group of health care professionals.

The preliminary findings in Table 8 further imply that four percent or more of the sample of 445 home health agencies have an ownership arrangement involving physician investors. These estimates must be regarded with caution, however, for the reasons discussed above. Hence, these figures are a lower bound estimate of the degree to which home health agencies are owned by physicians. Another 20 percent of these 445 home health agencies are owned solely by a health care professional; most of these owners are either registered nurses or home health administrators.

Examination of the results for physical therapy centers shows that more than 22 percent of the sample of 242 entities have some ownership arrangement that directly involves physicians. Another nearly 49 percent of these centers are owned by nonphysician health care professionals. Not surprisingly, most of these nonphysician health care professionals are physical therapists.

Physicians also have established ownership interests in freestanding radiation therapy centers. Approximately 43 percent or 13 of the 30 facilities that returned the questionnaire have an ownership arrangement that directly involves physicians.

The results for hospitals, nursing homes and psychiatric hospitals show that a large percentage of each of these facilities are wholly owned subsidiaries of parent corporations. For example, the percentage of hospitals, nursing homes and psychiatric hospitals involved in such ownership arrangements are 37, 39 and 66

percent respectively. Since the ownership information on the parent corporations is incomplete, the proportion of these facilities which have physician owners are lower bound estimates of the prevalence of joint ventures involving physicians for these entities.

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## APPENDIX A

### Literature Review

This review summarizes the discussions, findings and implications of the available published literature pertaining to joint ventures among health care providers. The literature review covers economic and empirical research on joint venture arrangements and articles from health care trade publications. Throughout this review of the existing literature, the term "joint venture" refers to any ownership or compensation arrangement between persons providing health care, as defined in Florida Statutes, Chapter Law 89-354.

#### 1. Academic Literature

Much of the academic literature relevant to joint ventures are commentaries and discussions of the conflict of interest issue associated with the practice of referrals by physician owners to joint-ventured providers. Although previous empirical studies have examined the responses of physicians to different financial incentives, as of this time, academic researchers have not examined the prevalence and impacts of physician ownership of health care businesses to which they refer patients. At this juncture, the data required to analyze such issues are not reported to private or public third party payers.

This section of the literature review will first discuss research on types of joint venture arrangements. Following this, empirical studies that have examined physicians' responses to alternative financial incentives are reviewed.

#### The Structure of Joint Venture Arrangements

Compensation arrangements and joint ventures in the health care industry have been characterized as either vertical or horizontal (Broccolo and Roach, 1986). Horizontal arrangements are established between entities that compete in providing health care services in a given market or an adjacent market area, while vertical arrangements involve facilities or entities that make referrals or accept referrals from another entity. For example, the physician with an office laboratory that was also involved in a joint venture to provide laboratory services outside his/her office represents a horizontal arrangement. The construction of a free-standing radiation therapy facility by a hospital is another type of horizontal joint venture. An example of a vertical venture is a physician who invests in an independent clinical laboratory. Other typical vertical joint ventures include the purchase of MRI equipment by physicians and hospitals, physician ownership of ambulatory surgical facilities, ownership of adult-congregate living facilities by nursing homes,

and establishment of home health agencies by hospitals, nursing homes, or physicians.

Broccolo and Roach (1986) point out that horizontal ventures have, in the past, been subject to more scrutiny for antitrust violations than have vertical arrangements. Nonetheless, vertical joint ventures are the arrangements most likely to result in conflicts of interest in medicine. Such arrangements also have potential benefits in terms of efficiencies and access to services that might otherwise be unavailable. Moreover, these arrangements frequently create successful referral systems for their participants. The authors, however, fail to consider who benefits from successful arrangements: the patients or physicians.

Economic models developed for assessing the impact of joint ventures have limited application to the concerns regarding joint ventures amongst health care providers. These models have tended to focus on horizontal joint ventures and on the impact within a market of such horizontal ventures. In the instance of health care providers the joint venture arrangements are typically vertical. The vertical joint venture presents substantially different problems in terms of potential inefficiencies in that the participants in the joint-ventured entity typically make referrals to, or obtain referrals from, the joint-ventured entity. Thus, health care providers in joint ventures have a unique status because they control the demand for the services as well as the supply of services. That is, when referrals are made, the quantity of tests or others services demanded of the joint-ventured provider are essentially ordered by one of the owners of the joint venture. Additionally, after having set the quantity demanded by the consumer, the referral generally is specifically to the joint-ventured provider. This captive referral system in effect eliminates any price competition and thereby allows the joint-ventured entity to ignore competitors' prices.

Vertical joint ventures can inhibit the entry of competitors who might provide services at lower prices and/or higher quality. The dominant influence of the referring agents, such as physicians or hospitals, could allow them to effectively bar entry of any new competitor and to squeeze out existing competitors by limiting the number of referrals made to them. This situation occurred in the antitrust case wherein a home care provider sued Venice Hospital. The court ruled the hospital had used their referral power to effectively harm their competitor.

#### Evidence on Physicians' Responses to Financial Incentives

Shortell, Wickizer, and Wheeler (1984) report the results of a seven year evaluation of joint ventures in primary care group practice. In the study, 54 hospitals sponsored joint ventures

with physicians in a demonstration program funded by the Robert Wood Johnson Foundation as part of its Community Hospital program. The findings, based on data from years before the prospective payment system was implemented (1976-1983) suggest that such joint ventures can have substantial financial impacts for hospitals. The joint ventures accounted for an average of 9 percent of hospital admissions; participating hospitals increased their market shares by approximately 4 percent. Revenues from hospital laboratory charges increased by 15 percent over this period (even after adjusting for inflation); revenues from hospital radiology charges increased by 14 percent (again, after adjusting for inflation).

Many of the joint venture group practices attracted high percentages of self-pay and privately insured patients. As to the impact on physician charges to patients, costs per visit were lower for both emergency room visits and outpatient department visits, while costs per visit were slightly higher than for private practice fee-for-service physicians. The study concludes that such joint ventures are "needed" for hospitals in highly competitive markets and for those institutions with unfavorable prospective payment rates (other "needs" are also noted). These results clearly support the need to scrutinize hospital-physician joint ventures as to their impacts on charges and utilization rates.

Epstein, Begg and McNeil (1986) examined the influence of payment method on the use of ambulatory testing by internists. This study compared the number of tests performed on patients with uncomplicated hypertension by 10 physicians in large fee-for-service groups and 17 doctors in large prepaid groups. After controlling for patient characteristics, the results indicate that physicians in fee-for-service practices ordered 50 percent more electrocardiograms and 40 percent more chest radiographs than doctors in prepaid groups. Both tests were associated with high profits and high patient charges. These findings suggest that the financial incentives inherent in the fee-for-service payment method cause physicians to order more expensive, high-profit tests.

Hillman (1987) points out the potential conflict of interest for physicians inherent in financial arrangements with HMOs, including capitation-based payments, fee for service contracts wherein the HMO withholds a percentage of payments, and salary-based payments. His analysis of approximately 300 HMOs implies that certain financial arrangements result in conflicts of interest that influence physician behavior and may adversely affect quality of care. Specifically, this situation is likely to arise when the HMO has established mechanisms to share profits with participating physicians.

More recently, Hillman, Pauly and Kerstein (1989) examined whether financial incentives affect physicians' clinical decisions and the operating performance of HMOs. Their findings suggest that capitation payments or salaries were associated with lower hospitalization rates than fee-for-service payments. Moreover, it appears that imposing penalties on physicians for any deficits in the HMOs' hospital funds results in fewer outpatient visits. The authors conclude that HMO type and certain financial incentives influence physician behavior.

Hemenway, et al. (1990) compared the practice patterns of physicians at a chain of ambulatory walk-in clinics over a one-year period. In the middle of the year, the centers instituted a new compensation plan whereby physicians could earn bonuses which were tied to the gross revenues each physician generated. Prior to this change, physicians were paid a flat hourly wage. Under the new payment mechanism, physicians increased the number of laboratory tests performed per visit by 23 percent; the number of x-rays per visit increased by 16 percent. The total charges per month, adjusted for inflation, grew by 20 percent, primarily because of the significant increase in patient visits. Moreover, the wages of those physicians who regularly earned the bonus rose 19 percent. The authors conclude that significant monetary incentives may induce physicians to change their practices to increase utilization of office visits and diagnostic procedures.

In a recent study published in the NEJM, Hillman and colleagues (1990), compared the frequency and costs of imaging examinations performed by physicians who conducted these diagnostic tests using equipment in their offices (within-office referrals) with those ordered by physicians who referred their patients to radiologists (radiologist-referring). Their analysis is based on claims data for more than 65,000 imaging procedure orders by more than 6400 physicians for acute upper respiratory symptoms, pregnancy, low back pain, or difficulty in urinating (for men). The imaging procedures examined for each of the respective conditions were chest radiography, obstetrical ultrasound, radiography of the lumbar spine, and excretory x-rays or ultrasonography. The study found that, on average, doctors who own the machines ordered four to 4.5 times more imaging tests than those who referred their patients to radiologists. Further, physicians who owned the equipment charged their patients fees that average 4.5 to 7.5 times more per procedure than fees charged for patients of radiologist-referring physicians. The authors conclude that the extreme differences in the two groups calls to question the assumption that the financial interests of physicians do not influence medical decisions. The researchers question whether four times the utilization compounded by four to seven times the cost provide commensurate incremental benefits in health to these patients.

## 2. Health Care Industry Trade Publications

Most articles appearing in health care trade journals emphasize advantages to the development of joint ventures in terms of patient referral bases, eliminating risks, and enhancing profit opportunities for participants. A 1985 article in Hospitals reports on hospital-physician joint ventures (Morrissey and Brooks, 1985) based on a survey by the American Hospital Association. The results indicated that hospital-physician joint ventures existed for most types of health care entities including preferred provider organizations, HMOs, IPAs, ambulatory surgical centers, primary care centers, emergency care centers, home health agencies, free-standing laboratories, free-standing imaging centers, and medical office buildings. Twelve percent of the hospitals responding to this survey indicated that one or more of these joint ventures had been established as of January 1984 with higher percentages in the West and in New England, and lower percentages for the rest of the country. The authors project continued development of such joint ventures by large non-governmental, non-teaching hospitals in urban areas. The article closes with the statement, "It is the nature of competition that those who do not develop or imitate successful innovations, fall by the wayside. The changing financing environment and the increasing supply of physicians suggest that profitable joint ventures will be imitated wherever competition demands them" (Morrissey and Brooks, 1985).

Articles in Hospitals support the conjecture that hospital-physician joint ventures have significant impacts on charges and utilization rates. The February 1986 issue of Hospitals reports that more than seventeen percent of larger hospitals (at least 400 beds) have outpatient surgery joint ventures. These articles emphasized that joint venture arrangements can be extremely profitable. In fact, the study indicates that hospitals can expect to double revenues from outpatient surgery if they establish ambulatory surgical facilities with their physicians. The article also notes that physicians who invest in joint venture programs concentrate their services in these hospital-based joint ventures. For example, a California hospital shifted business away from competing hospitals by establishing a joint venture with its physicians for diagnostic services involving a CAT scanner.

An April 1987 article in Hospitals reports increasing competitive threats to revenues from laboratory services in hospitals as physicians develop laboratories in their offices. The article includes a survey suggesting that more than sixty percent of hospital chief executives expect more than a 25 percent growth in revenues from outpatient lab services by 1990. The article notes that physician office laboratories face problems including a crackdown on within-practice referrals as physicians with office analyzers tend to overutilize this

equipment. Increased regulation and other problems are expected to suppress the growth of physician office laboratories but physicians are likely to respond by banding together in limited partnerships to start their own freestanding reference laboratories. The article closes by noting that as physicians start their own reference laboratories, competition will intensify significantly.

Droste (1987) reports on changes in Medicare reimbursement for free-standing ambulatory surgical centers. These centers will benefit from higher reimbursements for currently approved procedures and will also benefit from an expanded list of surgeries that will be covered by Medicare. Not surprisingly, the changes are expected to increase the number of physician-hospital joint ventures in ambulatory surgical centers.

Souhrada (1988) describes the rapid growth of joint ventures providing magnetic resonance imaging (MRI) services. She summarizes the results of a survey which reveals that ventures involving MRI units include twelve percent by hospitals with hospitals, 50 percent by hospitals with physicians, 20 to 25 percent by physicians with physicians, and thirteen to eighteen percent by other types of joint ventures. The high cost of these units (\$3,000,000 per unit) is cited as a motivation for encouraging joint ventures between facilities and/or physicians who can provide the necessary patient referrals to keep these units operating at high volumes.

The trend toward physicians purchasing hospitals is discussed by Koska (1988). The author describes a situation in California whereby physicians joined forces to purchase a hospital from a bankrupt parent company. She notes a growing trend toward integration of practice units; the purchasing units are usually the most powerful entity (whether it be a hospital or a physician group). Physicians are expected to buy hospitals when they account for the majority of admissions because they want to benefit from revenues produced by those admissions. Koska notes legal and ethical issues arising in such joint ventures and then describes some problems that may inhibit the success of such joint ventures. Koska's article closes by noting that the physicians who acquired the hospital in California expected to increase the market share for the hospital from 50 to 80 percent; to accomplish this goal, the physicians planned to extensively renovate and expand the range of services offered.

Mistarz (1984) points out that joint ventures for home health agencies likewise present many opportunities for hospitals and other providers to diversify and reduce their risks. She suggests that hospitals who add home health care as a joint venture may be able to recapture a portion of revenues lost under the DRG prospective system, especially if hospitals set up joint

ventures with physicians. Joint ventures with other hospitals, joint ventures with medical equipment suppliers, and joint ventures with nursing homes are also suggested as providing profit opportunities for hospitals.

A series of articles dealing with legal issues in joint ventures was also published in Hospitals. Traska (1984) reports on a legal dispute between an HMO and an independent practice association (IPA) of physicians. The HMO had increased some physician fees but decreased other physician fees causing physicians to threaten to "strike". Larkin (1989) reports on the limits for avoiding price fixing charges where providers control an HMO. In a recent case, Hassan v Independent Practice Associates, the U.S. District Court in Flint, Michigan, rejected a claim that the HMO's establishment of a maximum fee schedule represented per se violations of antitrust law. The Court ruled that these activities were carried out as part of a legitimate joint venture and actually promoted competition by making possible a new and competitive product -- managed care. The article includes guidelines that would help to reduce the risk of successful price fixing claims from fee setting activities by provider-controlled HMOs, including risk sharing by providers, provision of new products (such as comprehensive health services), and setting prices to reflect market forces.

Holthaus (1989) notes that the courts have acted broadly in interpreting anti-kickback provisions of Medicare laws. These interpretations eliminate defenses that show physicians perform some services for money received, that a particular payment was remuneration, that there may have been other reasons for a solicitation of remuneration by defendants, and that even if only one purpose was to induce further referrals, the payment can be interpreted as a kickback. These conclusions, while important for Medicare recipients or Medicaid beneficiaries, do not apply to consumers not covered by these programs.

A September 1990 issue of Hospitals reports on "group practices without walls". In the article the author describes arrangements whereby physicians maintain solo practices or small group practices, and buy into a multi-group practice arrangement. These arrangements allow each physician to deliver services under the multi-group practice from their offices. This development is of interest for this study because the article emphasizes that such multi-group practice arrangements provide opportunities for joint venture partnerships by hospitals. Two particular arrangements are singled out, one in Sacramento, California, the other in Londonderry, New Hampshire. The California group practice has two joint ventures that are operated with hospitals, a surgery center and imaging center. The article suggests that such arrangements will be beneficial in the future for hospitals.

The September 17, 1990 cover story of Modern Healthcare is entitled "Home Healthcare - a Strategy and Its Perils." The article notes that hospitals who have entered into home care ventures are reevaluating their positions, especially those who are in home medical equipment. Problems in Medicare reimbursement cuts are cited as a reason for the lack of profitability in this area. The article notes that hospitals face substantial competition as they seek to enter the home care business and in order to remain viable they must diversify and provide services to non-Medicare patients. A highlighted section of the article reports that hospitals have been cautious in the wake of the 1988 Florida Home Medical Equipment lawsuit against Venice Hospital. The article points out such caution may be unnecessary, however, as there has been a decline in the number of antitrust lawsuits against hospital-based home health care service providers and equipment dealers. The article further highlights the fact that home infusion therapy firms have enjoyed generous profits with little exposure to the reimbursement whims of Medicare. The article notes that private payers provide 90 percent of the revenues for home infusion firms but cautioned that managed care case managers will tend to reduce future profits (relative to the high profitability that now occurs).

McManis (1990) in an editorial comment in Modern Healthcare, claims that competition has failed in health care. He suggests that hospitals need to develop vehicles for collaboration if they are to succeed in the future. In addition, he argues for joint development companies which will allow hospitals to work together and share future growth areas such as new technology or clinical programs. He also advocates the development of integrated medical delivery systems with physicians that would realign financial incentives and avoid further duplication of facilities and services. In closing he comments that "the time has come to stop developing strategies that are concerned with beating competition and to begin to develop a shared vision that will benefit both hospitals and the communities they serve."

The May 21, 1990 issue of Modern Healthcare reports on a multi-unit provider survey. The article reviews developments for multi-hospital systems and highlights the expansion opportunities in rehab units, retirement centers, managed care, ambulatory care, and surgery centers. These areas are singled out as particularly profitable for hospital operators. Other areas with limited opportunities include long-term care and home care.

In the same issue, Tarabella (1990) describes the tremendous growth opportunities in the area of rehab services. Growth opportunities are particularly noted in the area of specialty rehab services where franchising companies have developed. A continuing problem, however, is the shortage of rehabilitation therapists. The provision of rehabilitation services is

earmarked as a particularly lucrative area for hospital expansion.

In another article in this special issue Lutz (1990), describes significant opportunities for multi-hospital systems in the provision of ambulatory care. The article notes that hospitals have opened ambulatory health care centers at growth rates exceeding 20 percent recently. In contrast the number of centers not associated with hospital systems has fallen by six percent. Urgent/primary care centers owned by hospital systems increased by 24 percent in 1989. Several other areas of growth are noted. The number of diagnostic imaging centers owned by hospital systems increased 73 percent in 1989. Hospital systems operated 22 percent more industrial medicine clinics in 1989. In addition, the number of cancer centers operated by hospital systems rose by 55 percent in 1989. This tremendous growth is attributed to consumer preference for ambulatory centers. Your Medical Imaging Centers, a Florida company that specializes in mobile magnetic resonance imaging services is singled out for having developed a "cookie cutter for modular facilities development of an imaging center on hospital campuses". The article notes that many hospital systems are expanding off-campus to provide such services.

Henderson (1990), in the same special issue of Modern Healthcare, described recent developments in surgery centers. He notes that this market has experienced significant growth and hospital systems have continued to expand in this area. Nevertheless, despite their expansion efforts, hospitals have lost market share to freestanding outpatient surgical centers. In 1984 hospitals held 89 percent of the outpatient surgery market; by 1989 hospitals' share of this market had fallen to 76 percent. The article concludes that despite this loss of market share, that off-campus surgical centers provide ample profit opportunities for hospitals.

Koska (1989) in an article in Hospitals cautions that hospital CEOs need to be careful regarding physician joint ventures in order to avoid legal problems with the Stark referral bill. The article notes that the American College of Radiology has come out with a policy statement supporting the Stark legislation on ethics in patient referrals. The author suggests that hospitals need to enter special clauses in any joint venture arrangements that would provide for restructuring should the joint venture arrangement be found to be illegal.

Segedy (1988) in Homecare, a trade publication of the home care business, reviews recent competitive problems posed by the entry of physicians into home care businesses including home health agencies and home medical equipment suppliers. The article notes that the entry of physicians into home care companies has provided substantial, sometimes insurmountable,

competition to existing providers of these services. The article quotes Arnold Relman of the New England Journal of Medicine, as well as Uwe Reinhardt of Princeton, as notable persons who have objected to the entry of physicians into the home care and other related health care provider services. The article is lengthy and is replete with stories of how physicians through referrals can effectively eliminate competition when they enter into the home care business. As in many other articles from the perspective of existing providers, the article strongly objects to physicians entry into this business, as well as the entry of other providers, such as hospitals.

## APPENDIX B

### Federal Regulation, Federal Studies, and State Regulation

#### A. Federal Regulation

Since the inception of Medicare and Medicaid, federal policymakers have expressed concern over the potential conflicts created by joint ventures between physicians and health care entities to which they make referrals. The first explicit policy enacted to prevent what are considered to be inappropriate provider transactions was incorporated in the Social Security Amendments of 1972 (P.L. 92-6037). This legislation outlawed payments for referrals under the Medicare or Medicaid programs. The penalties included a misdemeanor conviction, a sentence of up to a year in prison, and a \$10,000 fine.

Congress strengthened and further expanded the scope of this legislation five years later when it enacted the Medicare and Medicaid Anti-Fraud and Abuse Amendments. The amended anti-kickback statute declared it was a criminal act to solicit, receive, offer, or pay any remuneration in return for referrals of patients or business payable under either the Medicare or Medicaid programs. Such a transaction was considered a felony punishable by up to five years in prison and a maximum fine of \$25,000. This legislation, however, contained certain ambiguities which prompted Congress to revise it in 1980. These revisions stipulated that such conduct is illegal only if the referrals are made knowingly and willingly.

The general view of the courts is that physician ownership of health care entities per se is not a violation of the anti-kickback laws. Nevertheless, excessive returns on investment in a health care facility, might constitute a violation of these laws in circumstances where such returns are provided to induce referrals.

In the authoritative case on this issue, the United States v. Greber, the court found that if one purpose of payments to a physician from a diagnostic center was to induce referrals, such a transaction constituted a violation of the Medicare fraud statute. This reasoning was adopted in recent rulings by two federal appeals courts. In both cases the defendants were found guilty of violating anti-kickback laws even though only one purpose of the payments was to induce referrals. The case of the United States v. Bay State concerns a hospital employee who reviewed bids and subsequently awarded contracts for ambulance services. Concomitantly, the defendant was providing consulting services to one of the bidders and received compensation for his consultations. The other case, the United States v. Kats involves a diagnostic lab and a community clinic that agreed to

share payments for patient referrals made by the clinic. A strict interpretation of the anti-kickback laws was also adopted in the case of the United States v. Lipkis. The Court determined the value of the alleged services (collecting specimens, spinning down blood, and carrying insurance) were worth far less than the payments from the independent lab; hence, these payments were viewed as kickbacks for referrals.

In 1987 Congress adopted the Medicare and Medicaid Patient and Program Protection Act (P.L. 100-93). This legislation authorized the inspector general through a civil, as opposed to a criminal, proceeding to exclude violators of the anti-kickback statute from federal health programs. Previous attempts to prosecute providers who were suspected of violating the anti-kickback laws were unsuccessful because the government attorneys lacked the necessary administrative authority to achieve their objective. This legislation also mandated the Secretary of the Department of Health and Human Services to publish regulations identifying those practices and arrangements that would not be classified as violations of the anti-kickback statutes. These "safe harbor" regulations were outlined in a Notice of Proposed Rulemaking published in the Federal Register on January 23, 1989.

Safe harbors pertain to both physician ownership of, and compensation from, health care entities to which the physician may refer patients. The only safe harbor stipulated concerning physician ownership involves investments in large corporations (i.e., assets in excess of \$5 million and a minimum of 500 stockholders) obtained at a fair market price. Safe harbors were also proposed for compensation arrangements involving space and equipment rentals as well as management services that fell within specified guidelines that limit abuse. Ownership or compensation arrangements that do not satisfy these criteria might constitute a violation of the anti-kickback laws.

In April 1989, the Inspector General released a "fraud alert" on joint ventures. This document stated that any investment interest, regardless of whether it is directly tied to referrals, may violate the anti-kickback laws. The three areas of concern highlighted include how investors are selected and retained, whether the entity is disguised as a shell or holding company that provides no services directly, the amount invested by each physician and the rate of return on the investment. The "fraud alert" cited questionable attributes which may identify potentially illegal ventures.

With respect to the first area of concern, suspect joint ventures include those arrangements where physicians are chosen as investors because they are likely to refer to the entity. Other indicators of potentially unlawful activity are situations where investors are required to divest ownership if they cease to practice in the service area.

The second questionable feature relates to the business structure of joint ventures. The situation discussed is an arrangement between two health care providers in the same line of business. For example, in the case of clinical laboratories, one entity is an established provider and thus acts as the reference lab. In this situation, the other provider is essentially a "shell" lab which performs little or no testing on site. Thus, although the "shell" lab bills Medicare or some other third-party payer directly for these tests, the procedures are performed at the reference lab.

The third concern relates to how these joint ventures are financed and the way profits are distributed. For example, physicians may invest only a small nominal amount ranging between \$500 and \$1500, and receive large returns (often as much as 100 percent per year). These setups are also questionable because the physicians are frequently able to borrow the amount invested from the health care entity and then repay it subsequently through deductions from profit distributions.

Nevertheless, prior to the prohibition of certain ownership and compensation arrangements between referring physicians and clinical labs under the recently enacted Stark legislation, the only existing federal regulations that explicitly prohibit physician ownership and self-referral of patients involved home intravenous (IV) drug therapy treatments and home health agencies. The Medicare Catastrophic Coverage Act of 1988 (P.L. 100-360), recently repealed by Congress, contained a provision that prohibited a home IV therapy provider from rendering services to a Medicare patient when these services have been ordered by a physician who owns more than five percent of the agency. Thus, under current federal regulations it is not illegal for physicians to maintain ownership interests in most health care entities to which they refer their patients.

#### The Stark Legislation

Because joint venture arrangements among health care providers have proliferated in recent years, some members of Congress contend that existing anti-kickback laws are not sufficient to prohibit the increasing prevalence of fraud and abuse in the health care sector. This concern prompted Representative Fortney H. (Pete) Stark, chairman of the House Ways and Means Subcommittee on Health, in February 1989 to introduce a bill (H.R. 939), known as the "Ethics in Patient Referrals Act". This bill addressed the problem of conflicts of interest attributable to "self-referrals", that is, the referral of a patient to a health care facility or provider with whom the physician has a financial relationship. In his statements endorsing the bill, Stark noted the efficiency of the anti-kickback laws:

"the payment of any remuneration, directly or indirectly, overtly or covertly, in cash or kind is illegal. Unfortunately, clever deal makers have found a loophole. Referrals schemes are being disguised as 'legitimate' business arrangements, most commonly as 'partnerships' involving referring physicians, but also as 'consulting' or similar arrangements. The general intent is quite clear; to 'lock in' referrals by creating a web of financial relationships binding the referring physician to the provider."

The Stark bill, as it was originally introduced, would have prohibited a physician from referring Medicare patients to any health care entity in which the physician or an immediate family member of a physician has an investment interest. This prohibition on referrals would also cover any facility with whom a physician has compensation arrangements. The measure would further prohibit the health care entity from billing Medicare, the patient, or another insurer for services rendered through referrals from physician investors.

The law eventually passed as part of the Omnibus Reconciliation Act of 1989 (P.L. 101-239) prohibits physicians who have ownership interests or compensation arrangements with clinical laboratories from referring Medicare patients to these entities effective January 1, 1992. This ban on physician referrals also pertains to labs in which a physician's immediate family member has an investment interest.

The law prohibiting self-referrals contains certain exemptions which might limit its impact. The exemptions include: labs located within a physician's office, group medical practice, or HMO; labs in hospitals where the referring physician maintains staff privileges, but his or her investment interest is in the entire hospital as opposed to only the clinical lab; and laboratories located in rural areas or in hospitals in Puerto Rico. Physicians may also own stock and refer patients to labs that are publicly traded corporations with assets exceeding \$100 million.

The law further exempts certain compensation arrangements between physicians and laboratories from the ban on self-referrals. These include payments from a hospital to a physician employee; payments for leasing office space provided such payments are not determined by the number of referrals; and payments from a hospital to a physician in order to attract the physician to relocate within the boundaries of the hospital market area (provided that such payments are not tied to the number of referrals). Finally, the prohibitions do not apply to lab tests requested by a pathologist for another physician, provided that the pathologist supervises the testing.

The law imposes substantial penalties for violations. First, no Medicare payment will be made for any lab tests linked to an illegal referral. Second, physicians who violate the law are required to refund any compensation they received related to these illegal referrals. Third, persons who submit claims for illegal referrals, as well as those who fail to refund payments for any illegal referrals, will be subject to civil penalties of up to \$15,000 for each service rendered. Physicians found in violation of the law could also be excluded from the Medicare program. Finally, cross-referrals schemes or other similar arrangements established between health care providers to lock-in referrals are illegal and are subject to civil penalties of up to \$100,000 for each such arrangement. Any physicians involved in such arrangements may also be excluded from the Medicare program.

#### Related Debates on Conflicts of Interest and Physician Referrals

At this juncture, it seems appropriate to consider the views of the medical profession, other non-physician health care providers, and the inspector general regarding physician ownership in a commercial venture and the potential conflicts of interest arising from the practice of self-referral.

#### Congressional Testimony on the Stark Legislation

Representatives from various medical organizations expressed their views regarding the potential conflicts of interest arising from self-referrals during the Congressional hearings on Stark's proposed legislation to prohibit referrals by physician owners to facilities in which they have investment interests.

The American Medical Association (AMA), which has a powerful lobbying group in Washington, opposed Stark's bill primarily because most of the evidence cited by Stark was anecdotal. The AMA recognizes the importance of physicians maintaining high ethical standards. Nevertheless, despite their concern for ethical behavior, the AMA opposes a complete ban prohibiting physicians from investing in freestanding health care facilities to which they refer their patients. The AMA contends that such prohibitions are anticompetitive, may curtail access to care, and adversely affect quality (Todd and Horan, 1989). Rather than a complete ban on physician referrals, the AMA advocates the adoption of legislation refining the "safe harbor" regulations for physician investment. They also favor the establishment of an advisory opinion process so that physicians are able to assess in advance the legality of a potential venture. Finally, the AMA has lobbied for a phase-in period if Congress enacts any new regulations or requires any divestiture of current investment interests (Todd and Horan, 1989).

More recently, the AMA has qualified their position somewhat; the referral of patients to facilities in which the

physician has an investment interest is allowable, subject to specific criteria. First, the physician must notify the patient of his or her investment interest and that the patient may choose to obtain the recommended services at another facility. Second, the physician's primary concern should be for the patient; exploitation for financial gain is contrary to ethics of the medical profession (Todd and Horan, 1989).

An article by Morreim (1989) in JAMA offers some further insights on the conflict of interest issue arising from physician participation in joint ventures. Morreim acknowledges that the practice of self-referrals endangers both patients and insurers with the possibility of unnecessary and/or poor quality care. Although Morreim recognizes the ethical dilemma physicians face, she argues that prohibitions such as the Stark legislation are unnecessary and undesirable. Morreim contends that the basic principles of common law are available to protect patients' rights without intruding on the patient-physician relationship. Such protections are also available to insurers. In her opinion, utilization review and quality assurance are preferable to encompassing prohibitions that might restrain trade and hamper the development of more cost-effective ways of providing care.

Representative Stark responded to Morreim's statements that legislative prohibitions on self-referrals are not necessary because this practice is best controlled through the common law. Stark (1989) contends that if the common law were capable of curtailing the potential problems associated with this phenomenon, policymakers would not be debating "the best way" to stop these abusive actions.

Views contrary to the position held by the AMA on the practice of self-referrals in medicine were also expressed during the Congressional hearings by representatives from both the American College of Surgeons and the American College of Radiology. Dr. Edward Seljeskog, the spokesman for the American College of Surgeons testified that

"the college believes that professional income should be derived from services that physicians personally provide or supervise, not from goods or services they prescribe for their patients. Referrals made to ancillary health care facilities in which a referring physician plays no role in ensuring the quality of services, yet which result in profit to the physician, clearly run contrary to this ethical standard...these so-called self-referrals run contrary to the fellowship pledge to place the patient's welfare above all else, and they violate the college's prohibition against any and all forms of fee splitting".

Dr. Lee Rogers, testifying on behalf of the American College of Radiology declared:

"the practice of self-referral of patients for a diagnostic or therapeutic medical procedure may not be in the best interest of the patient. Referring physicians should not have a direct or indirect financial interest in diagnostic or therapeutic facilities to which they refer patients...the American College of Radiology supports legislation prohibiting reimbursement for any diagnostic or therapeutic procedure carried out in a facility in which the referring physician has a direct or indirect financial interest."

Perhaps the most outspoken physician to testify before Congress was Dr. Arnold Relman, editor of the New England Journal of Medicine. Dr. Relman adamantly opposes self-referrals, claiming this practice runs contrary to the ethics of the profession. In his view, since the physicians do not supervise or provide these services directly, self-referrals encourage unnecessary duplication and overutilization of facilities and service and therefore add significantly to the costs of health care (Relman, 1985). Relman further contends that the proposed safe harbor regulations are inadequate and for this reason many gray areas exist which skillful lawyers have been able to exploit. Moreover, he points out that the Inspector General's Office does not have the resources needed to enforce the proposed safe harbor regulations, and thus additional legislation should be enacted to identify those arrangements which are legal (Iglehart, 1989).

Many consumer groups, non-physician health related professionals, health insurers, and health care businesses have expressed their concern about the conflicts of interest arising from the practice of self-referral. The majority of these organizations favor the enactment of more encompassing legislation which would prohibit physician owners from referring patients to health care facilities in which they have an investment interest. Some of the organizations who have voiced concern on this issue are: the American Physical Therapy Association, the Blue Cross-Blue Shield Association, the Health Insurance Association, the National Association of Medical Equipment Suppliers, and the American Association of Retired Persons (Iglehart, 1989). The primary reason these organizations oppose physician ownership of freestanding health care facilities is because it creates a captive referral system between physician owners and these entities. Under these circumstances, it has become increasingly difficult for non-joint ventured facilities to compete unless they offer the referring physicians some financial compensation.

One remedy to this problem which has been discussed at length is disclosure; these laws require physicians to reveal financial conflicts of interest to their patients. Rodwin (1989) examines disclosure policies in four contexts: medical informed consent, consumer protection laws, lawyer-client relationships, and disclosure by government officials. Rodwin evaluates the implications of these policies for physician investments and concludes that physician disclosure alone is not sufficient to protect patients. In fact, in some situations, disclosure may place the patient in a difficult situation. Thus, Rodwin advocates that policymakers work with the medical profession to evaluate the risks and benefits associated with different conflict of interest situations, and then develop appropriate policies to limit these conflicts.

#### Other Federal Regulation

The Stark Legislation further requires that as of October 1, 1990, all health care entities that bill Medicare must report the names and Medicare-provider numbers of all physician owners. This information must also be reported for physicians who have immediate family members with investment interests in health care entities. Facilities who fail to report this information will be subject to civil penalties up to \$10,000 per day of violation. The counterpart for physicians billing Medicare is that all claims for referred services must list the name and Medicare identification number of the referring physician. The information gleaned from these reporting requirements will reveal which health care entities are physician-owned and the number of patients referred to these facilities by physician owners. (Iglehart, 1990).

#### B. Governmental Studies

Two congressionally mandated studies have been conducted to evaluate the prevalence and effects of physician ownership of health care entities to which they make referrals. Both studies required data collection because information identifying physician owners of health care entities which are Medicare providers was not available from Medicare carriers, state governments or the federal government. The first investigation was conducted by the Office of the Inspector General. Representative Pete Stark cited the results from this report, in May 1989, in his efforts to win support in Congress for new legislation restricting the practice of self-referral. The other study is currently being conducted by the General Accounting Office. Hence, only preliminary findings from the GAO report will be reviewed. The Bureau of Competition, Consumer Protection and Economics of the Federal Trade Commission has also examined the development of regulations pursuant to the Medicare and Medicaid anti-kickback statute. An overview of the comments they

related to the Secretary of Health and Human Services in December 1987 is presented below.

### The OIG Study

The OIG conducted two surveys of health care providers in eight states to obtain the data needed to determine the prevalence, nature and impact of physician ownership of medical businesses to which they make referrals. The states examined were Arkansas, California, Connecticut, Florida, Michigan, New York, West Virginia, and Kansas City, Missouri. One survey involved approximately 4000 physicians, while the other focused on ownership and/or compensation arrangements between physicians and three types of health care businesses: freestanding clinical labs, durable medical equipment suppliers, and freestanding physiological labs. Physiologic or imaging facilities perform noninvasive diagnostic testing such as magnetic resonance imaging, CT scans, and ultrasounds.

Estimates derived from the data reported by the 2690 physicians who responded to the survey imply that nationwide twelve percent of the physicians who bill Medicare have ownership interests in facilities to which they make referrals. The results further suggest that about eight percent of the physicians who bill Medicare have some type of compensation arrangement with one or more health care facilities to which they make referrals. National estimates calculated from the surveys of health care entities imply that at least 25 percent of freestanding clinical labs, eight percent of durable medical equipment suppliers, and 27 percent of freestanding physiological labs or imaging centers are owned either partially or wholly by physicians.

The results also indicate that Medicare patients of referring physicians who have investment interests in freestanding clinical labs received 34 percent more tests directly from these labs than the general population of Medicare patients. The latter group is comprised of patients treated by both physician owners as well as physicians who have no investment interests in health care facilities. Medicare patients of physicians who reported investment interests in diagnostic centers received about thirteen percent more tests than all Medicare beneficiaries in general. In contrast, the study found no significant differences between Medicare patients of physician owners and all Medicare beneficiaries with respect to the utilization of durable medical equipment items. With the exception of durable medical equipment, these findings suggest that physician ownership of facilities to which they make referrals adds significantly to the overall cost of services purchased through the Medicare program. In fact, the OIG report estimates that the costs of the additional clinical lab testing amounted to \$28 million in 1987.

The data from the OIG study further indicate that the percentage of physician owners in Florida was the highest of the eight states surveyed; over 20 percent of the physicians in Florida have ownership interests in facilities to which they refer patients. The proportion of physicians with compensation arrangements ranked second; nearly eleven percent of the nonowner physicians in Florida have some type of compensation arrangement with facilities to which they make referrals. Moreover, Medicare patients of physician owners in Florida received 40 percent more clinical lab tests, twelve percent more diagnostic tests, and utilized sixteen percent more items of durable medical equipment than the general population of Medicare beneficiaries. In contrast, use rates for all services by patients of nonowner physicians who have compensation arrangements with these facilities are comparable to the utilization rates exhibited by all beneficiaries. In summary, the OIG findings suggest that in Florida, Medicare patients of physicians who have ownership interests in the three types of medical facilities examined have substantially higher utilization rates in comparison to the general population of Medicare beneficiaries.

Richard Kusserow, the Inspector General of the Department of Health and Human Services, also testified during the Congressional hearings on Stark's bill. After reporting the findings of his study examining physician ownership of clinical labs, imaging centers, and durable medical equipment suppliers, Kusserow commented that the existing anti-kickback laws are not adequate to deal with the perceived problems associated with self-referrals. He further remarked that the findings of his report imply that disclosure requirements will not remedy the problem either; physician-owned clinical labs in states with disclosure laws reported both significantly higher charges and utilization rates than the general population of labs. In his view, more clear-cut legislation such as Stark's bill, would be easier to enforce than the existing ambiguous anti-kickback laws.

Kusserow expounded upon his testimony later in a letter, dated October 31, 1989. The letter was written in response to several queries from Stark regarding the prevalence of joint ventures. Kusserow stated that physician investment in health care businesses to which they make referrals has grown rapidly in recent years. Moreover, such ventures are generally marketed exclusively to doctors, with the intent of influencing their referral practices. According to Kusserow, the gray areas of the existing law make it difficult to determine which of these partnerships are illegal. He concluded by stating:

"the current anti-kickback law is inadequate to prevent outright kickbacks and bribes which are offered or paid to induce the referral of Medicare business. It will never be effective at curtailing business practices where the ultimate objective may be the same but the

payments are masked as dividends, rent, or consulting fees."

### The GAO Study

Michael Zimmerman, director of Medicare and Medicaid issues for the GAO, testified during the congressional hearings on Stark's bill regarding the ongoing GAO investigation of physician ownership. He presented preliminary results from a study focusing on physician referrals to clinical laboratories and diagnostic imaging centers in Maryland and Pennsylvania. In June of 1989 when Zimmerman testified, 87 percent of the facilities in each state had responded to the questionnaire. Preliminary estimates suggest that about 18 percent of the freestanding clinical labs and imaging centers in Maryland are owned by one or more physicians in a specialty unrelated to the services rendered at either of these health care entities (pathologists render clinical laboratory services while radiologists interpret x-rays and scans at imaging centers). In Pennsylvania, about 29 percent of the freestanding labs and imaging facilities are owned in part or entirely by referring physicians.

With respect to the utilization of laboratory services, Zimmerman reported that physician owners in Maryland ordered more tests, and ordered more costly tests, than physicians with no investment interests. A breakdown by specialty indicates that cardiologists who owned labs ordered fewer tests than nonowners specializing in cardiovascular disease. In contrast, both family practice and internal medicine physicians with investment interests in clinical labs ordered significantly more tests per visit than nonowners. The data for diagnostic imaging procedures show that physician owners ordered fewer tests, but ordered more expensive tests, than physicians without ownership interests.

At the time of his testimony, Zimmerman was not able to comment on the utilization rates for labs and imaging centers in Pennsylvania because the analysis of this data was incomplete. Researchers at the GAO informed the principal investigators of this study that their study is still not complete, and results on utilization patterns of physician owned labs and imaging centers in Pennsylvania are still not available.

### The FTC Report

The FTC discussed several examples of financial arrangements and practices that could be construed to violate the anti-kickback laws. The view of the FTC is that in many situations these are legitimate pro-competitive arrangements which may ultimately intensify competition among health care providers. Moreover, in some cases these arrangements may help to control health care costs. The FTC report considered business arrangements involving alternative delivery systems, referral

services, the ownership of freestanding health care facilities by referring physicians, and the waiver of deductibles and coinsurance. Each example is discussed in turn.

Health maintenance organizations and preferred provider organizations are alternative delivery systems which contain incentives for providers to control health care costs. Nevertheless, some of the contractual arrangements employed by HMOs and PPOs may involve legitimate payments that may be construed to violate the anti-kickback laws. For example, to fund administrative expenses, a PPO may require participating providers to remit to the PPO a percentage of the dollars earned from treating PPO patients. This might be viewed as a kickback from the provider as an incentive for the PPO to refer patients to the provider. The FTC contended that contractual payments made to PPOs and HMOs must be viewed in light of the cost containment aspects of these programs. Congress adopted this stance in 1980 when it exempted payments made by providers to group purchasing agents from the anti-kickback laws. Congress maintained that alternative delivery systems can reduce overall health care costs.

The second case examined by the FTC involves referral services. These arrangements can foster competition because they reveal information on fees and services offered by doctors. A referral service, for example, may offer patients listings of providers who accept Medicare assignment. Any remuneration paid to the referring entity is not likely to generate unnecessary care because the referral service does not recommend that the patient seek medical services.

The third scenario considered, which is relevant to the present study, involves the referral of patients by a provider to an entity in which the provider has a financial interest. The FTC cites the situation in which a physician refers a patient to a laboratory in which the physician has an ownership interest. As a stockholder, the physician will receive a share of any profits earned by the lab, which may be construed as payment for the referral. The FTC report states that such practices may have several pro-competitive effects.

First, physicians might identify a particular need for services in the community. Yet, if physicians are prohibited from referring to this facility, they may be reluctant to invest their time and money in such a venture. Another potential benefit of such ownership arrangements is that physicians are able to monitor the quality of care provided to the patient.

The FTC report recognizes, however, that physician ownership of medical businesses to which they refer patients may result in health care services which are unnecessary, inappropriate and more expensive. Nonetheless, the FTC contends that similar risks

are created by other common practices which are not regarded as unlawful. The example noted is the referral of a patient by a physician to another physician within the same group practice association. The problem is where to draw the line between arrangements which violate the laws and those that do not. The FTC argued that these practices should be permitted; however, physicians should disclose any ownership interests in health care facilities to their patients. The FTC report advocates the adoption of regulations stating that an ordinary return on invested capital does not violate the anti-kickback laws.

The last case reviewed concerns the waiver of deductibles for Medicare Part A. Some hospitals waive these payments in order to attract patients to their hospital. The waiver of these fees should not be illegal because it may promote price competition. The potential increase in competition and savings to Medicare patients is likely to outweigh any overutilization of hospital care that arises from the waiver.

In concluding, the FTC report advocated that the Secretary of HHS develop regulations which clarify that providers involved in such financial arrangements are not likely to raise costs. Furthermore, if these arrangements are not more costly, these providers should not be subject to criminal sanctions or excluded from the Medicare and Medicaid programs under the anti-kickback laws.

### C. State Regulation

Appendix D provides a listing of existing Florida statutory provisions that have implications for joint venture arrangements. Florida's anti-kickback statute protects both governmental and private health care purchasers and therefore is more expansive than its federal counterpart. Under Section 395.0185, Florida Statutes, no person may pay or receive any commission, bonus, kickback or rebate or engage in any split-fee arrangement with any physician, surgeon, organization, agency, or person, for patients referred to a licensed facility. Florida's anti-kickback statute pertains to health care reimbursed under State health care programs, as well as private insurers. Section 395.0185(2), Florida Statutes, gives the Department of Health and Rehabilitative Services authority to promulgate rules appropriate for the enforcement of the state's anti-kickback statute.

Additional laws pertaining to anti-kickback prohibitions are contained in the health care professional regulation statutes. Section 455.25, Florida Statutes, requires health care practitioners licensed under Chapters 458, 459, 460, 461, or 466, Florida Statutes, to disclose in advance their financial interest in writing to patients referred to a joint venture involving physical therapy and the provision of medicinal drugs. Florida law also contains a general disclosure law for physicians,

however this statute only applies to equity interests in excess of ten percent.

As the prevalence of joint ventures arrangements between physicians and health care entities to which they make referrals and receive compensation from increases, these relationships have and are currently attracting legislative attention in many states. For example, 36 states have laws which prohibit physicians from receiving or paying monetary or in-kind compensation for referrals. These laws are analogous to the Federal law which prohibits payment for referrals.

Other states have enacted laws restricting physician referrals to health care facilities in which the physician has an ownership interest. Michigan, for example, prohibits physicians from referring their patients to any health care entity in which the practitioner has a financial interest. Pennsylvania recently adopted similar legislation, however, their law only pertains to patients receiving state medical assistance. Under Delaware law, it is illegal for physicians to refer patients to physical therapy centers in which they have an investment interest. The Delaware law further prohibits physical therapists from working for physicians as salaried employees to evaluate and treat patients for physical therapy within a physician's practice setting.

While Michigan is the only state with a complete ban on physician referrals to facilities in which they have ownership interests, many states have laws or regulations prohibiting physicians from exploiting patients for financial gain. For example, under California law referrals to health care entities which are medically unnecessary, and are made only because the practitioner has an ownership interest in the facility are illegal.

Moreover, 24 states have adopted direct access provisions in an attempt to circumvent the reliance on physician referrals for physical therapy. Under these laws, physical therapists are authorized to treat and evaluate patients without a physician referral. In many states, however, this provision has had only minimal impact because private insurers refuse to pay for physical therapy evaluations and treatments unless these procedures are provided by a physician. For example, in eleven of the 24 states with direct access provisions, Blue Cross will not pay for a physical therapy evaluation without a physician referral. Furthermore, in thirteen of the 24 states with direct access statutes, Blue Cross will not reimburse physical therapy treatments unless these services are referred by a physician.

A number of states have laws which ensure that patients have freedom of choice as to where they receive services. For example, a physician in Missouri can have his/her license revoked

if he/she requests that a patient receive drugs, devices or other professional services directly from facilities either owned by the physician or associated with his/her practice.

Several states require that physicians disclose financial interests under certain circumstances to patients. These states include Arizona, California, Delaware, Florida, Massachusetts, Nevada, Pennsylvania, Virginia, Washington, and West Virginia. The stringency of the disclosure laws, however, varies significantly between the states. In Pennsylvania and Virginia, the disclosure laws pertain to any financial interest in a health care entity to which the physician makes a referral. Physicians are also required to inform their patients that they may obtain services at another facility if they choose to do so. Minnesota law requires that physicians disclose financial interests to their patients in advance and in writing. The Minnesota law further stipulates that the disclosure statement must inform the patient that he/she is free to seek care from another health care provider.

APPENDIX C

FLORIDA STATUTORY PROVISIONS RELATED TO  
JOINT VENTURES IN THE HEALTH CARE INDUSTRY

**Regulation of Professions and Occupations**

FLA. STAT. s. 455.25 Disclosure of financial interest by practitioners.

It shall be a misdemeanor of the first degree, punishable as provided in s. 775.082, s. 775.083, or s. 775.084, for any health care practitioner licensed under chapter 458, chapter 459, chapter 460, chapter 461, or chapter 466 to make any professional referral for physical therapy services, as defined in s. 486.021, or to provide medicinal drugs from any source other than on a complimentary basis when the practitioner has a financial interest or for which the practitioner will receive some financial remuneration, unless in advance of any such referral the practitioner notifies the patient, in writing, of such financial interest.

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**Hospital Licensing and Regulation**

FLA. STAT. s. 395.0185 Rebates prohibited, penalties.

(1) It is unlawful for any person to pay or receive any commission, bonus, kickback, or rebate or engage in any split-fee arrangement, in any form whatsoever, with any physician, surgeon, organization, agency, or person, either directly or indirectly, for patients referred to a licensed facility.

(2) The department shall adopt rules which assess administrative penalties for acts prohibited in sub-section (1). In the case of an entity licensed by the department, such penalties may include any disciplinary action available to the department under the appropriate licensing laws. In the case of an entity not licensed by the department, such penalties may include:

(a) A fine not to exceed \$1,000.

(b) if applicable, a recommendation by the department to the appropriate licensing board that disciplinary action be taken.

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**Medical Practice**

FLA. STAT. s. 458.327 Penalty for violations

\* \* \*

(2) Each of the following acts constitutes a misdemeanor of the first degree, punishable as provided in s. 775.082, s. 775.083, or s. 775.084:

\* \* \*

(c) Referring any patient, for health care goods or services, to a partnership, firm, corporation, or other business entity in which the physician or the physician's employer has an equity interest of 10 percent or more unless, prior to such referral, the physician notifies the patient of his financial interest and of the patient's right to obtain such goods or services at the location of the patient's choice. This section does not apply to the following types of equity interest:

1. The ownership of registered securities issued by a publicly held corporation or the ownership of securities issued by a publicly held corporation or the ownership of securities issued by a publicly held corporation, the shares of which are traded on a national exchange or the over-the-counter market;

2. A physician's own practice, whether he is a sole practitioner or part of a group, when the health care good or service is prescribed or provided solely for the physician's own patients and is provided or performed by the physician or under his supervision; or

3. An interest in real property resulting in a land-lord-tenant relationship between the physician and the entity in which the equity interest is held, unless the rent is determined, in whole or in part, by the business volume or profitability of the tenant or is otherwise unrelated to fair market value.

FLA. STAT. s. 458.331 ~~Grounds for disciplinary action; action by the board and department.~~

(1) The following acts shall constitute grounds for which the disciplinary actions specified in subsection (2) may be taken:

\* \* \*

(i) Paying or receiving any commission, bonus, kickback, or rebate, or engaging in any split-fee arrangement in any form whatsoever with a physician, organization, agency, or person, either directly or indirectly, for patients referred to providers of health care goods and services, including, but not limited to, hospitals, nursing homes, clinical laboratories, ambulatory surgical centers, or pharmacies. The provisions of this paragraph shall not be construed to prevent a physician from receiving a fee for professional consultation services.

\* \* \*

(o) Promoting or advertising on any prescription form of a community pharmacy unless the form shall also state "This prescription may be filled at any pharmacy of your choice."

\* \* \*

(gg) Referring any patient, for health care goods or services, to a partnership, firm, corporation or other business entity in which the physician or the physician's employer has a equity interest of 10 percent or more unless, prior to such referral, the physician notifies the patient of his financial interest and of the patient's right to obtain such goods or services at the location of the patient's choice. This section does not apply to the following types of equity interest:

1. The ownership of registered securities issued by a publicly held corporation or the ownership of securities issued by a publicly held corporation, the shares of which are traded on a national exchange or the over-the-counter market;

2. A physician's own practice, whether he is a sole practitioner or part of a group, when the health care good [sic] or service is prescribed or provided solely for the physician's own patients and is provided or performed by the physician or under his supervision; or

3. An interest in real property resulting in a landlord tenant relationship between the physician and the entity in which the equity interest is held, unless the rent is

determined, in whole or in part, by the business volume or profitability of the tenant or is otherwise unrelated to fair market value.

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### **Nursing Homes and Related Health Care Facilities**

FLA. STAT. s. 400.17 Bribes, Kickback, certain solicitations prohibited.

\* \* \*

(2) Whoever furnishes items or services directly or indirectly to a nursing home resident and solicits, offers, or receives any:

(a) Kickback or bribe in connection with the furnishing of such items or services or the making or receipt of such payment; or

(b) Return or part of an amount given in payment for referring any such individual to another person for the furnishing of such items or services;

is guilty of a misdemeanor of the first degree, punishable as provided in s. 775.082 or by fine not exceeding \$5,000, or both.

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### **Physical Therapy Practice**

FLA. STAT. s. 486.125 Refusal, revocation, or suspension of license; administrative fines and other disciplinary measures.

(1) The following acts shall constitute grounds for which the disciplinary actions specified in subsection (2) may be taken:

\* \* \*

(f) Engaging directly or indirectly in the dividing, transferring, assigning, rebating, or refunding of fees received for professional services, or having been found to profit by means of a credit or other valuable consideration, such as an unearned commission, discount, or gratuity, with any person referring a patient or with any relative or business associate of the referring person. Nothing in this chapter shall be construed to prohibit the members of any regularly and properly organized business entity which is comprised of physical therapists and which is recognized under the laws of this state from making any division of their total fees among themselves as they determine necessary.

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## APPENDIX D

### The Effects and Regulation of Joint Ventures: Results of Interviews with Industry Leaders and Experts

What are the effects of joint ventures among medical providers on health care costs, accessibility of care, quality of care, and medical ethics? Further, given these effects what is the most reasonable way to regulate joint ventures? These two issues were explored through open-ended interviews with a panel of selected Florida physician and hospital representatives, industry representatives, and policy and research experts. Selected Florida physician and hospital representatives included Guy Selander (M.D., President of the Florida Medical Association), Charles Kahn (M.D., Internist, Chair of the Florida Medical Association Special Committee on Ethics), Maurice Laszlo (M.D., Chair of Florida Medical Association Council on Ethical and Judicial Affairs), and Charles Pierce (President of the Florida Hospital Association). Selected Florida industry leaders included Kylanne Green (Associate Director of Managed Care for the Health Insurance Association of America), Greg Short (President of Short Medical, a medical supply and equipment company), Lois Adams (President of Home Health Care Services, Inc. Chair of the Regulatory Affairs Committee for the Florida Pharmacy Association), Tim Sanders (durable medical equipment dealer), and Drexley Smith (owner of Drexley Smith Rehabilitation Center, Inc.). Providing a broader perspective were selected health policy and research experts, including Arnold Relman (M.D., Editor-in-Chief of the New England Journal of Medicine), David Abernathy (staff member of the Committee on Ways and Means of U.S. House of Representatives), Uwe Reinhardt (Ph.D., James Madison Professor of Political Economy at Princeton, member of Physician Payment Review Commission for the U.S. Congress), and Alain Enthoven (Ph.D., Professor of Management at the Stanford Graduate School of Business). The sections below present a summary and analysis of the panel's comments.

#### The Effects of Joint Ventures on Health Care Costs

When asked whether joint ventures generally lead to increases in medical costs, the majority of panel members replied affirmatively. Panelists provided a variety of cost-increasing scenarios resulting from joint ventures. These included the following: overutilization in order to make a profit on the investment; overutilization in order to pay the mortgage; elimination of competition from non-joint-ventured entities and creation of joint-ventured monopolies; and overutilization arising from the combination of a joint venture and the fee-for-service payment system which underlies most arrangements. Regarding elimination of competition, some panelists (especially

industry representatives) indicated that non-joint-ventured businesses may fail in areas where physicians establish financial links through joint ventures to medical services (such as physical therapy, durable medical equipment, home health agencies, rehabilitation, pharmaceutical companies, hospitals, etc.). Panelists reported that the businesses fail because they have no captive referral base, not because their product is inferior. This scenario undermines competition between joint venture and non-joint venture companies, and often forces companies to become involved in a joint venture to survive. Regarding the effect of fee-for-service payment, one panelist pointed out that joint ventures based on capitated payment arrangement (such as some joint ventures among health maintenance organizations) do not induce overutilization, but instead induce cost-effective care due to the payment arrangement. This contrasts to cost-increasing joint ventures based on a fee-for-service payment system.

In discussing cost-raising scenarios, panelists raised two important related issues: the nature and strength of financial incentives in different types of joint ventures, and the expected response of physicians to these financial incentives. In analyzing effects of different types of joint ventures, most panelists felt that joint ventures which give providers an interest as an inducement to referral are directly cost-increasing. In addition, some panelists stated that a provider's ownership interest in a local joint venture is sufficient to stimulate over-utilization, regardless of any specific remuneration per referral, since the returns or dividends from even small ownership interests in local companies can mean dramatic income differences for providers. One panelist pointed out that the Florida Medical Association and the American Medical Association currently consider it ethical if a physician's remuneration is based on a percentage of his or her capital investment, but unethical if remuneration is based on referrals to the joint venture. This panelist felt that this distinction is without substance since ownership interests assuredly provide referral incentives. Regarding joint ventures between physicians and hospitals, some panelists stated that these arrangements are also problematic in that the hospital is trying to bind the physician to itself and thus increase the hospital's utilization.

Given the stated potential of many joint ventures to induce overutilization and thus increase costs, what is the actual likelihood that a physician or hospital will fall prey to indirect or direct financial incentives? Of the four physician panelists interviewed, two panelists felt that most physicians are ethical and will respond ethically to financial incentives from joint ventures; the other two physician panelists disagreed, saying that the primary reason most physicians participate joint ventures is to make a profit on their investment.

## The Effects of Joint Ventures on Health Care Access

Generally, panelists felt the joint ventures in rural areas could improve access through investment by providers in costly technology not currently available in these areas. Otherwise, most panelists felt the joint ventures generally decrease access for a variety of reasons. First, the high costs of health care, due partly to overutilization from joint ventures, deprive people of access, especially the poor. Some panelists indicated that physicians often are not willing to continue treating patients once insurance has reached its cap; further, these panelists indicated that overutilization from joint ventures causes insurance to run out much more quickly for patients. A second problem with joint ventures is that patients lose the ability to make their own selection regarding ancillary services. As a consequence business may lose its impetus to provide high quality services. Some panelists indicated they have seen numerous situations wherein patients preferred a particular provider but were forced to change to the one in which their physician had a joint venture.

## The Effects of Joint Ventures on Health Care Quality

Panelists discussed several examples of how joint ventures may cause quality to deteriorate. First, according to some panelists, joint ventures increase the probability of overutilization, which is negatively correlated with quality of care; these adverse effects are due to increases in treatment risks and increases in risks of additional unnecessary treatments. Second, joint ventures cause more referrals to occur due to a monetary incentive and not because the agency to which the patient is being referred is best for the patient -- i.e., geographically close to the patient, preferred by the patient, or offering more expertise in the service required by the patient than other agencies. Third, some industry panelists felt strongly that because joint ventures inhibit competition, quality of care suffers. One [physician] panelist stated that when doctors don't have a financial interest, they may be more critical and demanding of quality before they would send the patient there. In contrast, when they have an economic interest, they may be more tolerant of services that are not first-rate. Some panelists also indicated that non-joint-ventured companies faced higher accrediting and credentialing standards than companies partially owned by physicians.

## The Effects of Joint Ventures on Health Care Ethics

Overall, panelists felt strongly that joint ventures which have the potential to affect referral patterns are unethical. Of the four physician panelists, two felt that joint ventures in general should not be considered unethical, while two physicians felt that most joint ventures should generally be regarded as

unethical. Some panelists disagreed with the current AMA policy that physician ownership interests in commercial ventures are not of themselves unethical. Some panelists stated that even small ownership interests in many local joint ventures have the probable effect of overutilization. Some panelists argued that doctors are generally not oblivious to economic incentives. This panelist also stated that in his perception, most doctors feel joint ventures in general are unethical and undesirable, but that some feel they are forced to do it because of economic circumstance. However, he stated that he believes a substantial minority of physicians feel there is nothing wrong with joint ventures.

Most nonphysician panelists stated that joint ventures are unethical because they represent conflicts of interest which often result in higher costs, reduced access and poor quality. One [nonphysician] panelist indicated that the Institute of Medicine has said it should be regarded as unethical and unacceptable for physicians to have ownership interests in health care facilities to which they make referrals.

Types of joint ventures viewed by panelists as particularly problematic include the following: joint ventures which have financial incentives associated with overutilization; joint ventures based on fee-for-service payment systems (vs. those under capitated arrangements); joint ventures owned partially by equipment companies, hospitals, or corporations where the physician is given an interest as an inducement to referral; joint ventures which diminish local competition; joint ventures with no precertification and no type of utilization review; and joint ventures between physicians and hospitals (since these have the potential to induce overutilization).

The only joint venture cited by panelists as one from which clear advantages were gained was the rural joint venture; these arrangements typically make available a service that might otherwise not be offered. Another joint venture cited by one panelist as particularly beneficial was the type of joint venture represented by Kaiser-Permanente, a California joint venture among physicians, hospitals, and other service providers with no incentive overutilization because of the capitated payment system upon which the joint venture is based. Two panelists also indicated that joint ventures could increase convenience for both the doctor and the patient.

Some panelists indicated that joint ventures in Florida are problematic joint ventures, especially in the urban areas of the state. In addition, one panelist cited information from the Inspector General's report that Florida leads the nation in the creation of joint ventures and the utilization by Medicare beneficiaries is higher in Florida, particularly the Miami area, than elsewhere in the country.

## Current Regulation and Recommended Changes

The majority of panelists felt that current Florida regulation is inadequate. Many panelists advocated that firm disclosure to patients will not solve the problem. Second, the ten percent ownership interest currently required for disclosure was viewed by some panelists as too lenient. Third, some panelists felt that the current law is unenforced and/or unenforceable. As a result of perceived inadequacy of current regulation, panelists offered a variety of policy options. These included requiring full disclosure to patients, requiring disclosure to experts, requiring disclosure of any financial interest in local joint ventures, forbidding providers from referring patients to entities in which they have any financial interest, and forbidding providers from forming joint ventures, with some exceptions. These include rural joint ventures which provide unavailable services and capitated joint ventures which are based on more cost-effective payment incentives. For joint ventures which are permitted, one panelist suggested that the rate of returns should be regulated.

Regarding disclosure to patients, most panelists felt that this form of regulation is ineffective, for several reasons. First, panelists stated that disclosure has no effect because the vast majority of patients would not presume to counter any suggestion made by the physician or suggest through word or action that the physician might act unethically. Another panelist stated that patients "fell intimidated when told by their doctor that he or she is going to refer them to a facility in which the doctor has an interest but the patient is free to go elsewhere if the patient wants. Very few patients under those circumstances are going to say, "I don't want to go to the one that you own an interest in." They would be embarrassed and ashamed and intimidated...it's like saying to the doctor, "I don't trust you..you're a crook and therefore send me to another facility.'" Second, the nature of disclosure often biases patients in favor of the physician's joint venture (see specific examples of disclosure statements in Mr. Abernathy's comments in the attached report). Third, some panelists felt that patients are unable to sort through the implications of such disclosure, even if disclosure is made and made in a proper way. Thus, these panelists recommended that if disclosure is made, it should be made to a panel of experts, who can then decide whether the joint venture should be allowed.

Regarding the level of equity ownership, some panelists felt that any ownership interest in a local entity is potentially problematic since the financial interest has the potential to affect referrals, raise costs, lower quality, and deleteriously affect medical ethics. One panelist stated that even a very small equity interest in some joint ventures could mean thousands of a percent return for those involved.

Finally, a few panelists cited the difficulty of enforcing current regulation. In the words of one panelist, "The AMA has argued that [additional] regulations are not necessary -- that what should be done is to make sure doctors don't overutilize, that they -- only prescribe what is in the patient's interest...There is no way you can police the myriad of private decision that doctors make in their private offices. To attempt to determine whether in fact doctors are overprescribing, you would have to have the most elaborate, expensive, cumbersome bureaucracy..." Another panelist stated that currently, regulatory agencies do not have a clear idea of their territory or rights with regard to enforcement.

Regarding recommendations on how to regulate joint ventures, some panelists recommended either making most joint ventures among health care providers illegal (with a few well-defined exceptions regarding rural areas and those with capitated payment arrangements) or forbidding providers from referring patients to local entities in which they have a financial interest. Some panelists recommended disclosure to experts rather than patients. One panelist recommended more specific types of disclosure to patients. A few panelists stated that current regulation is adequate, but that it needs to be better enforced. The details of these interviews by categories of panelists are documented below.

## Section 1: Health Policy and Research Experts

Experts interviewed in this section include Arnold Relman (M.D., Editor-in-Chief of the *New England Journal of Medicine*), David Abemathy (staff member of the Committee on Ways and Means of the U.S. House of Representatives, assisted in drafting the Starke legislation), Uwe Reinhardt (Ph.D., James Madison Professor of Political Economy at Princeton, member of Physician Payment Review Commission for the U.S. Congress), and Alain Enthoven (Ph.D., Professor of Management at the Stanford Graduate School of Business).

### 1. What are the effects of joint ventures on health care costs?

Relman I think that the general thrust of joint ventures has increased medical costs inevitably because they are intended to increase the volume of services; by enlisting the participation of physicians in facilities, in laboratories, and in hospitals they tend to favor more prescribing and more use of services, and this increases medical costs.

Abernathy The issue [of joint ventures] in my mind is when physicians refer patients to entities in which they receive a financial bonus as the result of that referral. It's the notion of buying and selling referrals as a commodity in the medical marketplace. These kinds of referrals directly drive up medical costs. There is absolutely no question in my mind that, given the vague nature of many referral decisions and given the kind of unlimited ability of physicians to order evermore procedures given the presence of fairly comprehensive third-party reimbursement, when there is a direct financial incentive associated with that referral decision, physicians will by and large order more tests and procedures and drive up medical costs. Ownership is the most pernicious form--it is really a way in a joint venture in which nonphysicians bribe physician owners for their referral decisions. Given the expense of some of these procedures--such as imaging--the return is just incredible--literally thousands of percent return. So you don't need a specific kick-back arrangement. If the ownership is not dilute, then the physician will directly benefit from referrals.

Reinhardt Several studies have shown that doctors who own radiology equipment use more and charge more. Some studies suggest that doctors who are in joint ventures conduct more tests than doctors not in joint ventures. A problem in conducting studies regarding the effects of joint ventures is that at least two conclusions are possible. The first is that the doctor needs to break even on the machine and therefore uses it more intensively. The second is that the doctor may be a test-intensive doctor and may therefore want a machine on the premises. It is difficult to tease out statistically the separate effects of each of these scenarios. Additional studies need to be done in this area. Ultimately, we need a study by clinicians who can judge appropriateness of care--a clinical outcome type of study. Another type of study could look at a physician's utilization before ownership and compare utilization after ownership.

Enthoven Some joint ventures can lead to wastes and others to cost reductions. A group of doctors in town form a partnership to buy an MRI, and they order unnecessary tests and this may greatly raise costs. On the other hand, in a town without an MRI, the hospitals may form a joint venture to purchase the MRI, and this could be cost-saving. You have to look in detail at the precise arrangement. Arrangements which provide incentives to physicians to make inappropriate referrals that they are going to profit from I think [are] a problem. Here in Northern California our leading and most cost-effective health care organization is Kaiser-Permanente, a large professional corporation of doctors, combined with an insurance organi-

zation and a hospital organization. That organization owns their own laboratories, MRIs, and they compete in the marketplace and are paid on a per capita basis. The doctors do not personally profit from making referrals to an MRI machine, but since they own so much of their equipment, they can more efficiently and effectively plan usage. Generally speaking, a [key] difference among [joint ventures] is that some are paid on a capitated basis and others on a fee-for-service basis. In a capitated system, there are rewards for doing things economically. Joint ventures in which payment is on a fee-for-service basis generally lead to overutilization.

### 2. What is the effect of joint ventures on health care access?

Relman Insofar as increased utilization of resources limits the amount of money available to provide for the care of the uninsured and indigents, joint ventures tend to affect the access of medical care in terms of diminishing it because joint ventures are only concerned about providing more medical care to those who can pay. That strains the resources available to third parties including government and limits the amount of money that is available to pay for the uninsured. The more Medicare charges under Part A or Part B as a result of joint ventures, the less money the government has to pay for Medicaid. Also, the less money the government has to pay for expanding needed services for Medicare, the more they have to add to co-insurance and deductibles. Joint ventures in general are an expression of an entrepreneurial marketplace approach to health care. To the extent that health care becomes an entrepreneurial, commercialized activity, it becomes less and less accessible to the poor because more and more money will be spent by those who have insurance and less and less money is available for the third parties who have the pay the insurance premiums for those who are uninsured.

Abernathy There is no evidence that you need joint ventures to improve access. I don't think there is evidence that the American public, except in rural areas, has any difficulty having access to medical care, and the whole notion that physicians must put up money for ownership to improve access is ridiculously fallacious.

Reinhardt Some doctors claim that a certain machine, such as an MRI machine, may not be available in a rural area; in this situation, physicians may form joint ventures to further access. Regarding access for the poor, in order to cover the fixed costs for too many machines, prices rise. Thus, an excess of machines actually decreases access. To the extent that joint ventures cause overutilization of health care, they decrease access to the poor. Basically, we have priced kindness out of our soul in health care. The kind of high-priced, high-tech health care that we use in the United States definitely contributes to lower access for the poor.

### 3. What is the effect of joint ventures on health care quality?

Relman [The effect of joint ventures on quality] is a mixed bag. If you include access and availability of needed services to the poor as one of the measures of the quality of care of the American health care system, then *ipso facto* joint ventures reduce the quality of care because they reduce the amount of money available to pay for the poor, and diminish the extent, the variety, and the quality of services that the poor can get because that costs money. Now as far as the quality of services to those who have access, I would also say that it is a mixed situation. To the extent that the provision of care by joint venture arrangements is motivated by economic considerations, it may result in overservice in providing unnecessary or marginally

necessary services to insured patients. That, by definition, is not good care because there are obviously risks. So I think that joint ventures can affect the quality of care in a number of ways: by limiting access at one end of the spectrum, and by giving doctors incentives to provide unnecessary or marginally necessary care at the other end of the spectrum. It has been argued by those who think that joint ventures are a good idea that when doctors have a personal financial interest in a facility or service or laboratory or product that they're prescribing, they are more personally involved and therefore the patients will receive better service. I think that argument is spurious for several reasons. First, by law limited partners--and that is what many or most joint ventures are--limited partnerships--are not allowed to have any managerial or administrative responsibilities. In other words, they just invest their money and they refer the patients. The patients are taken care of by the professionals and the staff at the facility to which they are referred and the doctors have no control over that. So in fact you could argue just the opposite: when doctors don't have a financial interest, they might be more critical and demanding of quality before they would send the patient there. When they have an economic interest, they may be more tolerant of services that are not first-rate. And there is less competition. If you believe that competition between clinics or laboratories, etc., maintains quality because suppliers try to provide good services so the doctor will send them patients--if you believe that, and I think that is a reasonable assumption, then a vested interest or joint venture reduces that competition and makes doctors less critical and less discerning, and they are going to send the patients to the facility in which they have an interest, come what may.

**Abernathy** It is conceivable that joint ventures may adversely affect quality. Joint ventures do not improve quality if they result in excessive care.

**Reinhardt** Both overutilization and underutilization of health care negatively affect quality. To fully understand this issue, we need more studies regarding outcome/appropriateness studies of the sort the Rand Corporation has done in conjunction with coronary by-passes. A protocol is set ahead of time, and the appropriateness of the procedure is judged in terms of the set protocol.

**Enthoven** Overutilization of services can be bad for quality.

#### 4. What is the effect of joint ventures on health care ethics?

**Relman** I think joint ventures are unethical. They violate the basic spirit of medical professionalism. One of the fundamental traditions of the medical profession has been that doctors get paid as professionals only for their services to patients for what they personally do or personally supervise. They do not get paid just because they act as a middleman in referring their patients somewhere else. In fact in earlier versions of the AMA Code of Ethics and in most early writings on the subject, there was general agreement that physicians should derive income only from their personal, professional services. And now, with joint ventures, they are deriving income from something that they have no personal or professional responsibility for at all. It is not simply that doctors are being given incentives to refer their patients and to use services and use facilities. Allowing joint ventures to continue sends a signal to the young people in the medical profession that they are really businessmen...they they are entitled to make investments in facilities to which they refer their patients in a way in which many professional businessmen wouldn't allow. The doctor should be, in essence, a purchasing

agent or a counselor or a fiduciary for his or her patient. And in most walks of life, purchasing agents are not allowed to have any personal financial interest in the entities with which they do business. Doctors as counselors are judges: they are counted on to judge the quality of services that their patients might need, to decide whether the patient should have a procedure or not. The patient and the public in general need to know that the doctors are impartial, that they are uninfluenced by any other consideration than the patient's best interest. The joint venture puts an economic incentive squarely between the doctor and his patient's best interest, and to argue that doctors can overcome that financial incentive and can make decisions without regard to the fact that they have a vested interest in the product or the service that they are prescribing for their patients is to fly in the face of common sense and to imply that doctors are not like other human beings. For example, if a purchasing agent for a big corporation were to go to his boss and say, "Boss, I want you to know that I have a vested interest in some of the businesses that I purchased the company's supplies from. But don't worry, Boss, I'm an honest man and you can count on the fact that I'm only going to make decisions that are only in the company's best interest," obviously, he would be fired summarily. That wouldn't be allowed in business. And in the law where a judge has to make decisions all the time...if a judge were presiding over a trial in which there was a legal contest between two corporations with some big economic prize, and the judge were to announce before the trial started, "Ladies and gentlemen of the courtroom...I want you to know that I am a stockholder or I'm on the board of Company A...but don't worry, you can count on the fact that I'll be an impartial judge. My record is an open book and I'm a highly ethical person," obviously, he would be violating the canons of judicial behavior. It wouldn't be allowed. And yet doctors seem to feel that they can argue convincingly that having economic interests and owning stock, or having other economic arrangements with the facilities that they are judging and choosing for their patients all the time won't influence them. On the face of it, it's ridiculous.

[Regarding perceptions of physicians on this subject], I can only give you my impressions from years of addressing medical groups, talking to doctors, travelling around the country, corresponding with hundreds of physicians who have written to me over the years about their feelings on this matter, talking to medical students and residents, and so on. My personal view is the the majority of physicians in this country will admit, in private, that joint ventures, for the most part, with very few exceptions, are unethical and undesirable. Some of them feel that they have to do it because of the economic circumstances in which they find themselves. They don't like it, yet they are forced to do it. I think a substantial number of doctors just won't do it no matter what because they feel it is wrong. But I'm sure there are some, I would say they are a minority, but a substantial minority, who feel there is nothing wrong. They think doctors should be allowed to act like entrepreneurial businessmen, not like professionals.

**Abernathy** I agree with Arnold Relman and the Institute of Medicine and the American Academy of Physicians, all of whom have made it abundently clear that for physicians to own entities to which they make referrals is directly unethical. In fact, the Institute of Medicine said it should be regarded as unethical and unacceptable for physicians to have ownership interests in health care facilities to which they make referrals or to receive payments for making referrals. They are supposed to be the cream of the crop of American physicians and that is their position. And the American College of Physicians in its ethics code has similarly come out against this practice of physicians investing in these entities.

**Reinhardt** I personally believe physicians do themselves a disservice getting into this sort of thing. What if the faculty jointly owned Simon and Schuster, to which we refer students, and we reaped financial benefits? How would we feel about our profession? Ultimately, what

kind of image does a physician wish to project to the public? That of basically a busy-body entrepreneur who leaves no stone unturned to make an extra buck, or that of an intellectual scientist, a hypothesis tester, who makes his or her income by intellectual skills? More and more, people who go into these joint ventures portray the American medical profession just as another bunch of entrepreneurs, and they will be treated as such, with suspicion and disrespect. While I say that it is difficult to demonstrate that owning a machine causes unethical conduct, it gives the appearance of impropriety to the profession. I think the medical profession suffers.

Enthoven It is likely to be inappropriate for physicians to directly profit on a fee-for-service basis from referrals to something they own. It is likely to motivate inappropriate utilization.

5. Are any types of joint ventures particularly problematic?

Relman Well, there are lots. If you mean group practices, I see nothing wrong with that. Arrangements between independent practitioners whereby the referring physician gets some benefit from the physician to whom he is referring patients to, that is fee-splitting and a direct violation of the AMA Code of Ethics. Physician joint ventures with nonprofit hospitals I think are undesirable for the most part because they tend to bind a physician to a particular hospital when he or she may have opportunities to use other hospitals and tends to increase utilization of the hospital. Hospitals do these things because they want to fill their beds and provide more services and generate more income. As far as joint ventures between doctors and for-profit organizations, whether they are hospitals or ambulatory surgical centers or diagnostic clinics or imaging centers or physiotherapy units or whatever, they are terrible. Some effort should be made to make those illegal. They certainly are unethical and I think they should be made illegal because I don't believe that kind of arrangement offers American society anything beneficial, but instead runs up costs and threatens quality and access. We don't need that.

Abernathy The kinds that are particularly problematic are those that have an entrepreneur who doesn't have the ability to make referrals, and they come into a community and say to the docs, "You don't have to put up any money, and we'll cut you in for a share." That is a kick-back disguised as ownership. Some of the prospectuses we get are just amazing. A corporation out in California said, "With the right group of neurologists, neurosurgeons, internists, orthopedists, family practitioners, and others, our company will take all of the financial risk without any capital investment whatsoever by the physicians. Stated in its simplest form, we can tell you without reservation that you can increase your income significantly by merely referring your radiology studies to your own facility which has cost you nothing." Another kind of joint venture which is really terrible is the case where a hospital takes equipment or services that it already owns, creates a subsidiary corporation, transfers the ownership of that asset to that subsidiary, retains 51 percent ownership, and sells 49 percent in shares to local doctors. For example, a hospital in California sold its operating rooms to local doctors and promised a 900 percent rate of return. It took an existing service and bribed the local doctors to use it. In another case in California, the hospital sold its radiology department to local doctors.

We are aware through the Inspector General's study that Florida leads the nation in the creation of [joint ventures]. We are also aware, particularly in the physician arena, that utilization by Medicare beneficiaries is higher in Florida, particularly in the Miami area, than it is elsewhere in the country.

Reinhardt The type of joint venture where to be an investor you must make referrals, those ventures are suspicious on their face. This borders on selling referrals. In joint ventures between physicians and hospitals, the hospital is trying to bond physicians to itself, and in general I don't like these joint ventures. Ideally, you would like a physician not to have a financial interest in referring a patient to a particular hospital, or any other entity. They should be disinterested in that.

Enthoven (Fee-for-service joint ventures--See comments under Question 1)

6. Are any types of joint ventures particularly beneficial?

Relman I think there are very few. There are undoubtedly some rare circumstances in which capital is not available except through doctors. There may be communities in need of service and the service is not being provided, and only due to the fact that doctors put up some venture capital is the service going to be made available. There undoubtedly are some exceptions and I think that any law that restrains joint ventures should allow for these exceptions.

Abernathy I suppose the only kind of joint venture that is beneficial is the miniscule number of situations wherein hospitals don't have the capacity to buy the minimal level of up-to-date equipment. One out of five-hundred, maybe. In this case, [providers] put up their own money.

Reinhardt Beneficial joint ventures would be those in which investors bring a needed service to a community which does not have that service. This is an issue of mobilizing capital, which should not exclude physicians, but should not exclude others.

Enthoven (Capitated joint ventures--see comments under Question 1)

7. What are your recommendations regarding effective regulation of joint ventures?

Relman I think that the original draft of the Starke bill before it was trimmed down to what it finally was, was a pretty good first try. In general, what it said was with certain specified exceptions that doctors should not be allowed to refer patients to any entity in which they have any financial interest. Disclosure is only important if the law allows them to refer. I think that disclosure is important, but I think that it is certainly not adequate. Then there should be enough exceptions to the rule so that you can allow for those relatively rare circumstances in which it really is important for the doctors to invest some money. The terms of the investment ought to be regulated so that the returns are reasonable, and it must also be very clear that it is necessary and it is not just adding and duplicating services that are already available.

Let me add why I think disclosure is inadequate and is no solution to the problem. Patients feel intimidated when told by their doctor that he or she is going to refer them to a facility in which the doctor has an interest but the patient is free to go elsewhere if the patient wants. Very few patients under those circumstances are going to say, "I don't want to go to the one that you own an interest in." They would be embarrassed and ashamed and intimidated..it is like saying to the doctor, "I don't trust you...you're a crook and therefore

send me to another facility." The vast majority of patients won't do that. Secondly, disclosure is usually honored in the breach. Investigations have shown repeatedly that most of the time it's not done or it's done in such a perfunctory way that the patient doesn't know.

Let me point out one other thing. It think it is very important for the Florida Legislature to understand this. The AMA has argued that regulations are not necessary--that what should be done is to make sure doctors don't overutilize, that they really do only prescribe what is in the patient's interest. Individual violators, when found, should then be prosecuted... but [the AMA says] don't throw out the baby with the bathwater...don't use a cannon to kill a flea. Well, that is nonsense. There is no way that you can police the myriad of private decisions that doctors make in their private offices. There is no way that you could do that. There is no way to have adequate peer review of what doctors do in their offices. To attempt to determine whether in fact doctors are over-prescribing, you would have to have the most elaborate, expensive, and cumbersome bureaucracy that would boggle the mind...it can't be done. Summary recommendation: With a few exceptions, providers should not be allowed to refer patients to any entity in which they have any financial interest.

Abernathy Regulations are inadequate regarding disclosure. Disclosure statements that patients get are written by real smart lawyers and by psychologists and other people and they are basically designed to obfuscate the fact. Ownership in any sense of the term presents a problem. Let me give you an example of a disclosure statement. This is about a sports medicine facility. "We are the caring touch. Physical therapy may be available elsewhere, but we are the state-of-the-art facility where the knowledge and skills of our physicians and physical therapists combine to deliver the finest in medical care to restore your health. Owned in part by your physician in cooperation with XYZ hospital and managed by XYZ Sports Centers, a professional management company." This disclosure statement is in relatively small type on the bottom of a legal-sized preprinted prescription blank which includes a map to get you to this facility. I don't know many patients who are going to question ownership as a result of this kind of disclosure.

Let's talk about the equity requirement. In most of these joint ventures is that the physician doesn't own a majority--they actually own a minority--49 percent, split 10 ways. Those docs are going to make a tremendous amount of money off that 5 percent interest. Here is what the Inspector General said about the federal anti-kickback statute. "We do not believe current law has been an effective deterrent to these arrangements. We continue to believe that the anti-kickback statute is effective for the purposes for which it was originally enacted: to prevent outright kickbacks and bribes which are offered or paid to induce the referral of Medicare business. It will never be effective in curtailing business practices where the ultimate objective may be a kickback, but where the payments are masked as dividends, rents, or consulting fees." Effective regulation of joint ventures is to ban them. The issue is buying and selling of referrals in the marketplace. My view is that this really attacks the entire basis of the American healthcare delivery system, which is based on the faith that patients have in the decisions of doctors, and once they understand that in far too many cases these decisions are made for doctors' profits, it is going to be real interesting to see how patients respond. I think the only effective way to deal with this is to ban them completely, and that includes joint ventures between hospitals and doctors, between independent entrepreneurs and doctors, and between doctors and doctors--whenever the physician is in a position to profit directly from the decision to refer. Since the problem is not in rural areas, our view is "Let's exempt rural areas." There are a lot of different types of financial arrangements. We've always argued that enforcement is extremely difficult. What you want legally is a "bright line" rule, because you have to rely on self-enforcement on the one hand, and other people helping enforcement. This

will be enforced mostly by attorneys being asked their opinion by doctors as to what is legal and what isn't. Summary recommendation: With a few well-defined exceptions, make joint ventures involving providers illegal.

Reinhardt Pete Starke would prohibit certain joint ventures. It is very difficult to write legislation that a good lawyer and physician can't dance around. After all, all you have to do is become a group practice, incorporating additional specialties, such as physical therapy. Larger and larger group practices can limit competition. I would prescribe disclosure, including the form of disclosure, the particular words, the size of words, and the location. If you own three shares of Upjohn, you shouldn't have to reveal that. However, any percent of a local arrangement should be disclosed. Summary recommendation: Full disclosure of any percent of a local arrangement.

Enthoven Disclosure needs to be made to an expert. Disclosure is useful to try. I can appreciate that it might have limited usefulness, but you're going to have a hard time drawing the line legally between appropriate and inappropriate joint ventures. If a doctor buys a machine in his or her office, this might be very economical and convenient. Generally speaking, I believe the fee-for-service payment system is becoming dysfunctional with complicated high-tech medicine and other things going on. Generally speaking, capitation arrangements, especially if employers are alert, are less likely to generate abuse from joint ventures. Summary recommendation: Disclosure to an expert.

## Section 2: Physician and Hospital Representatives

Florida physician and hospital representatives interviewed in this section include Guy Selander (M.D., President of the Florida Medical Association), Charles Kahn (M.D., Internist, Chair of the Florida Medical Association Special Committee on Ethics), Maurice Laszlo (M.D., Chair of Florida Medical Association Council on Ethical and Judicial Affairs), and Charles Pierce (President of the Florida Hospital Association).

### 1. What are the effects of joint ventures on health care costs?

Selander Because joint ventures increase access, in the long-run they may increase medical costs, since if [services] are available, they will be done more. If tests are not done appropriately, certainly there could be high costs from that. If a physician were an owner in one of these operations and were not ethical, certainly it could lend itself to overutilization in order to pay the mortgage. My own feeling is to go after those people, not after joint ventures.

Kahn I would tend to think that joint ventures have very little to do with medical costs, although I have seen the Inspector General's report. Joint ventures should be designed to improve access, quality, and lower costs. This can be done. Joint ventures lend themselves to abuse if there are abusive people. The profession is primarily composed of honest, caring people. I've operated an on-site, general clinical laboratory which has never charged more than other facilities but has provided prompt and easy access to my patients and other nearby physicians.

Laszlo I have witnessed joint ventures in operation with regard to a hospital in which I practiced and with physician-laboratory joint ventures in North Dade. I have never personally been involved in any joint venture. With regard to medical costs, there is no question in my mind that the association of physicians in joint ventures leads to increases in costs. The very nature of physicians leaving the practice of medicine and engaging in entrepreneurialism and business ventures is that they are seeking to make a profit on their investment. In order to make a profit you have to make sure that there are enough patients paying enough fees so the bottom line is enhanced. When physicians join joint ventures, they are absolutely interested in sending as many patients as they can as many times as they can for as many tests as they can to the joint ventures in which they have a financial interest. Physicians are actually the purveyors of health care. Patients know very little and put their faith and trust in physicians, who are running the ballgame from beginning to end. Patients trust their physicians, but physicians who belong to joint ventures are serving two masters: their patients and their pocketbooks. Doctors go into joint ventures to make money.

Pierce I think that the HCCB needs to spend a fair amount of time very carefully defining different kinds of joint ventures. If it is defined as a contract, you've suddenly roped in every emergency room physician or in some cases every physician on a staff. I think there is a danger of overkill. In my view, almost anytime you expand services, you raise costs. Sometimes it means you are meeting needs better. Regarding physician joint ventures, I've been reading the same press as everyone else, such as the recent study in the New England Journal of Medicine that pointed out that both the increase in costs and the utilization rates when physicians own labs showed a much higher frequency. I think this raises some very serious questions.

### 2. What are the effects of joint ventures on health care access?

Selander Joint ventures in rural areas make some of the higher technology available to patients. Joint ventures increase access, and therefore in the long-run may increase medical costs.

Kahn Access is the primary reason for having a physician-owned facility--access to quality, cost-effective procedures.

Laszlo In a rural community, doctors may form joint ventures to bring services to the community, and access to healthcare can thus improve in rural areas due to joint ventures. But in nonrural areas this is not the case. The recent study in the New England Journal of Medicine proved that doctors with diagnostic facilities in their offices increased tests and utilization significantly. People in large geographical areas certainly have access to medical care, and the problem is that the cost of health care is depriving them of adequate access.

Pierce Those entities and service contracts that I am aware of illustrate some of the best things hospitals are doing to reach out to their communities. The final implications tend to be what we are doing together to get more services out to the community. However, access in terms of cost might be marginal. Where I have my concerns are when physicians in joint ventures take services out to the community but don't pick up the medically indigent. The hospitals pick up the medically indigent, but don't have as many payers to spread that cost over and this creates a problem.

### 3. What are the effects of joint ventures on health care quality?

Selander High quality tests improve the quality of health care. If they are not done appropriately, there could be high costs that result.

Laszlo By joining joint ventures, physicians are actually leading to a diminution in the quality of health care. As soon as you increase the number of studies and tests, you leave the patient wide open for decreasing the quality of health care. We are spending over \$600 billion in this country for health care and we are not one whit healthier than any other western industrialized country. Patients enter a diagnostic merry-go-round because an inappropriate study was done in the first place, and was done only because the doctor needed to improve the bottom line in the joint venture. In medicine, more is not necessarily beautiful, and less is frequently beautiful.

### 4. What are the effects of joint ventures on health care ethics?

Selander I am a believer in the ethics of the medical profession. We should be assumed ethical until proven otherwise.

Kahn If the service provided is of high quality and is at or below the cost available in the community, there is no ethical problem.

Laszlo As Chair of the FMA Council on Ethical and Judicial Affairs, the AMA policy is that physician ownership interest in commercial ventures with the potential for abuse is not of itself unethical. The potential conflict of interest must be disclosed to the patient--the ownership arrangement. Disclosure is hogwash. This is giving lip-service in the worst way. The AMA says the physician cannot exploit the patient, and the vast majority of physicians are very ethical. Let's say 90 percent of physicians are quite ethical, and 10 percent are unethical. Thus, 50,000 physicians are unethical. I submit that is a lot of people who can create mayhem in the society. In theory the professional principles are okay, but in practice, it is impossible to expect ordinary mortals--which is what physicians are--to disregard economic incentives. The FMA and AMA ethics statements are fine; but you can't separate physicians from whatever motivates any other human being. One of the ethical considerations is that remuneration cannot be based on referrals to the joint venture. However, it is considered ethical if the physician's remuneration is based on a percentage of his or her capital investment. In other words, the more he or she invests, the greater return he or she gets. I say, if you want to invest in a business venture, go invest in Connecticut, where you have nothing to say about the number of people referred there.

Pierce I've been reading the work of Jack Wennberg. I like the way he raises the question of physician-induced demand. I think that is where the big ethical questions are. I feel [joint ventures] raise problems with self-referral.

5. Are any types of joint ventures particularly problematic?

Selander There have been some problems with some of the neurological joint ventures, in that the machines are so expensive that abuse has resulted. On the other hand, neurologists are under the gun with regard to liability and under the gun to do all these tests. I think this should be watched, but I don't think they should throw the baby out with the bathwater.

Kahn The worst kind is the kind owned partially by equipment companies, hospitals, and corporations, where the physician is given an interest as an inducement to referral, whether it be an interest in the business or a kickback--income dependent on the volume of referrals. This type of joint venture is unethical and immoral.

Laszlo Investment in local joint ventures affects referrals. There will be inappropriate referrals, enhancing profits and enhancing each physician's share. The only legitimate benefit is the rural joint venture. In all other cases, the down side far overwhelms any potential benefits. In Florida, we have the problem that 20 percent of patients are over 65, so the problem exists in Florida more so than in other areas--its easier to take advantage of this population.

Pierce There may be [problematic joint ventures] but I don't have the evidence. From what I see, it is usually the hospital which is trying desperately to keep the service within the hospital.

6. Are any types of joint ventures particularly beneficial?

Selander Joint ventures in rural areas do make some of the higher technology available to patients.

Kahn I feel clinical laboratories owned by physicians are the most beneficial kind of joint venture. I've operated an on-site, general clinical laboratory which has never charged more than other facilities but has provided prompt and easy access to my patients and other nearby physicians.

Laszlo In a rural community, doctors may form joint ventures to bring services to the community, and access to health care can thus improve in rural areas due to joint ventures.

Pierce I think that with smaller, particularly rural, hospitals it is my understanding that this may be the only way in which a new service can be mounted. I suspect that for hospitals really strapped for cash, it is either this way or it doesn't get done.

Laszlo

7. What are your recommendations regarding effective regulation of joint ventures?

Selander I think joint ventures are adequately regulated. We're one of the most regulated professions in the world. I think it is time for them to back off regulations and let us practice good medicine. I don't think they should forbid physicians from referring anywhere; I don't think that is the business of regulators. Summary recommendation: current regulation is adequate.

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Kahn The regulations are adequate, but there is no way to monitor it as well as it should be monitored. The regulation should not be changed. I believe that to justify any procedures, whether it be laboratory or therapeutic, that the diagnosis has to fit. The procedure and the frequency of the procedure must be recognized by the profession in terms of accepted practice parameters. A group of academicians and physicians establish practice standards that provide guidelines--a sort of laboratory DRG. Right now, practice parameters are being established. The states should have to abide by these. Regarding disclosure, I think you should have a complete disclosure--you should explain to patients why you are referring them for the test and tell them it is available elsewhere. We post it in our office--that I own an interest in the laboratory and that there are other laboratories nearby which are capable of doing the study. Less than one percent of patients choose to get it done elsewhere. Disclosure should be in advance, and in writing. Summary recommendation: current regulation is adequate.

Laszlo Disclosure to the patient has so many holes in it it's like Swiss cheese. I was a physician with a large private practice. I really could tell my patients to do anything and they would follow through. If physicians can tell patients, "Go to my facility, it is the best," that is not effective disclosure. Patients know only what the physician wants them to know. I suspect that 99 percent of the time the physician doesn't do any disclosure--it's fraudulent. Even if the physician does disclose, the effect is zero. The physician says, "I have a financial interest." What is the patient going to do? He or she is not going to say, "I don't want to go to your clinic." Florida law is currently inadequate; disclosure is total nonsense--meaningless. If you want to make money entrepreneurially, invest in a nonfocal firm. Recommendation: Forbid physicians from referring patients to entities in which they hold a financial interest.

Pierce I think joint ventures are important, but way down on the scale. I would be very fearful or cautious about a massive regulatory foray into this arena. I think the results will be negligible on costs and everything else. I think the potential for producing massive reports that are essentially worthless is overwhelming. Summary recommendation: Current regulation is adequate.

### Section 3: Industry Representatives

Florida industry leaders interviewed in this section include Kylanne Green (Associate Director of Managed Care for the Health Insurance Association of America), Greg Short (President of Short Medical, a medical supply and equipment company), Lois Adams (President of Home Health Care Services, Inc., Chair of the Regulatory Affairs Committee for the Florida Pharmacy Association), Tim Sanders (durable medical equipment dealer), and Drexley Smith (owner of Drexley Smith Rehabilitation Center, Inc.).

#### 1. What are the effects of joint ventures on health care costs?

Adams We saw in our own industry that there were increased costs and nursing home visits in the home... We saw physicians who were out there to "get their's", and whatever happened with regard to caps on insurance coverage was just something patients had to deal with. The conditions we are most familiar with are arrangements between physicians and infusion companies and durable medical equipment companies. In these situations, more equipment was used in homes than was necessary. The physician referred the patient to the home because they were going to get part of the profits from the infusion company. One contract which came across our desk [as chair of the Regulatory Affairs Committee for the Florida Pharmacy Association] contained an offer to the physician that "if you have your patient on [a certain medication] for 30 days, we will pay you \$250. If you have your patient on [a certain medication] for 30 days, we will pay you \$1,200. In order to pay the physician for this hidden referral, someone must pay--this is the hidden tax on private health costs. For one of our patients, the physician had gone through \$50,000 of the patient's insurance money and then the insurance company dropped her and she had no more access. The physician did not continue serving her. What happens is that the joint venture between the physician and the company run tests which may not have been necessary; they make nursing visits that are not necessary; some antibiotics are used that are unnecessary; so the cost of the insurance is so high that the patient runs out of insurance more rapidly than the patient needed to. In view of this, I can understand why there is not enough money to go around.

Short I feel joint ventures do increase medical costs. If a hospital has a joint venture with a durable medical equipment (DME) company through their joint ventured home health agency, then typically we see a lot of equipment being ordered, and often in my opinion that equipment is not necessary. I've been in the business 10 years and have a good understanding of the types of equipment and their uses. As an example, a medical equipment company in this area has a capitated arrangement with an area HMO. That same medical equipment company is owned by a person who also owns a home health care agency. Patients with the HMO use fewer services. In the case of the HMO, the equipment company has no incentive to increase services due to the capitated arrangement; however, in the case of the relationship with the home health agency wherein payment is on a fee-for-service basis, equipment can be over-used.

Sanders You have a situation where the hospital owns its own DME company and therefore it probably has a vested interest in getting as much equipment used as possible, and the doctor is basically told by the discharge planner what equipment is needed for the patient. The effect is overutilization. We have a situation wherein a hospital has an agreement with a local durable medical equipment provider and the hospital receives a kickback for referrals--the guy

in the durable medical equipment company told this to me. From an economic point of view, these institutions are heavily incented to get as much equipment out as possible. So it is highly likely that overutilization takes place.

Smith Joint-ventured physicians and physical therapists are able to purchase expensive equipment because they hold the key to the referral system. They can funnel all their patients to use this piece of equipment to pay for it, often leading to over-utilization of physical therapy. In 30 years of practice I have seen very few pieces of equipment costing more than \$15,000 that were absolutely necessary for rehabilitation. Since I have no investors, I am answerable only to the patient (who seems to be the forgotten element in all of this). I am motivated to do the best job possible in the shortest time possible to keep everyone happy. If I prolong treatment past the point of medical necessity, the insurance company is all over me. If patients are unhappy, they go elsewhere. But a physician-owned practice does not have the same motivation since they can just keep prescribing physical therapy and there is really nothing that anyone can do. Therefore, my costs to the consumer and insurance company will be lower due to fewer treatments.

Physical therapy for Workers' Compensation can only be billed on two codes for a total of \$41 per treatment. However, Work Hardening Programs can be billed under a different number at 100 percent reimbursement. Many physician-owned physical therapy clinics offer work hardening and almost all back patients are referred into these programs with charges of up to \$250 per day. Patients are in these programs daily for four to eight weeks for total charges of between \$5,000 and \$10,000. [Because of the lack of patients due to the increase in physician-owned physical therapy clinics], I am no longer able to offer a comprehensive Work Hardening Program in Florida.

[Finally], the average length of time for a hospital to hire a physical therapist in Florida is 4-6 months. The journals are full of ads for physical therapists with starting salaries of \$40,000 and over, yet physicians can hire someone overnight. How? Offer them twice the money and they will leave the hospital the next day. Physicians can afford to offer these salaries; hospitals and I cannot. Someone is paying these high salaries--consumers and insurance companies.

Green Joint ventures may do something to actually increase medical costs. We have information, some of which comes from literature; the most recent article I can think of is the article in the New England Journal of Medicine regarding X-Ray utilization by providers. This may actually be a joint venture in its purest form. Thus, we tend to think that where joint ventures are involved, there may actually be a tendency to increase medical costs...

## 2. What are the effects of joint ventures on health care access?

Adams The patient can't make the selection. I have had the situation where I have had a patient for a long time. They are then admitted to the hospital for some reason, and then discharged home to a very specific health care agency. The patient will say that he wants us to continue taking care of him, but there is then an argument. The physician makes the choice for the patient. Most patients do what physicians say.

Short Initially, joint ventures could enhance access. But in the long-run it could have a reverse effect. The more joint ventures, the harder it is for companies not joint-ventured to survive. In my community, the local hospital has a joint venture with a local home health

agency, which has a joint ventured relationship with another medical equipment company. This has an adverse effect on my business revenues. We've been able to weather the storm so far, but this situation can eventually drive companies like us which are not joint ventured out of business.

Sanders I don't see any impact on access. I work heavily with Medicare patients, so I can't assess this issue with respect to the poor.

Smith If the patient, physician, or insurance company is unhappy with my physical therapy services, they can simply go elsewhere. Such is life in free enterprise. This is not the case in physician-owned practices. The patient-consumer has no choice since many times they are not even given a prescription and told "take this anywhere you wish." They are simply walked next door to the therapist. I have many people calling or coming into my office wishing physical therapy. I have to refer them to a doctor for a prescription. It is becoming more and more difficult to find a doctor who does not have some type of financial relationship with a physical therapist and who will refer that patient back to me. The Workers' Compensation situation is becoming ludicrous in Florida.

Green In some cases, joint ventures may be potentially helpful. There are some areas in this country that are in some respects underserved by types of technology. Joint ventures allow, in those areas, backing needed in order to bring technology to the underdeveloped areas. In that case, I think you can say it is potentially helpful. On the other hand, in areas where there is not a dearth of technology, [joint ventures] may encourage overutilization by providers because of the financial incentives involved. In circumstances where people have limited benefits such as those with AIDS and those who are HIV positive, you may actually see that as the cost goes up, they may actually have diminished access to medical care as a result [of overutilization from joint ventures].

## 3. What are the effects of joint ventures on health care quality?

Adams The infusion companies--those who provided pharmaceuticals and a nurse to go out to start the IV--they are not under the same kind of regulatory guidelines that we are as a licensed home health agency. We are subjected to much higher standards. (See also comments on Question 1) I have seven HIV clinical protocols on line. I probably know more about HIV disease than any other agency in town. When you only refer to one or two agencies, the expertise that another agency has is lost. If you're going to refer, utilize those resources which can best serve the patient's interest. Loss of quality also means increased costs.

We treat a lot of cystic fibrosis patients--a lot of little children who stay with us as they get older. We have a situation in which because of the joint ventures hospitals have with infusion companies and the whole gamut of care (nursing agencies, durable medical equipment, pharmaceutical companies providing infusion), care is fragmented. We had a child who was a cystic fibrosis patient. The order was given by the physician for a certain amount of fats to be given to the patient. They ran the infusion at 125 cc's an hour, and the patient had to be admitted to the hospital in respiratory distress. Somebody wasn't monitoring the whole scenario. The agency didn't have the expertise. There was a money factor involved. It had nothing to do with competence. The money factor was: Who is going to give me most for my referral? I don't feel this is an exception--it happens a lot. There is

nobody monitoring the entire situation. In our situation, the pharmaceuticals are made in the same place that the nurses are, and there is a consultation with the physician. At least three highly credentialed practitioners see the patient before care is administered.

Short When people shop for services, if they shop in a normal competitive arena, they will get a better shake. If people are being routed to certain companies because of financial relationships, quality of care can suffer.

Sanders The company with a guaranteed source of new cases obviously does not have to earn their wings every day and as a result their services are not as good--they don't make deliveries on time, etc. I think if these people were freestanding, they would be hurt by that, but because of the joint venture, they don't have to strive for excellence. Because it inhibits competition, it inhibits quality. If it weren't for the fact that some hospitals don't participate in these joint ventures, we would have an antitrust case.

Smith First, many physicians have nonphysical therapists in their offices providing "physical therapy." These non-qualified people do whatever and write notes in the chart which the doctor signs and bills for (legal in Florida) under the same code numbers which I use. A simple way to stop this abuse is to require the physical therapist's license number on every insurance bill. Second, an employee does what the employer says if they wish to keep their job. On several occasions I have refused to carry out physician orders as written because that treatment was contra-indicated. For example, ultrasound and diathermy should not be used where there is a history of cancer. Cervical traction is contra-indicated if there is cervical instability.

Green Some joint ventures that we see, particularly in the area of Washington, D.C., have a duplication of services, laboratories, and the like. In some joint ventures, these institutions, and special services, because they are smaller, are not necessarily accredited. For instance, a laboratory that is accredited by the C.A.P. is probably at least more likely to prove their quality measures than one that is not. In some of the joint ventures, I think you'd see more frequently that they would not necessarily have that credentialing.

#### 4. What are the effects of joint ventures on the ethics of health care?

Adams I think it's wrong for a physician to receive \$700 because he has referred a patient for an antibiotic infusion. I think it's wrong for him to receive \$2,100 because a patient has gone on a certain treatment for three months. It's a violation of the practice acts and I think the federal government addressed that in the Code of Federal Regulation. I think joint ventures are a violation of fair trade. Care should be based on need, not ownership. A referral system should not be based on financial remuneration. Joint ventures increase the probability of inappropriate care.

Short If a physician has a financial interest in an entity and referral patterns could be affected, this is not ethical. If a physician has a financial interest, and the physician gave the patient a list of all suppliers, including the one he or she had a financial interest in, and let the patient choose, that would be okay.

Sanders I think it is highly unethical for someone to send captive referrals to their own company to line their own pockets: dirty pool, even if it is legal.

Smith I hear physicians defend their joint ventures with the fact that it is free enterprise and other groups are allowed to do the same thing. But is it really the same thing when one group totally controls what the consumer has access to? Here are some examples. Bill had a Workers' Compensation injury--a severe knee fracture. We had rehabilitated him successfully to the point where he could now have a total knee replacement. The surgeon insisted that Bill receive his post-surgical physical therapy at his own place or he would not take responsibility for the operation. The rehabilitation nurse and Bill wanted to continue with us (we were 1/4 mile from Bill's apartment, and insurance has to pay for mileage) but the doctor said no. The nurse told the doctor she felt he was unethical. The sister of one of our therapists wanted to come to us for treatment of her knee problem but the orthopedist said that we did not have the right equipment (Nautilus) and that she was to go to his therapist. On occasions too numerous to count, we have been seeing patients on referral from their primary physician and lost them to a specialist's physical therapist when they were referred for a second opinion. The patients protest, but are told that the specialist cannot supervise their treatment as well unless they are with his therapist. The law states that the physician must inform the patient if he or she has more than a 10 percent financial interest in the physical therapist and that they can take the prescription anywhere they want to. However, four local orthopedists do not even give the patient the script; they simply walk the patient into physical therapy. One company told a physician that he must refer their employee to us rather than his own physical therapist (he had not given her a prescription, simply walked her next door). He then told the employee that we were not as good but reluctantly would allow it. He told her to return in three days. When she returned, he asked her, "Are you all well?" She said no and he answered, "I told you so," and referred her to a specialist who referred her to his physical therapist, who also is owned by the first physician. They belong to a limited partnership owned by nearly 80 physicians. This physician now circumvents the company's request that he refer all physical therapy to us by referring instead to one of the specialists in the limited partnership who then refers to physical therapy. Can you begin to imagine what this is doing to workers' compensation costs? Finally, when a large limited partnership first opened, physicians personally called the patients and told them to switch to their place. They, of course, did not tell them that they owned it--just that it was "better". How many people are going to argue with their doctor? They hold them in awe and do not wish to offend them for fear that medical care will suffer. It already has.

Green There are many physicians and providers in the community that practice medicine no differently, regardless of their affiliation. I think there are other instances where the financial incentives may, in fact, sway a provider's use of services and at least raises the question that there may potentially be a conflict of interest there.

#### 5. Are any types of joint ventures particularly problematic?

Adams The problem [of joint ventures] in Florida is very bad. The Medicaid and elderly population has led to this sort of thing. Physicians in South Florida who are treating HIV patients are overtreating them and then the patients become wards of the public. This is the scenario I'm most familiar with. The problem is extremely widespread in certain parts of the state. South Florida is a disaster. If medical practitioners don't participate, they simply can't compete down there. Central Florida is becoming a serious problem. The mind-set in the

urban areas is different from that in the rural areas, where they may still make house calls, and know the patient and the patient's family. They have to live with each other; they go to church together; they are a whole lot closer.

Smith There was a large limited partnership with 39 physicians which formed about four years ago. It nearly put me out of business. I recouped by talking to doctors who are not partners. That limited partnership recently expanded (six months ago) to now include nearly 80 doctors. My revenues are down by one-third since August. Patients are now referred from one doctor to another within the partnership and to their two physical therapy clinics. When referred to physical therapy, the patient must drive across the entire county, by-passing me and several other fine physical therapists. I see these large partnerships as the worst offenders because they totally control an entire segment of the medical community, severely restrict consumer choice, and increase direct and indirect costs.

Green Laboratory, physical therapy, hospital arrangements--the ones in which providers make direct referrals from one location to another location, particularly where there is no precertification and no type of utilization review--I think those are particularly problematic.

#### 6. Are any types of joint ventures particularly beneficial?

Short The only types of joint ventures that could be beneficial are those in a rural area with no laboratories, or durable medical equipment suppliers, and through a joint venture the service could be brought in. Generally, all other joint ventures are problematic. In Florida, the problem of joint ventures is of major significance. I see the problem as stronger in some areas than others.

Sanders The measurement would depend on whether the hospital insists on allowing the patient to choose among companies. I have never heard of a joint venture which I would say provides any benefit whatsoever.

Smith I can think of no joint ventures as particularly beneficial.

Green I think that this goes back to the issue of access. I think that a joint venture that brings in services or technology that would ordinarily not be available to a community, such as a rural community, where there is a documented need, I think that is particularly helpful.

#### 7. What are your recommendations regarding effective regulation of joint ventures?

Adams About two weeks ago, I made a presentation to the Board of Pharmacy in the Department of Professional Regulation. I had the Vice President of Operations for Options Care in California, who is also studying this issue, also make a presentation. What we looked at is that nobody really knows who should control this. The Attorney General's office said they don't really control this. The Department of Professional Regulation is hesitant to say kickbacks are a violation of the Pharmacy Practice Act or the Medical Practice Act or the Nursing Practice Act. The problem is enforcement. Practitioners should be punished appropriately for violations. In the case of the practice acts, the language is there. Enforcement needs to be coordinated. No one agency knows what to do or how far to go.

There should be a percentage ownership requirement which is reasonable. The federal government says if you own more than 5 percent, you have to disclose that to the patient. The problem is that when you go to a physician and he refers you for a technical procedure, you're not about to say, "No, doctor, I'm not going to go to that facility." The situation should be studied to find out exactly how bad the abusive situation is. I do think disclosure should be made to the regulatory boards. Summary recommendation: Leaning toward forbidding physicians from referring patients to entities in which they hold at least a 5 percent interest and disclosure to experts rather than the patient.

Short It would be best to forbid physicians (as well as hospital discharge planners, other hospital personnel, and home health care agencies, as well as all providers who refer patients) from referring patients to entities in which they have a financial interest, with minor exceptions. Summary recommendation: Forbid providers from referring patients to entities in which they hold a financial interest.

Sanders The problem with all the statutes is that no one has any money to enforce them. The only effective way to regulate joint ventures is to outlaw them. You can write more and bigger anti-kickback laws, but those things never get enforced. Summary recommendation: Forbid providers from referring patients to entities in which they hold a financial interest.

Smith We should give consumers direct access to physical therapy. Speech pathologists, occupational therapists, massage therapists, nutritionists and nurse practitioners all have direct access, and in most cases they are directly reimbursed by third party payers. If patients could come directly to physical therapy for musculo-skeletal injuries, it would eliminate the referral for profit. Also, [it should be] illegal for a physician to refer to any facility whereby he or she is directly or indirectly rewarded financially for their referral. This is already a standard for Medicare--why not across the board? Summary recommendation: Forbid providers from referring patients to entities in which they hold a financial interest.

Green I think disclosure is very important to the insurance industry...those who refer patients to entities in which they hold at least a 10 percent financial interest--unless they are a sole source provider--I think that [is] something we would forbid; full disclosure of any type of interest is necessary so that we know of any potential conflict of interest. Something that is less than 10 percent of a financial interest is not as significant as something greater. Disclosure should be in advance and in writing, particularly where you had arrangements with providers by contract. Summary recommendation: Full disclosure, including disclosure to insurance companies.

<sup>1</sup> Occasionally, interviewees had no specific comment on a question, resulting in their name and response not appearing for that question.

APPENDIX E

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**JOINT VENTURES AMONG  
HEALTH CARE PROVIDERS IN FLORIDA**

**VOLUME II**

**SEPTEMBER 1991**

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STATE OF FLORIDA  
HEALTH CARE  
COST  
CONTAINMENT  
BOARD

**JOINT VENTURES AMONG  
HEALTH CARE PROVIDERS IN FLORIDA**

**VOLUME II**

**SEPTEMBER 1991**

**STATE OF FLORIDA  
HEALTH CARE COST CONTAINMENT BOARD**

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**CONDUCTED BY THE STATE OF FLORIDA  
HEALTH CARE COST CONTAINMENT BOARD  
IN CONJUNCTION WITH  
THE DEPARTMENT OF ECONOMICS AND  
THE DEPARTMENT OF FINANCE  
FLORIDA STATE UNIVERSITY**

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## PREFACE

The Legislature, under Chapter 89-354, Section 6, Laws of Florida, directed the Health Care Cost Containment Board (Board) to conduct a special study of ownership or compensation arrangements, i.e., "Joint Ventures", between persons providing health care. Persons are defined to include real persons as well as most all business associations.

Researchers at Florida State University (FSU), under an intergovernmental services contract with the Board, were contracted to meet the study requirements. The researchers responsible for the study are Jean M. Mitchell, Ph.D., Associate Professor of Economics and Elton Scott, Ph.D., Associate Professor of Finance. The Survey Research Laboratory at FSU, under the direction of Suzanne Parker, Ph.D., handled the collection of the data.

The study program, begun in the Fall of 1989, was assisted by a Technical Advisory Panel (TAP) for the entire course of the study. The TAP, established in accordance with legislative provisions, is comprised of representatives from physicians, the hospital industry, state agencies responsible for the enforcement of the anti-kickback law, and other appropriate industry groups. The Appendix lists the TAP members as of this date.

This report represents Volume II of the three phase study. This volume contains final results on the prevalence, scope and nature of joint ventures among health care providers. The major focus of this report is to evaluate the impact of joint ventures on access, utilization, costs, charges, and quality of health care services in Florida.

The Volume I report contains a literature review, results of interviews of industry leaders, and preliminary results of the health care facility surveys regarding the prevalence, scope and nature of joint venture arrangements. Volume III will focus on the adequacy of the existing disclosure requirements and anti-kickback authority in the Florida Health Care Statutes. Volume III will also evaluate alternative policy recommendations.

## EXECUTIVE SUMMARY

The Legislature, under Chapter 89-354, Section 6, Laws of Florida, directed the Health Care Cost Containment Board to provide data-based conclusions regarding: 1) the scope and nature of joint ventures among health care providers, and 2) the impacts of joint ventures on costs, access, utilization, and quality of health care services in Florida. The legislation further required that the findings of the study be used as the basis to make recommendations for possible regulation of these ownership arrangements. The enabling legislation defined "joint venture" as any ownership or compensation arrangement between persons providing health care. In this report (Volume II), the term "joint venture" has been specified to mean any ownership, investment interest or compensation arrangement between physicians (or any health care professional who makes referrals) and an entity providing health care goods or services.

Although the literature provides extensive discussions of the pros and cons of joint venture arrangements, nearly all of the evidence regarding the effects of these ownership arrangements is anecdotal or limited by the scope of the sample used to reach the conclusions. The only available data-based study of this issue was conducted by the Office of the Inspector General in 1989. Of the eight states examined, Florida had the highest percentage of physicians involved in joint ventures. The study also reported that Medicare patients of physician owners in Florida received 40 percent more lab tests, 12 percent more diagnostic imaging tests, and utilized 16 percent more durable medical equipment than the general population of Medicare beneficiaries. The current study examines comprehensive data for all payer groups on an extensive range of services and thus presents a more complete picture as to the impact of joint ventures on access, costs, and utilization of health care services in Florida.

The variables used to evaluate the impacts of joint ventures on access, costs, and utilization are described below and are summarized in Exhibit 1.1. The relationships of these measures to access, costs, charges, and utilization are described in each chapter.

Surveys were developed to obtain ownership, financial and utilization data from Florida health care providers. Surveys were mailed to over 3000 freestanding entities; the types of entities were ambulatory surgical facilities, clinical laboratories, diagnostic imaging centers, durable medical equipment suppliers, home health agencies, hospitals, mental health treatment centers, nursing homes, physical therapy and rehabilitation centers, and radiation therapy centers. In January of 1991 the Board published Volume I of this study; this volume provided preliminary results on the prevalence and scope and nature of joint venture arrangements among Florida health care providers. Subsequently, followup

surveys of nonrespondents, surveys of parent corporation owners, and surveys of professional association owners were conducted. Based on results of this additional work the results reported in Volume I were revised; these revisions are reported in this volume II and are summarized below.

The final overall response rate is 82.4 percent. More than 90 percent of the ambulatory surgical facilities, hospitals, nursing homes, and psychiatric hospitals filed completed surveys. The response rates for clinical laboratories, mental health treatment centers, physical therapy and/or rehabilitation centers, home health agencies, diagnostic imaging centers and radiation therapy centers range between 72 and 85 percent. Only durable medical equipment suppliers had a response rate under 70 percent. The majority of the nonrespondents are concentrated in the Southeast peninsula region; about 26 percent (190) of the 713 facilities in this geographic region failed to file a completed survey.

The results on scope and nature of joint ventures show that physician ownership of health care businesses providing diagnostic testing or other ancillary services is quite common in Florida. More than three-fourths of the responding ambulatory surgical facilities and about 93 percent of the diagnostic imaging centers are owned either wholly or in part by physicians. Almost 80 percent of the responding radiation therapy centers, more than 60 percent of the responding clinical laboratories and nearly 40 percent of the responding physical therapy and/or rehabilitation facilities also report physician owners. Furthermore, about 20 percent of the responding durable medical equipment businesses, as well as close to 13 percent of the home health agencies are owned by physicians.

In contrast, physician ownership of hospitals and nursing homes is less common. Only 5.3 percent (12 of 227) acute care hospitals and 12 percent (54 of 450) of the nursing homes have physician owners. Psychiatric hospitals and mental health treatment centers reported no joint venture arrangements so that impact analyses were not conducted for these two types of entities.

Results indicate that there are at least 10,000 owners of Florida health care entities that are health care professionals or health care entities; over 80 percent of these owners are physicians. The most common types of entity owned by these physicians are diagnostic imaging centers (41%), clinical laboratories (16%) and home health agencies (13%).

For some types of entities the results indicated that joint venture ownership had little or no impact on access, costs, charges, or utilization of health care for Florida consumers. For other types of entities, the results clearly indicated that joint venture ownership had negative impacts on either access, costs, charges, or utilization. In the remaining types of entities the

nature of results was inconclusive; additional data and analysis are required for definitive conclusions.

The results indicated that joint venture ownership arrangements had little or no impact on access, costs, charges, or utilization of health care services for

- acute care hospitals
- nursing homes

Results clearly indicated problems in either access, costs, charges, or utilization (or in more than one of these areas) of health care services for

- clinical laboratories
- diagnostic imaging
- physical therapy - rehabilitation centers.

Results indicated that there could be problems or the results did not allow clear conclusions on access, costs, charges, or utilization of health care services for

- ambulatory surgical centers
- durable medical equipment suppliers
- home health agencies
- radiation therapy centers.

Other conclusions from this study are that

- joint ventures do not increase access to rural or underserved indigent patients
- at least 40 percent of physicians involved in direct patient care in Florida are owners of joint venture health care facilities to which they may refer their patients for services. A total of 9,682 physician owners of health care entities were identified.

Here and elsewhere in this report the term "significant" means that differences in averages were statistically significant (at the 10% level). Brief summaries of results for each facility type are provided below.

Ambulatory Surgical Centers were subdivided into multi-specialty surgical centers and ophthalmological specialty surgical centers. Multispecialty ambulatory surgical facilities are relatively homogenous with respect to costs, charges, quality and profitability. The major significant difference between joint venture and nonjoint venture multispecialty surgery facilities arises with respect to access. In particular, joint venture multispecialty surgical facilities treat no Medicaid patients. Furthermore, nonjoint venture multispecialty ambulatory surgery centers have significantly higher discounts and contractual

adjustment rates than physician owned multispecialty surgery centers.

Ambulatory surgery centers specializing in eye surgery are relatively homogenous with respect to access, costs, charges, utilization and profitability. Thus, joint venture ownership does not appear to significantly influence, costs, charges, quality or profitability of either type of ambulatory surgical facility. These results, however, represent small sample sizes; further study is needed for definitive conclusions.

Clinical Laboratories were subdivided into four groups; effects of joint venture ownership were evaluated in detail for the two basic types of clinical laboratories: 1) labs with courier services, and 2) labs without courier services. Furthermore, some limited comparisons were also made between these labs and labs owned by pathologists. (Specialty labs were not included in the analyses.) Nonjoint venture courier service labs generate significantly more revenue from Medicare, Medicaid and self-pay patients than their joint venture counterparts. Nonjoint venture labs without courier services generate a significantly larger share of their revenues from Medicaid, and significantly more revenue from contract work than otherwise similar labs owned by physicians.

Physician owned labs with courier services have significantly higher utilization rates and generate significantly higher revenue per patient than courier service labs without physician owners. Joint venture labs without courier services perform significantly more procedures per patient than otherwise similar nonjoint venture labs.

In sum, the findings reported here indicate that joint venture clinical labs perform more tests per patient and have higher charges per patient than nonjoint venture labs.

Diagnostic Imaging Centers reported that physicians had ownership interests in all but eleven of the responding freestanding imaging centers. Ten of the eleven nonjoint venture imaging centers provide only x-ray services. These results preclude meaningful comparisons of results for joint venture and nonjoint venture Florida imaging centers. Descriptive statistics are reported for specialized and for comprehensive imaging centers. Access is a problem regardless of the type of services provided as joint venture diagnostic imaging centers treat a negligible number of Medicaid patients. The results show all types of imaging centers (except x-ray services centers) have higher average percent operating income (relative to the risk of that income) than the other facilities examined in this study. This higher percent operating income indicates either disproportionately high net charges or low expenses as a percent of net charges and shows that joint venture imaging centers in Florida are far more profitable

than most other types of nonjoint venture Florida health care businesses.

Utilization rates are summarized for joint venture imaging centers providing MRI scans and CAT scans in Florida counties with joint ventures but utilization comparisons were a problem for imaging centers due to a lack of nonjoint venture facilities in Florida. To overcome this problem, comparisons were made between utilization rates for the Baltimore MSA and utilization rates for three Florida MSA's with similar socioeconomic status characteristics. MRI scans and CAT scans for the three Florida MSAs were found to be higher than utilization rates for the Baltimore MSA. The extent of higher utilization in the Florida MSAs relative to Baltimore ranged from 14 to 65 percent. The relative percentage difference between utilization rates for CAT scans in each of the Florida MSAs and Baltimore ranged from five to 28 percent.

Thus, the limited comparisons for the Florida joint venture imaging centers indicates that the utilization of diagnostic imaging services is higher as a result of joint venture ownership.

Durable Medical Equipment Suppliers are diverse in the services provided: this diversity precludes an indepth analysis of the impact of joint ventures on this industry. Meaningful per unit comparisons of utilization, expense, and charge measures cannot be computed. Results reported are limited to the issues of access, profitability and net charges (after discounts). Nonjoint venture equipment dealers generate a significantly larger share of their revenues from Medicare, and self-pay patients than their joint venture counterparts. This suggests that the nonjoint venture equipment dealers provide greater access to patients with limited ability to pay. Also, nonjoint venture businesses average significantly higher discounts and writeoffs than physician owned firms. If gross charges are similar, this finding suggests that nonjoint venture providers are less expensive than joint venture businesses. Also, equipment businesses owned by physicians are more profitable. A problematic arrangement in the medical equipment and supply industry that may inhibit competition are joint venture businesses that are "shell" companies. More comprehensive data is needed to evaluate impacts of joint venture ownership on the utilization and expenses for durable medical equipment services.

Home Health Agencies were subdivided into agencies that are Medicare certified and those that are not Medicare certified. The joint venture agencies, while demonstrating some differences, provide no clear pattern of greater profitability for physician owners of home health agencies. Private non-Medicare joint venture agencies generate significantly higher gross and net revenue per patient than their nonjoint venture counterparts. Medicare certified joint venture agencies render significantly more visits

revenue per patient (\$200 or 31 percent) due to the higher utilization of services. Joint venture physical therapy facilities are also significantly more profitable than their nonjoint venture counterparts.

Joint venture physical therapy facilities averaged 62 percent more visits per full time equivalent (FTE) licensed physical therapist; this difference is statistically significant. These, and other findings indicate that joint venture facilities provide a lower quality of care or provide simpler services because both licensed therapy workers and nonlicensed workers spend less time with each patient. These results also explain why the average total cost of a physical therapy visit is less in joint venture facilities than in nonjoint venture facilities.

Patients treated at physician owned comprehensive rehabilitation facilities averaged significantly more (32 percent) physical therapy visits than patients treated at nonjoint venture facilities. Physician owned rehabilitation facilities are more profitable and have a lower average cost per visit than nonjoint venture providers. Costs are lower, in part, because joint venture rehabilitation facilities average significantly more visits per licensed physical therapist than nonjoint venture facilities. These findings imply that joint venture facilities provide lower quality services, than their nonjoint venture counterparts because visits are of shorter duration and/or that services are not administered by licensed practitioners. Finally, physician owned rehabilitation facilities have higher average lists charge than their nonjoint venture counterparts.

In sum, for both joint venture physical therapy and rehabilitation centers average utilization rates (visits per patient) are significantly higher, and average revenue per patient is significantly higher for facilities specializing in physical therapy services only. Finally, both joint venture physical therapy and rehabilitation facilities render significantly more visits per licensed physical therapist. This is also the case when visits are expressed relative to the sum of FTE licensed physical therapists and licensed therapist assistants. This suggests that joint venture facilities provide lower quality services than their nonjoint venture counterparts because their visits are of shorter duration. This could imply that services are being delivered by nonlicensed persons.

Radiation Therapy Centers are predominantly owned by physicians. Regardless of ownership status, radiation therapy facilities generate comparable shares of their revenue from all payer classes. Radiation therapy centers not owned by physicians render more procedures per patient than their physician owned counterparts. On the other hand, physician owned radiation therapy centers charge more per procedure, which on net results in higher total charges per patient.

## INTRODUCTION

The Legislature, under Chapter 89-354, Section 6, Laws of Florida, directed the Health Care Cost Containment Board (Board) to conduct a special study to provide data-based conclusions regarding: 1) the scope and nature of joint ventures among health care providers, and 2) the impact of joint ventures on costs, access, utilization, and quality of health care services in Florida. The legislation further required that the findings of the study be used as the basis to make recommendations for possible regulation of these ownership arrangements.

The enabling legislation defined "joint venture" as any ownership or compensation arrangement between persons providing health care. In this report (Volume II) containing the impact analysis of joint ventures, the term "joint venture" has been applied to any ownership, investment interest or compensation arrangement between physicians (or any health care professional who makes referrals) and an entity providing health care goods or services. Volume III, the final study report, will focus on the adequacy of the existing disclosure requirements and anti-kickback authority in the Florida health care statutes. Volume III will also evaluate alternative policy recommendations.

Physician ownership of health care facilities to which they make referrals has been frequently debated (Dobson, Todd and Manuel, 1986). Critics maintain that physician involvement in joint ventures presents conflicts of interest, increases costs, and generates unnecessary utilization of services. Critics also contend that joint ventures decrease access because these facilities "cream skim" and treat only patients with good insurance coverage. Further, critics argue that these arrangements create a captive referral system, which limits competition by nonjoint venture providers. This lack of competition in turn may adversely affect the quality of services.

On the other hand, proponents of joint ventures argue that these arrangements are necessary adjustments to the major changes that have occurred in the health care sector during the 1980s. Potential benefits of joint ventures include economies of scale, increased ability to compete, improved access to capital financing, diversification of project risks, and improved access to persons in medically underserved areas (Rosenfeld, 1984). For example, proponents have stated that joint ventures between hospitals and physicians may enable both hospitals and physicians to attract more private pay patients and as a consequence, lower the average costs of treating large numbers of Medicare patients.

Although the literature provides extensive discussions of the pros and cons for joint venture arrangements, nearly all of the

evidence regarding the effects of these ownership arrangements is anecdotal or limited by the scope of the sample used to reach the conclusions. The only available data-based study of this issue was conducted by the U.S. Department of Health and Human Services, Office of the Inspector General in 1989. Of the eight states examined, Florida had the highest percentage of physicians involved in joint ventures. The study also reported that Medicare patients of physician owners in Florida received 40 percent more lab tests, 12 percent more diagnostic imaging tests, and utilized 16 percent more durable medical equipment than the general population of Medicare beneficiaries.

While the OIG study reveals that joint ventures result in higher utilization of services, the study only examined the utilization of services by Medicare beneficiaries, and therefore offers little insight as to the effects of joint ventures on the general population. The current study examines comprehensive data on an extensive range of services and thus presents a more complete analysis of the impact of joint ventures on access, costs, utilization and quality of health care services in Florida.

In January 1991, a preliminary report (Volume I of the study) regarding the scope and nature of joint ventures in Florida was prepared for the Legislature. Approximately 75 percent of the facilities had filed questionnaires at the completion of the Volume I report. Each survey response was examined to identify incomplete and inconsistent information. This data verification phase of the project proved to be critical as many of the responses were returned with incomplete information. An intensive effort of telephone follow up calls were conducted to obtain missing data and to correct incomplete information reported on the facility questionnaires. These efforts resulted in a final overall response rate of 82 percent. This second volume of the study reports final results regarding the prevalence, scope and nature of joint ventures among health care providers in Florida. The major focus of Volume II, however, is to examine the effects of joint ventures on access, costs, charges and utilization, of health care services in Florida.

The variables used to evaluate the impacts of joint ventures on access, costs, utilization are described below and are summarized in Exhibit 1.1. Some limited measures of quality are also described. The relationships of these measures to access, costs, charges, utilization, and quality are described in each chapter.

Numbers of patients, units of service per patient, and price per unit determine gross revenue (gross sales). All are directly related to gross revenues. If other influences are held constant, more patients will generate more gross revenue, more units per patient will increase gross revenues, and higher list prices will increase gross revenues. Gross revenues, adjusted for contractual

allowances and discounts, less bad debt and charity care yield net revenues. Net revenues, or actual dollars collected before expenses, are reduced by price competition as well as by the provision of services to medically underserved groups such as Medicaid patients and indigent patients. Discounts and contractual adjustments represent gross revenues, less writeoffs for bad debt and charity care, less net revenues, as a percent of gross revenues. Discounts and contractual adjustments increase with greater discounts or contractual adjustments to list prices.

Access is another key component of an analysis of the impact of joint ventures on the provision of health care services. "Access" as used in this study, is evaluated from an economic perspective by examining the availability of services to insured, underinsured, and indigent patients. The geographic location of these facilities is also noted to ascertain whether joint ventures increase access to persons residing in medically underserved areas. One could argue that any joint venture that establishes additional health care services will increase access even if it limits economic access. This argument presumes that only the joint venture owners are willing to provide such services. Results here do not support this argument.

If access is not limited by joint venture businesses, then one should find that these facilities provide services to all patients, and that competitive prices are offered to patients and third party payers. Furthermore, access for Medicare, Medicaid and charity care patients should be either greater or comparable to the levels of Medicaid and charity care rendered by nonjoint venture providers. On the other hand, if joint venture businesses cream-skim and only provide services to patients with generous insurance coverage, amounts of discounts and the quantity of services provided to underserved groups would be lower.

Access to health care services is increased when services are made available to persons who did not previously have access to the service. Thus joint ventures could increase access if the business is established in geographic areas where the service was previously unavailable. Rural areas are often regarded as underserved for some services because the demand for services is not sufficient to cover the costs of providing services. Persons covered by Medicaid and uninsured persons who are indigent often have limited access to health care services. Increased access to these persons would benefit the health care system while reduced access for these patients would have detrimental effects. Thus, if joint venture businesses provide less care to these persons (relative to nonjoint venture providers), this results in shifting the burden of care for these persons to nonjoint venture providers. Access to Medicare recipients is also a concern as these patients usually are served at reduced rates.

The measures of access employed for this study are the percent

of revenues obtained from Medicaid, the percent of revenues for services provided to bad debt and charity care, and the percent of revenues from Medicare. If these percentages are systematically lower for joint venture businesses, one must conclude that joint venture businesses provide less access to indigent persons, persons covered by Medicaid, or persons covered by Medicare. Although physicians, and not health care entities, control the number of such persons at joint venture entities, lower percentages indicate that either referring physician owners or the other referring physicians who utilize joint venture entities have systematically provided less access to these persons at the joint venture entity. In this circumstance, care for indigent patients and Medicaid patients would usually have to be obtained from outpatient units of hospitals. As a consequence, this shifts the expense of care for these patients to hospitals.

Objective measures of economic access used for this study are the actual percent of revenues obtained from the various payer classes. If joint ventures increase (or at least do not reduce) economic access, higher (or equal) percentages of revenues should be found for Medicare, Medicaid, and bad debt and charity care. Conversely, if economic access is reduced by joint venture ownership arrangements these percentages would be lower for joint venture providers. In this study access will be evaluated based on services provided to these groups of payers. Interpretation of differences in percentages of revenues obtained from other payer classes is less clear.

Discounts and contractual adjustments represent adjustments to gross revenues. Discounts and contractual adjustments in percentage terms, are defined as gross revenues minus bad debt and charity care minus net revenues (before expenses) divided by gross revenues. Given similar list prices, the discount rate should increase as access is provided to patients at lower prices or as discounts are offered to managed care insurers.

The impact of joint ventures on "costs" can be measured from two perspectives. First, costs to consumers can be measured by evaluating gross and net charges per unit of service, adjusted by the utilization rates and controlling for the type of facility and geographic region. Second, the costs of producing units of service can be analyzed to identify potential efficiencies or inefficiencies in production. Here again, comparisons should control for the type of facility and for geographic influences. The basic indicators of costs to consumers and production costs are described below. These measures are used to make comparisons for each facility type.

Expenses are classified as direct or fixed; direct expenses vary directly with the quantity of services produced, whereas fixed expenses are independent of the volume of services produced. Direct expenses depend on efficiency and quality. More efficient

producers can generate more units of service per hour of employee time and thus incur lower expenses per unit while maintaining quality standards. Alternatively, higher levels of output can be achieved by producing at substandard quality levels. Although total fixed expenses do not vary with the quantity of services produced, fixed expenses per unit or fixed expenses as a percent of total expenses decline with increased quantities of production. Fixed expenses include lease and rental payments, depreciation, and other overhead expense that do not vary with production levels.

In situations where normal economic forces of competition are constrained (or do not apply), businesses with market power may set prices at excessive levels or limit costs by reducing quality and thereby earn abnormally high profits. In the case where health care providers can make referrals to joint venture facilities in which they have a financial stake, the normal economic forces of competition may not apply. Critics maintain that a captive referral system enables the joint venture provider to set higher prices, order an excessive number of visits, diagnostic tests or other ancillary services, or provide lower quality services than facilities which are not involved in joint ventures. Of course, the referring health care providers could also use their ownership power to ensure that fair market prices are charged, and that only necessary quantities of high quality services are rendered to patients. Indeed, as proponents of joint ventures have argued, economies of scale could result in lower prices and/or the provision of higher quality services.

Given that profitability is determined by the quantity of services provided, as well as the production costs and charges for these services, an evaluation of firm profitability is one component of this analysis of the impact of joint ventures on utilization, costs, charges and access. Profits represent a return to owners on their invested capital. Such returns should be large enough to compensate the owners for the risks associated with their investments. Although skillful management or luck may yield above average profits, average rates of return for a group of businesses should be comparable to the rates of return for other firms with similar degrees of risk.

Profits equal net revenues minus expenses. Operating income is generally defined as net revenues less direct operating expenses. Although in some situations lease, rent, and depreciation expenses are regarded as operating expenses, here these items are treated as fixed expense items. Operating income increases as net revenues increase and decreases as direct expenses increase. Profits before interest and taxes equals operating profits less fixed expenses; higher fixed expenses reduce profits. Net profits before taxes exclude interest paid; here again higher interest payments reduce this net profit amount. (General usage of the term "profit" refers to net profit; in this study

profitability is indicated by percent operating income as a percent of net revenues).

Operating income is used as the basis for measuring firm profitability in this study. To adjust for differences in facility size, operating income is expressed relative to net revenues. This measure is referred to as "operating income as a percent of net revenue." The measure is not adjusted for fixed expenses, interest or other overhead, because these items are sometimes influenced by joint venture arrangements.

In the case of physical therapy/rehabilitation centers, visits per licensed full-time equivalent (F.T.E.) health care worker are reported as indicators of quality. Costs can be reduced and profits increased by increasing volumes of services per employee, or by substituting workers with lower skill levels. Variations in types of services can influence this measure but unless these types of services vary systematically with the type of ownership, averages should be the same for both ownership groups. Comparisons of these measures can indicate situations where quality has been sacrificed for profitability. Thus, for physical therapy services this measure should indicate variations in the quality of physical therapy services. For services where capital may substitute for skilled workers the degree of substitution is ambiguous.

The null hypothesis of interest in this study assumes that there are no differences (or that differences are beneficial to consumers) in averages for joint venture providers and averages for nonjoint venture providers. The alternative hypothesis assumes that differences in averages are detrimental to Florida consumers. If the null hypothesis is true and random variations in sample averages lead to rejection of that hypothesis, this error could result in recommendations of changes in regulation of joint ventures when there is truly no impact on Florida consumers. The primary cost of such an error to Florida consumers would be the cost of unneeded regulation. If, on the other hand, the null hypothesis of no effect is false, and the alternative hypothesis (that joint ventures have detrimental effects on Florida consumers) is true, a different set of costs apply to the decision. Failure to reject a false null hypothesis would lead to the conclusion that joint ventures have no effect; the outcome of failing to reject a false null hypothesis would allow joint venture businesses to reduce access, or overutilize, or overcharge for services, or deliver services of inferior quality, or some combination of these. The cost to Florida consumers would be needlessly increased costs for health care services and the excessive profits that are generated would accrue to owners of joint venture facilities.

Tests of hypotheses focus on limiting the probability of rejecting a true null hypothesis (the first scenario above). The probability level chosen is commonly referred to as the significance level and in scientific or academic research a five

percent level of significance is commonly used. In economic and business research, the level of significance should be chosen to balance the anticipated costs of making both types of errors. For a given sample size the probability of making the second type error (not rejecting a false null hypothesis) can be reduced only by increasing the probability of making the first type of error (rejecting a true null hypothesis). In this study the gravity of the second type error led the researchers to set the significance level at ten percent; for each comparison based on sample results that would be significant at this level or at lower levels, the observed level of significance is reported. While the number of data points varies from variable to variable, the reported significance levels are based on the actual number of data points used. It must be noted that when there is actually no difference in averages for joint venture providers and nonjoint venture providers, random variations in the pairs of sample averages will result in significant differences being observed ten percent of the time. Thus, infrequent significant differences are to be expected if the null hypothesis is true. It should also be noted that patterns of nonsignificant differences should not be ignored; with no systematic influences, differences in the sets of measures used here should vary randomly.

Statistically significant differences, indicate that there is some systematic influence that produced differences in the averages. For comparisons of joint venture versus nonjoint venture providers this study has identified and controlled for obvious systematic influences such as the type of service being provided and geographic influences.

This Volume II report is organized as follows. Chapter I reports on the prevalence, scope and nature of joint ventures among health care providers in Florida. This chapter also describes the characteristics of physician owners of joint venture health care facilities. Chapter II reports on the impact of joint ventures on the provision of services by ambulatory surgery facilities. Results pertaining to services provided by clinical laboratories are reported in Chapter III. Chapter IV presents results regarding the provision of diagnostic imaging services. The effects of joint ventures on the provision of services by durable medical equipment suppliers is presented in Chapter V. Results for home health agencies are reported in Chapter VI. Chapter VII examines the impact of joint ventures on the provision of services by acute care hospitals. Chapter VIII discusses the impacts of physician ownership on the nursing home industry. Chapter IX evaluates the impact of joint ventures on the provision of services by physical therapy and/or rehabilitation centers. Chapter X examines the effects of joint ventures on facilities providing radiation therapy.

## EXHIBIT 1.1

### Definitions of Terms

**Patients** means the number of patients who purchased or received services from the entity.

**Units of Service** vary for each type of health care business. "**Procedures**" are used for outpatient surgical services, clinical laboratory services, diagnostic imaging services, and radiation therapy services. "**Visits**" are used for home health services and physical therapy-rehabilitation services (procedures or modalities are also used for physical therapy-rehabilitation services). **Patient days** are used for nursing home services (and for inpatient acute care hospital services).

**Price per Unit** is the list charge per unit (without adjustments) or average gross revenue per unit.

**Gross Revenue** is the total dollar amount of sales before any discounts or other adjustments are applied.

**Net Revenues** are gross revenues less 1) discounts, adjustments for contractual prices (including adjustments for Medicare or other, third-party payers), 2) deductions for all amounts of uncompensated charity care provided, and 3) writeoffs of bad debt and uncollectable amounts.

**Discounts and Contractual Adjustments** represent the difference in gross revenues and net revenues, less writeoffs for bad debt and charity care, as a percent of gross revenues. Thus, discounts and contractual adjustments indicate the percent discount on list prices due to contractual arrangements with third party payers, including the markdowns for Medicare and Medicaid patients.

**Direct Expenses** include expenses that apply directly to the cost of producing the service. Direct expenses include costs of wages and salaries, fringe benefits, medical and surgical supplies, laundry, office expenses, and other general operating expenses. In some types of businesses contract expenses are treated as direct expenses. Direct expenses do not include lease payments, rent payments, depreciation charges, or other overhead.

**Fixed Expenses** include depreciation expenses, lease payments, and rental payments.

**Operating Income** is net revenues minus direct expenses. That is, income before fixed expenses, interest, and other overhead expenses.

**Operating Income as a Percent of Net Revenues** is net revenues less direct expenses expressed as a percent of net revenues.

**Units of Service per F.T.E.** is the total number of units produced divided by the number of full-time-equivalent employees. (F.T.E.). This measure is usually computed for the number of F.T.E. licensed or specially trained health care workers.

**Significant or Statistically Significant** means that the probability of the observed difference (or a greater difference) occurring due to chance is less than .10. In technical terms, a null hypothesis of no difference was tested against a one tailed alternative hypothesis at the .10 level using a t-test.

## CHAPTER I

### UPDATE OF HEALTH CARE FACILITIES SURVEYS

#### A. The Survey Process for Health Care Facilities

Mailing lists were compiled for Florida ambulatory surgical facilities, clinical laboratories, diagnostic imaging centers, durable medical equipment suppliers, home health agencies, acute care hospitals, mental health treatment centers, nursing homes, physical therapy-rehabilitation centers, psychiatric hospitals, and radiation therapy centers. The survey process required three mailings staged over a three-month period. Volume I reports on the details of this phase of the project.

As reported in Volume I, as of January 15, 1991, 3075 facilities had been identified as eligible. At that date, 75.4 percent or 2319 entities had filed completed surveys. The preliminary response rates for the individual facility groups were: ambulatory surgery facilities (90.7%), clinical laboratories (78.8%), community mental health centers (85.1%), diagnostic imaging centers (56.6%), durable medical equipment suppliers (59.8%), home health agencies (77.7%), hospitals (94.0%), nursing homes (96.2%), physical therapy and/or rehabilitation centers (60.8%), psychiatric hospitals (95.7%), and radiation therapy centers (68.2%).

Each survey response was examined to identify incomplete and inconsistent responses. This data verification phase of the project proved to be critical as many of the surveys were returned with incomplete or inconsistent information. An intensive effort of telephone followup calls was conducted to obtain missing data and to correct inconsistent information reported on the facility questionnaires.

As a consequence of these efforts, complete and consistent information on ownership required to classify the facilities as either joint venture or nonjoint venture was obtained from all survey respondents. Although some facilities refused to report the identities of their owners, they did indicate the number and type of health care professional owners. Furthermore, information on key financial, utilization and access variables was obtained from about 80 percent of the facilities.

#### B. Telephone Followup of Nonresponding Facilities

In order to evaluate potential nonresponse biases, a brief telephone followup survey was conducted with the nonrespondents from the three facility groups with the lowest response rates: physical therapy and/or rehabilitation centers, diagnostic imaging centers, and durable medical equipment suppliers. The telephone followup survey was designed to ascertain why these facilities

failed to file a completed questionnaire, and to determine whether the owners are physicians, other health care professionals or other health care entities. These results thus indicate proportions of nonresponding facilities which are "not applicable" and whether the eligible nonrespondents are more or less likely to be involved in joint venture arrangements. This component of the data verification process proved to be critical for at least two reasons.

As a consequence of the phone calls, several facilities were classified as ineligible. Sixty physical therapy and/or rehabilitation centers, forty diagnostic imaging centers, and seventy-one durable medical equipment suppliers were classified as such because they were either duplicates of previously submitted surveys, were no longer in business, were physician practices with diagnostic equipment, were billing addresses, or they did not provide the service in question.

When asked why they failed to return a completed questionnaire, most facilities indicated that they had never received the survey. (This is the expected response). Others stated that they did not comply because they were not involved in a joint venture. After the purpose of the survey was explained to the interviewees, most of these facilities indicated they would complete the questionnaire. Other nonrespondents claimed that the survey was never received by the appropriate person (i.e., the controller or financial officer). Many of the nonrespondents indicated that they would be willing to submit the information if another survey was mailed to them. Relatively few of the facilities refused to comply because they believed that the Board did not have the authority to collect the information under the enabling legislation.

The findings from the telephone followup survey revealed that the nonrespondents are more likely to be involved in joint venture arrangements. For example, forty of the sixty nonresponding imaging centers reported some physician owners. The information reported by 33 of the 40 joint venture imaging centers reveals that altogether these facilities involve at least 1000 additional physician owners. Nonresponding durable medical equipment and physical therapy facilities were also more likely to be involved in a joint venture arrangement.

The telephone followup of nonresponding entities also prompted 51 facilities to submit a completed questionnaire. All of these late responses were either physical therapy/rehabilitation centers or diagnostic imaging facilities. Of the 40 surveys received from physical therapy centers, 58 percent (23) are owned either partially or wholly by physicians. These facilities accounted for approximately one hundred additional physician owners. All of the eleven diagnostic imaging center surveys received as a consequence of the telephone followup calls are joint venture facilities.

These eleven imaging centers identified 253 additional physician investors. No completed surveys were submitted after the telephone followup by any of the durable medical equipment businesses.

Finally, some additional points are worth noting regarding the nonrespondents in those entity groups where no telephone followup of the noncomplying facilities was conducted (ambulatory surgical facilities, clinical laboratories, and home health agencies). First, during the data verification phase of the project the researchers ascertained that all seven nonresponding ambulatory surgical centers were owned either in part or wholly by physicians. Second, a random sample of 30 of the nonresponding clinical laboratories and home health agencies were contacted by telephone. About 60 percent of the nonresponding clinical laboratories and home health agencies contacted indicated they were owned by physicians.

### C. Final Survey Response Rates

The telephone followup surveys of diagnostic imaging centers, physical therapy facilities and durable medical equipment suppliers, identified additional facilities which were ineligible. In addition, some of the surveys recorded as complete responses as of January 15, 1991 were subsequently identified as ineligible upon evaluation by the FSU researchers. The major reason for the change in classification status was either that the facility was no longer in business or that it did not provide the type of services in question. For example, some durable medical equipment suppliers were classified as ineligible because they were suppliers of orthotics and prosthetics. Thus, the number of completed surveys is approximately 100 less than indicated previously in the Volume I report.

After deleting the "not applicable" and "return to sender" facilities from the mailing lists, there are 2669 eligible facilities. Table 1.1 shows the response rates by health care facility type. Altogether 82.4 percent or 2200 of the eligible facilities have submitted a survey with usable and consistent information to classify each facility as joint venture or not joint venture. The overall response rate is high; the typical response rate expected from a mail survey comprised of three mailings is about 60 percent (see Dillman (1978)). Importantly, because of the intensive data verification efforts, only a small percentage of the surveys are missing data on key variables.

Table 1.1 shows that over 90 percent of the ambulatory surgery facilities, hospitals, nursing homes and psychiatric hospitals have filed completed surveys. The response rates for clinical laboratories, mental health treatment centers, physical therapy and/or rehabilitation centers, home health agencies, diagnostic imaging centers, and radiation therapy centers range between 72 and 85 percent. Note in particular that the response rate for

diagnostic imaging centers has increased from 56 percent as reported previously in Volume I to almost 73 percent. The only facility type with a response rate under 70 percent is durable medical equipment suppliers, where the response rate is 66 percent.

#### D. Response Rates by Geographic Region

The overall response rate for each facility type may be misleading if the nonrespondents are concentrated in particular geographic regions of the state. To evaluate whether this is the case, the response rates are analyzed by four geographic regions: North Florida (HRS districts 1, 2, 3 and 4); the Western Peninsula (HRS districts 5, 6 and 8); the Central and Eastern Peninsula region (HRS districts 7 and 9); the Southeast Peninsula (HRS districts 10 and 11).

The response rates by entity type within each of the four geographic regions are reported in Table 1.2. The overall response rates by geographic region reported in the last row of Table 1.2 show that approximately 85 percent of the entities in North Florida, the Western Peninsula, and the Central & Eastern Peninsula have completed the questionnaire. The majority of the nonrespondents are concentrated in the Southeast peninsula; about 26 percent (190) of the 713 facilities in this geographic region failed to return a completed survey. Thus, more than 40 percent of the nonresponding entities (190 of 469) are located in the Southeast Peninsula region.

Additional points of interest are revealed by this analysis. First, facility types with high overall response rates generally exhibit comparable response rates within each of the four geographic regions. Second, most of the nonrespondents are concentrated in three groups: home health agencies, diagnostic imaging facilities, and durable medical equipment suppliers. While 112 of the nonrespondents are home health agencies, the response rates for this facility type do not vary significantly by region. In contrast, a different pattern exists among the suppliers of durable medical equipment and diagnostic imaging centers.

The response rates for diagnostic imaging facilities by geographic region displayed in Table 1.2 indicate that the Southeast Peninsula has the lowest response rate; about 62 percent (46 of 74) diagnostic imaging facilities in the Southeast region have filed completed questionnaires. Thus, nearly half of the nonresponding imaging centers are located in either Broward or Dade county.

A similar pattern emerges in the case of durable medical equipment businesses. The response rates for suppliers of durable medical equipment located in North Florida, the Western Peninsula, and the Central/Eastern regions range between 67 and 74 percent.

In contrast, only 56 percent (90 of 160) durable medical equipment suppliers operating in the Southeast Peninsula region have responded to the survey. Thus, approximately 45 percent (70) of the 153 nonresponding durable medical equipment businesses are located in the Southeast Peninsula.

E. The Scope and Nature of Joint Ventures Among Health Care Providers

Table 1.3 describes the scope and nature of the ownership arrangements of the health care facilities that filed completed questionnaires. These results are based on both direct ownership and on the ultimate owners of parent organizations. The ultimate owners of parent organizations were identified by surveying all corporations, partnerships, and entities identified from the facility surveys as the parent organization(s) of subsidiary health care entity owners. Mental health treatment facilities and psychiatric hospitals are excluded from subsequent analyses because none of these facilities are involved in joint ventures.

The followup survey of parent organization owners and health care entity owners was an important component of the survey process as many of these owners are corporations or partnerships whose individual shareholders are physicians. Failure to recognize the complex ownership structure of many health care facilities would substantially understate both the total number of individual physician investors and the number of joint venture facilities.

Although a high percentage of the parent corporation surveys were completed, some ownership information is missing because some of these health care owners refused to report the ultimate owners of their organization. For example, the legal counsel representing one joint venture partnership stated to one of the researchers that his client would not disclose the names of the individual owners of this joint venture. The ownership of this partnership is complex; one of the two partners is a corporation which is owned in turn by 200 corporations. Each of these 200 corporations has a single stockholder who is a physician. This joint venture partnership owns four facilities that provide health care services in Florida: an ambulatory surgical facility, a diagnostic imaging center, a clinical laboratory, and a durable medical equipment business. The number of physician owners of these joint ventures, however, was accounted for in the ownership classification of facilities.

The ownership arrangements for the health care facilities surveyed are classified into the following categories: 1) physician owners only ("physician owners" includes owners who are immediate family members of physicians); 2) physician owners, health care entity owners and/or nonphysician health care professional owners; 3) health care entity owners and/or nonphysician health care

professionals); 4) wholly owned subsidiaries of SEC registered corporations and 5) other--nonhealth care professional or nonhealth care entity owners, nonprofit and government organizations.

The results presented in Table 1.3 show that physician ownership of health care businesses providing diagnostic testing or other ancillary services is very common in Florida. More than three-fourths of the responding ambulatory surgical facilities and nearly all the diagnostic imaging centers are owned either wholly or in part by physicians. Almost 80 percent of the responding radiation therapy centers, more than 60 percent of the responding clinical laboratories and about 40 percent of the responding physical therapy/rehabilitation centers also report physician owners. The results further show that approximately 20 percent of the responding durable medical equipment businesses as well as nearly 13 percent of the responding home health agencies are owned by physicians.

In contrast, physician ownership of hospitals and nursing homes is less common. Only 5.3 percent (12 of the 227) acute care hospitals and only 12 percent (54 of 450) of the nursing homes have physician owners. Moreover, less than 6 percent (3 of 56) of the continuing care retirement communities are owned by physicians. This is also the case for the psychiatric hospitals; over 90 percent of these facilities are owned by either nonprofit organizations or SEC registered corporations. While the evidence presented in Table 1.3 indicates that relatively few hospitals are owned by physicians, some hospitals have established joint ventures with physicians to provide ancillary services. For example, some of the freestanding MRI centers in Florida are joint ventures between hospitals and physicians. Often in this situation, the hospital is the general partner and the physician investors are the limited partners. This type of joint venture also occurs with home health agencies and durable medical equipment businesses. The specific details of the ownership arrangements are discussed below.

Of the responding ambulatory surgical facilities 52 of the 68 (76 percent) are owned either in part or wholly by physicians. Moreover, 33 of these 52 ambulatory surgical facilities are limited partnerships or corporations whose only investors are physicians. Approximately 16 percent (11 of 68) are owned by a corporation that is publicly traded.

Examination of the ownership structure of clinical laboratories shows that over 60 percent of the 169 clinical laboratories that responded to the survey are owned by physicians. Approximately 12 percent or twenty of these labs are owned solely by pathologists, who provide services on a consultation basis and supervise the laboratory testing. Because of the nature of this specialty, pathologists generally are not in a position to refer patients to clinical laboratories for testing. Almost 50 percent of the labs are owned by referring physicians. Another 15 percent

of the clinical laboratories are owned by SEC registered companies such as Smith-Kline-Beecham.

The results for diagnostic imaging centers show that about 93 percent of the 160 facilities who filed a completed survey are owned by physicians. Nearly 66 percent of these 160 facilities indicate that all of their health care provider owners are physicians. Moreover, although not indicated in Table 1.3, only one of the diagnostic centers that perform magnetic resonance imaging and CAT scans is not owned by physicians. The other diagnostic centers which are not physician owned are only performing routine x-rays, ultrasound, and mammography.

The findings for durable medical equipment businesses show that over 20 percent of these companies are either wholly or partially owned by physicians. Approximately 25 percent of these businesses are owned by health care entities and/or nonphysician health care professionals. The largest proportion of these equipment suppliers, however, are small companies owned by persons who are not health care professionals or organizations.

The results for home health agencies indicate that close to 13 percent of the responding facilities have some physician owners. Another 20 percent are owned by nonphysician health care professionals; most of these individuals are home health administrators or registered nurses. Nearly 45 percent of the responding home health agencies, are owned by SEC registered corporations such as Upjohn or Kimberly Quality Care.

The results for hospitals show that unlike most facilities providing ancillary services, less than six percent of the acute care hospitals are owned by physicians. A large proportion of hospitals facilities are wholly owned subsidiaries with parent corporations that are SEC registered companies. Almost one third of the hospitals are not-for-profit or government entities which are not wholly owned subsidiaries of another organization.

The data on nursing homes shows that approximately 12 percent of the 450 nursing homes in Florida have physician owners. About half of all nursing homes are wholly owned subsidiaries of an SEC-registered parent organization. Another 25 percent of these facilities are owned by nonhealth care related entities or professionals.

Almost 40 percent of these 262 physical therapy and/or rehabilitation facilities have some ownership arrangement involving physicians. Another 50 percent of these centers are owned by nonphysician health care professionals; most of these nonphysician health care professionals are physical therapists.

Physicians also have ownership interests in freestanding radiation therapy centers. Close to 80 percent (18 of 23) of the

facilities that returned the questionnaire have an ownership arrangement with physicians. Furthermore, over 60 percent of these centers are owned solely by physicians.

Proponents contend that joint ventures promote access to services and new technological procedures to persons residing in rural, medically underserved, areas. This does not appear to be the case in Florida, however, as none of the joint venture facilities are located in rural areas. Furthermore, with the exception of some hospitals and nursing homes, few of the nonjoint venture facilities are located in less densely populated regions. The concentration of all types of health care facilities in urbanized areas is not surprising, however, because it is unlikely that less urbanized areas could generate the volume of patients necessary to achieve a breakeven point for the business.

#### F. Characteristics of Physician Owners

This section of the analysis links the characteristics of individual health care professionals to the type of facilities that these individuals have chosen as investments. This analysis includes the information reported on the individual owners of parent corporations.

The composition of owners who are either health care professionals or health care entities is presented in Table 1.4. The first column shows the number of direct owners of each facility type, while the second column contains the number of ultimate owners of these facilities through a parent corporation. Column three indicates the total number of owners (the sum of the direct number of owners and the number of ultimate owners.) An individual is counted as an owner for each facility that he or she was identified as an owner; although this results in more owners than individual persons, most physicians represent a single owner.

Of the 10,001 health care professionals and entities identified as owners (either direct owners from the facility surveys or ultimate owners through the parent corporation surveys), 81.1 percent or 8,112 are physicians. Another 3.5 percent or 351 are health care entity owners. Physician professional associations account for 3.5 percent or 348 of all owners; 230 of these professional associations are direct owners of the facilities, while the other 118 are the ultimate owners through a parent organization. Except for health care administrators, the remaining groups of health care professionals each account for less than three percent of all the owners identified. The characteristics of physician owners are examined in greater detail since they comprise the overwhelming majority of health care professional owners.

Table 1.5 displays the number of physician owners classified by the type of health care entity investment. Over 41 percent or 3,340 of the 8,112 physician owners have an investment interest in

a diagnostic imaging center. Nearly 16 percent (1261) of the physician owners have invested in clinical laboratories, while close to 13 percent of these physician owners have a financial interest in a home health agency. Almost eight percent (645) of these individual physician owners have an investment interest in an ambulatory surgical facility, while another seven percent (595) have a financial stake in a durable medical equipment business. The remainder of these physician owners have investment interests in hospitals, physical therapy/rehabilitation centers, nursing homes, and radiation therapy centers. The frequency and percentage of physician owners for each of these entity types are as follows: acute care hospitals - 493 (6.1%), nursing homes - 87 (1.1%), physical therapy/rehabilitation centers - 479 (5.9%), and radiation therapy centers - 172 (2.2%).

It would be cumbersome to examine the characteristics of physician owners according to the detailed specialty designations currently used by the American Medical Association. Therefore, the detailed specialty designations have been grouped into fifteen categories. Since podiatrists, chiropractors, and dentists may be owners who refer patients, these practitioners are included in the physician specialty classification. Table 1.6 provides a description of the physician specialty groups.

Table 1.7 shows the number of physician owners by specialty group. (These numbers exclude physician professional association owners.) The first column contains the number of direct owners, while the second column indicates the number of physician owners through parent corporations. The total number of owners is reported in column three. Only nine percent of these physician owners are in specialties that provide services on a consultation basis (pathology, anesthesiology, and radiology). Since these specialists are generally not in a position to make referrals to their own facilities, they are classified as consultation physicians. The number and percentage of total physician owners in these three groups are: pathology - 154 (1.9%), anesthesiology - 114 (1.4%), and radiology - 471 (5.8%).

The other 91 percent of total physician owners are concentrated in specialties which are likely to refer their patients for surgery, diagnostic testing, and other ancillary services or equipment. A large number of these physician owners, almost 35 percent, are internal medicine specialists. General practitioners account for 11.4 percent of the physician investors, while surgeons and orthopedists each represent about eight percent of all physician owners. Specialists in obstetrics/gynecology and neurology account for 6.8 percent and five percent of all physician owners respectively. With the exception of the "OTHER DOCTOR" category, all the remaining specialty groups each account for less than three percent of all physician owners.

Table 1.8 characterizes total physician owners by specialty and investment choice. Nursing homes have relatively few physician owners in comparison to the other health care provider groups. Most of the 87 physician owners of nursing homes are internists, general practitioners, or other less common specialists. The composition of physician owners for each facility type, except for nursing homes, is examined in more detail below.

About half of the 645 physician owners of ambulatory surgical facilities are specialists (i.e., obstetricians, gynecologists, surgeons, ophthalmologists and orthopedic surgeons) who are in a position to both refer patients and perform surgery or related ancillary services at these centers. The remaining physician investors of these facilities are concentrated in specialties which are likely to refer patients to the physician owners who perform surgical procedures.

The results reported in column two of Table 1.8 show the specialties of physicians who have investment interests in clinical laboratories. Only 6.4 percent of the physician owners of labs are pathologists, the specialists who supervise laboratory testing. Thus, nearly 94 percent of the physicians who have invested in a clinical laboratory are specialists, other than pathologists, who are in a position to refer their patients to these facilities for testing. Fifty-one percent of these physician owners are internists while close to twenty percent are general practitioners.

The characteristics of physician owners of diagnostic imaging centers are reported in column three of Table 1.8. This type of joint venture is the one most frequently chosen by physician investors. Again, physician owners are concentrated in those specialty groups that are in a position to refer their patients to the imaging centers for services. Less than nine percent of these physician owners are radiologists, the specialists who interpret x-rays and scans at imaging centers. The majority of these physician owners are specialists who refer patients to these facilities for x-rays, CAT scans, MRI scans, or other imaging procedures. Of the 3,340 physician owners of imaging centers about 35 percent are internists, while nearly 11 percent are general practitioners. Altogether ob/gyn specialists, surgeons, orthopedic surgeons, and neurologists comprise about 30 percent of all physician owners of imaging centers. Each of these four specialties separately accounts for approximately seven percent of the physician investors in imaging centers.

The specialties of physician owners of durable medical equipment businesses, reported in column four of Table 1.8, resemble those of imaging facilities and clinical laboratories. The physicians who have investment interests in durable medical equipment businesses are generally in a position to refer their patients to these entities for equipment and oxygen supplies. Approximately 70 percent of these owners are in four specialty

groups: general medicine (13.9%), internal medicine (36.1%), surgery (8.2%), and orthopedic surgery (6.6%).

The specialty mix of physician owners of home health agencies is consistent with the results for the other entities providing ancillary services. Only 8.5 percent of the physician owners of home health agencies are nonreferring specialists (pathologists or radiologists). More than 90 percent of these physician owners are specialists who may refer their patients to home care providers for services. The majority of these physician investors specialize in either internal medicine (32.8%) or surgery (10.8%).

Examination of the physicians who have investment interests in physical therapy and/or rehabilitation centers reveals that these owners are specialists who are likely to refer their patients to their own facility for physical therapy. Of the 479 owners of physical therapy/rehabilitation centers, over 31 percent specialize in orthopedics, while another 19 percent are internal medicine specialists. About twenty percent of these owners are either general practitioners or neurologists. Less than five percent are radiologists, pathologists, oncologists or ob/gyn specialists.

The specialty composition of the physician owners of radiation therapy centers is reported in column seven of Table 1.8. Twenty five percent of the 172 owners of radiation therapy centers are oncologists, while another 16 percent are radiologists. The remaining owners are regarded as referring physicians. The largest proportion of these owners are internists (36 percent of all), while about fifteen percent are either general practitioners or surgeons.

The last column of Table 1.8 reports the specialty mix of physicians who have a financial interest in a hospital. Less than five percent of the 493 owners are nonreferring physicians (pathologists or radiologists). Hence, about 95 percent of these owners are specialists who are in a position both to admit and treat patients in hospitals. Close to 34 percent of the 493 owners of hospitals are internists. General practitioners and surgeons each account for about 12 percent of physician owners of hospitals. Another eight percent of the physicians who have invested in hospitals are ob/gyn specialists, while orthopedic surgeons account for nearly seven percent of these owners.

#### G. Physician Professional Association Owners

As mentioned above, 348 of the owners identified by the responding health care facilities are physician professional associations. Through a followup questionnaire, each professional association was requested to report the name and specialty for each member. Responses were received from 58 percent (202) of the 348 physician professional associations. These 202 physician professional associations have 422 individual member owners. Since

each professional association has at least one member, the 148 professional associations that did not return the form account for at least another 148 physician owners. Thus, altogether these professional associations account for at least another 570 individual physician owners.

Nearly one quarter (101 of 422) of the individual physician owners of these professional associations are internal medicine specialists. Nineteen percent (81) are radiologists, while about nine percent (38) are pathologists. General practitioners, surgeons, and orthopedic surgeons each account for five percent of the individual physician owners of these professional associations.

#### H. Total Physician Owners

The results reported in Table 1.4 identified 8,112 individual physician owners. Another 1,000 physician owners were identified through the telephone followup survey of nonresponding entities. Finally, as mentioned above, professional associations account for at least 570 individual physician owners. Thus, based on the data reported in the surveys and the telephone followup, 9,682 individual physicians have been identified as owners of health care facilities in Florida. This number understates the total number of physician owners, however, because it does not include information on owners of all nonrespondents, and it does not account for the owners of the health care facility types that were not surveyed.

While the survey process identified at least 9,682 physician owners, some of these physicians have an ownership interest in more than one facility. It is estimated that there are at least 8,500 unduplicated physician owners. Of these 8,500 physicians, 858 were pathologists, anesthesiologists, and radiologists resulting in an estimated 7,600 individual referring physician owners who are involved in direct patient care. Pathologists, anesthesiologists, and radiologists generally provide services on a consultation basis and thus are not in a position to make referrals.

According to data collected by the American Medical Association, there are approximately 18,250 physicians involved in direct patient care in Florida. Hence, these estimated 7,600 individual referring physician owners represent more than 40 percent of the 18,250 physicians involved in direct patient care in Florida. Thus, these results indicate that at least 40 percent of the physicians involved in direct patient care are participants in joint venture businesses to which they may refer their patients for services.

#### I. Summary

This chapter reports final survey response rates, the results on prevalence, scope and nature of joint ventures among health care providers, and the characteristics of physician owners.

The overall response rate is 82.4 percent. More than 90 percent of the ambulatory surgical facilities, hospitals, nursing homes, and psychiatric hospitals filed completed surveys. The response rates for clinical laboratories, mental health treatment centers, physical therapy and/or rehabilitation centers, home health agencies, diagnostic imaging centers and radiation therapy centers range between 72 and 85 percent. Only durable medical equipment suppliers had a response rate under 70 percent. The majority of the nonrespondents are concentrated in the Southeast peninsula region; about 26 percent (190) of the 713 facilities in this geographic region failed to file a completed survey.

The telephone followup of nonresponding facilities indicates that the nonrespondents are more likely to be involved in joint venture arrangements. Furthermore, the telephone followup identified several facilities that failed to respond because they were ineligible.

The results on scope and nature of joint ventures show that physician ownership of health care businesses providing diagnostic testing or other ancillary services is quite common in Florida. More than three-fourths of the responding ambulatory surgical facilities and about 93 percent of the diagnostic imaging centers are owned either wholly or in part by physicians. Almost 80 percent of the responding radiation therapy centers, more than 60 percent of the responding clinical laboratories and nearly 40 percent of the responding physical therapy and/or rehabilitation facilities also report physician owners. Furthermore, about 20 percent of the responding durable medical equipment businesses, as well as close to 13 percent of the home health agencies are owned by physicians.

In contrast, physician ownership of hospitals and nursing homes is less common. Only 5.3 percent (12 of 227) acute care hospitals and 12 percent (54 of 450) of the nursing homes have physician owners.

The facility surveys identified 10,001 health care professional and health care entity owners. These include both the direct owners of these facilities as well as owners through a parent organization. More than 81 percent (8,112) of these owners are physicians. Over 41 percent of these owners have an investment interest in a diagnostic imaging facility. Another 16 percent of the physician owners have invested in clinical labs, while 13 percent have an ownership interest in a home health agency. Eight percent of these 8,112 physicians have ownership in an ambulatory surgical facility, while another seven percent have a financial interest in a durable medical equipment business. Six percent own part of an acute care hospital. Another six percent have invested in physical therapy and/or rehabilitation facilities. About three percent have an ownership interest in either a nursing home or a radiation therapy facility.

Only nine percent of these physician owners are in specialties that provide services on a consultation basis (pathology, anesthesiology, and radiology). These specialists are generally not in a position to make referrals to their own facility. The other 91 percent of the 8,112 physician owners are concentrated in specialties which are likely to refer their patients for surgery, diagnostic testing, and other ancillary services or equipment. The majority of these physician owners, nearly 35 percent, are internal medicine specialists. General practitioners account for 11.4 percent of physician investors, while surgeons and orthopedists each represent about eight percent of the 8,112 physician owners.

The telephone followup results for nonresponding facilities identified at least another 1,000 physician investors. The physician professional association account for at least 570 individual owners. Thus, altogether more than 9,682 physicians have been identified as owners of health care facilities in Florida. Since some of these physicians have an investment interest in more than one health care facility, it is estimated that there are at least 8,500 unduplicated individual physician owners. Of these 8,500 physicians, 858 were pathologists, anesthesiologists, and radiologists (who provide services on a consultation basis) resulting in an estimated 7,600 individual referring physician owners who are involved in direct patient care.

According to data collected by the American Medical Association, there are approximately 18,250 physicians involved in direct patient care in Florida. Hence, these estimated 7,600 individual referring physician owners represent more than 40 percent of the 18,250 physicians involved in direct patient care in Florida. Thus, these results indicate that at least 40 percent of the physicians involved in direct patient care are participants in joint venture businesses to which they may refer their patients for services.

In summary, the results show that physician ownership of ancillary services is quite common in Florida. Further, most of the physician owners are specialists who are in a position to refer their patients to the facilities in which they have an investment interest.

Table 1.1 Survey Response Rates by Health Care Facility Type

TYPE AND NUMBER OF FACILITIES	NUMBER OF SURVEYS COMPLETED	NUMBER OF SURVEYS OUTSTANDING	RESPONSE RATE
AMBULATORY SURGICAL FACILITIES (N=75)	68	7	90.7%
CLINICAL LABORATORIES (N=211)	169	42	80.1%
COMMUNITY MENTAL HEALTH CENTERS (N=47)	40	7	85.1%
DIAGNOSTIC IMAGING CENTERS (N=220)	160	60	72.7%
DURABLE MEDICAL (N=450) EQUIPMENT SUPPLIERS	297	153	66.0%
HOME HEALTH AGENCIES (N=516)	404	112	78.3%
HOSPITALS (N=238)	227	11	95.4%
NURSING HOMES (N=521) <sup>a</sup>	506	15	97.1%
PHYSICAL THERAPY/ REHABILITATION CENTERS (N=313)	262	51	83.7%
PSYCHIATRIC HOSPITALS (N=46)	44	2	95.7%
RADIATION THERAPY CENTERS (N=32)	23	9	71.8%
TOTAL (N=2669)	2200	469	82.4%

**Notes:**

<sup>a</sup>Includes 56 continuing care retirement community facilities.

Table 1.2 Response Rates by Entity Type and Geographic Region<sup>a,b</sup>

Entity Type and Number of Facilities	GEOGRAPHIC REGION			
	North Florida	Western Peninsula	Central and Eastern Peninsula	Southeast Peninsula
Ambulatory Surgical Facilities (N=75)	13/14 (92.9%)	32/35 (91.4%)	12/14 (85.7%)	11/12 (91.7%)
Clinical Laboratories (N=211)	35/40 (87.5%)	48/63 (76.2%)	29/35 (82.8%)	57/73 (78.1%)
Community Mental Health Centers (N=47)	10/14 (71.4%)	14/14 (100.0%)	9/9 (100.0%)	7/10 (70.0%)
Diagnostic Imaging Centers (N=220)	20/25 (80.0%)	48/56 (85.7%)	46/65 (70.8%)	46/74 (62.2%)
Durable Medical Equipment Suppliers (N=450)	73/108 (67.6%)	86/116 (74.1%)	48/66 (72.7%)	90/160 (56.2%)
Home Health Agencies (N=516)	80/109 (73.4%)	123/150 (82.0%)	88/108 (81.4%)	113/149 (75.8%)
Hospitals (N=238)	72/77 (93.5%)	63/65 (97.0%)	41/41 (100.0%)	51/55 (92.7%)
Nursing Homes (N=521)	143/146 (98.0%)	183/190 (96.3%)	105/105 (100.0%)	75/80 (93.7%)
Physical Therapy/Rehabilitation Centers (N=313)	70/78 (89.7%)	74/85 (87.1%)	55/64 (85.9%)	63/86 (73.2%)
Psychiatric Hospitals (N=46)	14/14 (100.0%)	11/11 (100.0%)	12/12 (100.0%)	7/9 (77.8%)
Radiation Therapy Centers (N=32)	7/10 (70.0%)	10/11 (90.9%)	3/6 (50.0%)	3/5 (60.0%)
Total	538/636 (84.6%)	692/796 (87.0%)	448/525 (84.5%)	523/713 (73.3%)

Notes: [Tab]<sup>a</sup>The numbers reported in the first line of each row represent the number of completed responses by entity type in each geographic region relative to the total number of entities located within the same geographic region. The second line of each row is the response rate or percentage of completed responses.

<sup>b</sup>North Florida includes HRS districts 1, 2, 3 and 4; the Western Peninsula includes HRS districts 5, 6, and 8; the Central and Eastern Peninsula includes HRS districts 7 and 9, and the Southeast Peninsula covers HRS districts 10 and 11.

**Table 1.3 Scope and Structure of Joint Venture Arrangements in Florida <sup>a</sup>**

<b>Facility Type</b>	<b>Total Number of Responding Facilities</b>	<b>Physician Owners Only</b>	<b>Physician Owners with Health Care Entities and/or Professionals</b>	<b>Health Care Entity and/or Nonphysician Health Care Professional Owners</b>	<b>Wholly Owned Subsidiary of SEC listed Companies</b>	<b>Other - NonProfit Government, and Non health care Owners</b>
Ambulatory Surgical Facilities	68	33 (48.5%)	19 (27.9%)	1 (1.5%)	11 (16.2%)	4 (5.9%)
Clinical Laboratories	169	84 (49.7%)	18 (10.7%)	10 (5.9%)	25 (14.8%)	32 (18.9%)
Diagnostic Imaging Centers	160	105 (65.6%)	43 (27.5%)	2 (1.3%)	7 (4.4%)	2 (1.3%)
Durable Medical Equipment Suppliers	297	22 (7.4%)	38 (12.8%)	76 (25.6%)	35 (11.8%)	126 (42.4%)
Home Health Agencies	404	15 (3.7%)	35 (8.7%)	79 (19.6%)	182 (45.0%)	93 (23.0%)
Hospitals	227	7 (3.1%)	5 (2.2%)	11 (4.8%)	138 (60.8%)	66 (29.1%)
Nursing Homes	506	31 (6.1%)	26 (5.1%)	64 (12.6%)	242 (47.8%)	143 (28.2%)
Physical Therapy/ Rehabilitation Centers	262	50 (19.1%)	50 (19.1%)	130 (49.6%)	14 (5.3%)	18 (6.9%)
Psychiatric Hospitals	44	1 (2.3%)	1 (2.3%)	1 (2.3%)	33 (75.0%)	8 (18.2%)
Radiation Therapy Centers	23	14 (60.9%)	4 (17.4%)	--	2 (8.7%)	3 (13.0%)
<b>TOTAL</b>	<b>2160</b>	<b>361 (16.7%)</b>	<b>246 (11.4%)</b>	<b>368 (17.0%)</b>	<b>690 (32.0%)</b>	<b>495 (22.9%)</b>

Notes: <sup>a</sup> Excludes mental health treatment centers because none of these are involved in joint ventures.

Table 1.4 Composition of Owners Who are Health Care Professionals or Health Care Entities<sup>a</sup>

OWNER TYPE	NUMBER OF DIRECT OWNERS	NUMBER OF PARENT CORPORATION OWNERS	TOTAL NUMBER OF OWNERS	PERCENTAGE OF TOTAL OWNERS
Physician <sup>b,c</sup>	6389	1723	8112	81.1%
Health Care Entities	351	--	351	3.5%
Professional Associations	230	118	348	3.5%
Nurses (R.N.s or L.P.N.s)	124	4	128	1.3%
Physical Therapists	197	7	204	2.0%
Other Therapists	112	6	118	1.2%
Licensed Technicians	72	1	73	.7%
Health Care Administrators	363	41	404	4.0%
Pharmacist	68	1	69	.7%
Other	167	27	194	2.0%
TOTAL	8073	1928	10,001	100%

Notes: <sup>a</sup>Health Care Professionals include immediate family members who have ownership interests in these health care entities.

<sup>b</sup>This category includes medical doctors, osteopaths, chiropractors, podiatrists and dentists.

<sup>c</sup>These numbers exclude professional association owners.

Table 1.5 Frequency of Physician Owners of Health Care Entities<sup>a,b</sup>

OWNER TYPE	NUMBER OF DIRECT OWNERS	NUMBER OF PARENT CORPORATION OWNERS	TOTAL NUMBER OF OWNERS	PERCENTAGE OF TOTAL PHYSICIAN OWNERS
Ambulatory Surgical Facilities	644	1	645	8.0%
Clinical Laboratories	1179	82	1261	15.5%
Diagnostic Imaging Centers	2,863	477	3,340	41.2%
Durable Medical Equipment Suppliers	378	217	595	7.3%
Home Health Agencies	287	753	1040	12.8%
Acute Care Hospitals	308	185	493	6.1%
Nursing Home	87	--	87	1.1%
Physical Therapy/ Rehabilitation Centers	472	7	479	5.9%
Radiation Therapy Centers	171	1	172	2.2%
TOTAL	6,389	1723	8,112	100.0%

Notes: <sup>a</sup>Physician owners include immediate family members of physicians who have ownership interests in these health care entities. Of the 6389 direct owners, 194 or 3 percent are physicians with immediate family members who are owners. Only 3 of the parent owners are immediate family members of physicians.

<sup>b</sup>Physicians include medical doctors, osteopaths, chiropractors, podiatrists and dentists. These numbers exclude professional association owners.

Table 1.6 Description of Physician Specialty Groups

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GENERAL PRACTICE	-	Detailed specialties are family practice and general practice.
OB/GYN	-	Detailed specialties are obstetrics, gynecology, or obstetrics-gynecology.
INTERNAL MEDICINE	-	Detailed specialties are general internal medicine, allergy, diabetes, endocrinology, hematology, infectious disease, immunology, nephrology, rheumatology, arthritis, otolaryngology, and urology, cardiology, pulmonary, gastroenterology, and neoplastic disease.
SURGERY	-	Detailed specialties are general surgery and specialized surgery areas: abdominal, cardiovascular, colon-rectal, hand, head-neck, plastic, thoracic, traumatic, and urological.
ORTHOPEDICS	-	Detailed specialties are orthopedics and orthopedic surgery.
PEDIATRICS	-	Detailed specialty is pediatrics.
NEUROLOGY	-	Detailed specialties are neurology and neurological surgery.
ONCOLOGY	-	Detailed specialties are oncology, pediatric oncology, and therapeutic radiology.
RADIOLOGY	-	Detailed specialties are radiology, diagnostic radiology, and nuclear medicine.
PATHOLOGY	-	Detailed specialties are pathology and clinical pathology.
ANESTHESIOLOGY	-	Detailed specialty is anesthesiology.
OPHTHALMOLOGY	-	Detailed specialty is ophthalmology.
PODIATRY	-	Detailed specialty is podiatry.
CHIROPRACTICS	-	Detailed specialty is chiropractics.
OTHER	-	Detailed specialties are dermatology, bloodbanking, critical care, emergency medicine, laryngology, neonatal, otology, occupational medicine, physical medicine, histology, and proctology, dentistry, psychiatry.

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Table 1.7 Specialties of Physician Owners of Health Care Entities<sup>a</sup>

Specialty	Number of Direct Owners	Number of Parent Corporation Owners	Total Number of Owners	% of all Physician Owners
General Practice	796	125	921	11.4%
OB/GYN	454	97	551	6.8%
Internal Medicine	2354	495	2849	35.1%
Surgery	462	178	640	7.9%
Orthopedics	592	73	665	8.2%
Neurology	314	90	404	5.0%
Ophthalmology	146	52	198	2.4%
Pathology	105	49	154	1.9%
Radiology	343	128	471	5.8%
Oncology	177	37	214	2.6%
Anesthesiology	49	65	114	1.4%
Pediatrics	115	66	181	2.2%
Podiatry	20	2	22	.3%
Chiropractor	9	--	9	.1%
Other Doctor	453	266	719	8.9%
TOTAL	6389	1723	8112	100.0%

NOTES: <sup>a</sup>Physicians include medical doctors, osteopaths, chiropractors, podiatrists and dentists. Physician owners include immediate family members of physicians who have ownership interests in these health care entities.

**Table 1.8 Physician Owners Classified By Specialty and Investment Choice**

Specialty Group	Ambulatory Surgical Facility (1)	Clinical Laboratory (2)	Diagnostic Imaging Center (3)	Durable Medical Equipment (4)	Home Health Agency (5)	Physical Therapy/Rehabilitation (6)	Radiation Therapy Center (7)	Acute Care Hospital (8)
Total Physician Owners	645	1261	3340	595	1040	479	172	493
General Medicine	18 (2.8%)	252 (19.9%)	358 (10.7%)	83 (13.9%)	70 (6.7%)	50 (10.4%)	12 (7.0%)	59 (12.0%)
OB/GYN	127 (19.7%)	61 (4.8%)	233 (7.0%)	22 (3.7%)	53 (5.1%)	10 (2.1%)	2 (1.2%)	39 (7.9%)
Internal Medicine	147 (22.8%)	638 (51.0%)	1172 (35.1%)	215 (36.1%)	341 (32.8%)	92 (19.2%)	62 (36.0%)	166 (33.7%)
Surgery	90 (13.9%)	52 (4.1%)	235 (7.0%)	49 (8.2%)	111 (10.8%)	21 (4.4%)	14 (8.1%)	61 (12.4%)
Orthopedics	105 (16.3%)	40 (3.1%)	254 (7.6%)	39 (6.6%)	45 (4.3%)	149 (31.2%)	—	33 (6.7%)
Neurology	5 (0.7%)	17 (1.3%)	228 (6.8%)	21 (3.5%)	69 (6.6%)	49 (10.2%)	2 (1.2%)	11 (2.2%)
Pathology	3 (0.5%)	81 (6.4%)	25 (0.7%)	10 (1.7%)	23 (2.2%)	2 (0.4%)	2 (1.2%)	7 (1.4%)
Radiology	3 (0.5%)	6 (0.5%)	297 (8.9%)	39 (6.6%)	66 (6.3%)	14 (2.9%)	28 (16.2%)	16 (3.2%)
Oncology	2 (0.3%)	23 (1.8%)	92 (2.8%)	14 (2.4%)	25 (2.4%)	2 (0.4%)	43 (25.0%)	12 (2.4%)
Other <sup>a</sup>	145 (22.5%)	91 (7.1%)	116 (3.5%)	103 (17.3%)	237 (22.8%)	90 (18.8%)	7 (4.19%)	89 (18.1%)

Notes: <sup>a</sup>Other - This category includes pediatrics, ophthalmology, anesthesiology, podiatry, chiropratics and the specialties listed in the "Other Doctor" classification in Table 5.

## CHAPTER II

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF AMBULATORY SURGICAL SERVICES

#### A. Introduction

This chapter analyzes the effects of joint ventures on the provision of outpatient surgical services in freestanding outpatient surgery centers. Freestanding ambulatory surgical centers have developed over the past twenty years as an alternative to many elective inpatient surgical procedures traditionally performed in hospitals.

To compete with these freestanding surgical centers, many hospitals offer outpatient surgical services with an all-inclusive price; as a result, third party payers also encouraged physicians to perform surgery on an outpatient basis. The Medicare program joined these third party payers and established a designated list of procedures to be performed on an outpatient basis; Medicare also adopted a fixed fee schedule for these surgical procedures. This prospective payment system established relatively low payment amounts and classified procedures into four categories based on the relative amounts of resources used to provide the surgical services.

Until recently, the development of outpatient surgical centers in Florida was regulated by Certificate-of-Need law. Recent changes in the law have enabled physicians to obtain licenses for surgical facilities that are affiliated with the physician's practice. Although in the past physicians have performed surgery in their offices legally, most third party insurers would not pay for a separate facility fee unless the surgery was performed in a licensed outpatient surgical facility. Whereas this limitation on third party reimbursement is still in effect, physicians may now obtain licenses for outpatient surgical centers without Certificate of Need approval. Currently, there are approximately 80 licensed outpatient surgical facilities in Florida.

As reported in chapter I, approximately three-fourths of the freestanding outpatient ambulatory surgical facilities in Florida are owned either in part or wholly by physicians. Outpatient ambulatory surgical facilities are classified into two groups according to the type of services performed: 1) multispecialty surgical procedures, and 2) eye specialty surgical procedures. The two ownership categories for outpatient ambulatory surgical procedures are: 1) joint venture with physician owners, and 2) not joint venture (no physician owners). Some of the joint ventures are limited partnerships of physicians, whereas others are joint ventures between surgeons, other referring physicians and a large

corporation, such as Medical Care International, which owns several freestanding outpatient surgical centers throughout the country.

Ambulatory surgical facilities require initial investment to establish the operating room and the support services for outpatient surgery. The costs of producing the services include the cost of the capital investment, depreciation on that investment as well as interest, cost of medical supplies, and cost of labor in the facility. Labor costs include wages for skilled nursing services, both R.N. and L.P.N., O.R. technicians, nursing assistants, other medical workers, administrative personnel, and clerical and other support workers. The number of units of labor, as well as the cost of medical supplies used, will vary substantially depending on whether the facility is a multispecialty or single specialty facility. The salaries may also vary for labor if the technical support people have specialized skills. Additionally, the cost of medical supplies will also vary substantially between single specialty and multispecialty surgery facilities.

Additionally, the prices charged are constrained by the forces of competition as most outpatient surgery facilities compete with hospitals. Thus, while prices charged may be used to generate additional revenues, competition would tend to limit the extent to which prices can be increased. Greater numbers of patients referred to the facility for surgery would however, increase revenues and ultimately profits. While surgical procedures performed in outpatient setting are typically elective procedures, there is a limitation on the number of such procedures that can be performed. Although some evidence indicates that surgical rates vary by region, there is no evidence that physicians with ownership interest in ambulatory surgical facilities tend to perform surgery more frequently.

Increased surgical rates may be regarded as indicators of surgeons performing unnecessary operations, which would not be viewed as "defensive medicine". On the other hand, patients are prone to seek a second opinion on recommended elective surgical procedures, because this may be required by third party insurers. Such requirements by third party payers would tend to discourage unnecessary surgical procedures.

Thus, most ambulatory surgical facilities increase numbers of patients by encouraging additional physicians to make referrals. Given these influences, utilization rates in terms of number of surgeries per thousand persons should not respond significantly to the influence of physician ownership in ambulatory surgical facilities. This influence is not directly evaluated here because the number of ambulatory surgical facilities is relatively small and nearly three-fourths of them are owned by physicians or by physicians in combination with health care entities.

B. Characteristics of Multispecialty Ambulatory Surgical Facilities

Table 2.1 compares key characteristics of joint venture and nonjoint venture freestanding ambulatory surgical facilities. Almost 64 percent of the patients treated in joint venture multispecialty ambulatory surgical facilities are referred by physicians who have an investment interest in the facility.

Access

Access to patients is measured by the percent of total revenue received from each payer groups. The six payer categories are: Medicare, Medicaid, managed care (HMOs and PPOs), Blue Cross and commercial insurers, self-pay, and "Other", which includes workers compensation patients. Another indicator of access is the proportion of gross revenues attributable to bad debt and/or charity care.

The results in Table 2.1 show that joint venture surgery centers treat a negligible number of Medicaid patients, while otherwise similar nonjoint venture surgery centers receive almost three percent of their revenues from surgeries performed on Medicaid patients. This difference is statistically significant.

Joint venture multispecialty surgery centers generate nearly 44 percent of their revenues from patients covered by Blue Cross and other commercial insurers. Nonjoint venture multispecialty surgery centers, in contrast, receive only 20 percent of their revenues from Blue Cross and commercial insurers. This difference is statistically significant. Nonjoint venture facilities derive nearly 21 percent of their revenues from "Other" patients, while joint venture facilities generate less than seven percent of their revenues from this payer group. This difference is also statistically significant. There is only a negligible difference between the two ownership groups in the proportion of gross revenues written off as bad debt and charity care.

Economic and Financial Characteristics

Table 2.1 also reports financial statistics for multispecialty ambulatory surgical facilities by ownership status (joint venture versus nonjoint venture). Physician owned multispecialty ambulatory surgical facilities treat about seven percent more patients than nonjoint venture surgery centers (2,573 patients for joint venture versus 2,410 for nonjoint venture). Surgery centers owned by physicians also perform about ten percent more surgical procedures per patient treated; the procedure to patient ratio is 1.47 in joint venture facilities versus 1.33 in nonjoint venture surgery centers.

Nonjoint venture facilities generate about \$70 more gross revenue per patient than their otherwise similar joint venture counterparts. (This figure may understate gross revenue per patient for physician owned facilities because some of these facilities maintain their financial records on a cash accounting basis; hence, these facilities only reported net revenues after adjustments but before expenses.) Averages do not vary systematically by geographic region.

The average rate of discounts and contractual adjustments of nonjoint venture surgery centers is 24.2 percent, compared to 12.6 percent for the joint venture facilities. This disparity in the discount rate by ownership type is statistically significant. Thus, the average discount rate for nonjoint venture facilities is almost twice the corresponding rate of joint venture providers. Nonetheless, even with this larger discount, net revenue per patient is not lower because nonjoint venture facilities have higher list charges that generate a higher average gross revenue per patient. Net revenue per patient is \$971 in nonjoint venture facilities compared to \$870 for joint venture providers.

Overall firm profitability is indicated by the percent operating income; this ratio, expressed as a percentage, is defined as net revenues (after deductions and discounts) minus direct expenses divided by net revenues. In the case of ambulatory surgical centers, direct expenses exclude depreciation, lease and rental payments, as well as the purchase of services under contract. The numerator of this financial indicator is defined as operating income. When "adjusted for contract services", expenses for purchases under contract are included in direct expenses.

The results show that nonjoint venture ambulatory surgical facilities with physician owners have higher percent operating incomes (excluding contract expenses) than facilities with physician owners (38 percent for the physician owned facilities versus 41 percent for the nonjoint venture group). Adjusting both the numerator to account for contract expenses essentially eliminates the difference in the average percent operating income between the two ownership groups. Furthermore, ownership status appears to have little impact on the average operating income per patient.

There appears to be some geographic variation in average percent operating income and operating income per patient. Both measures are systematically lower for both ownership groups in the southeast peninsula region. These differences can be attributed to higher expenses but little differences in revenue per patient.

Purchases of services under contract represent a higher percentage of direct expenses in nonjoint venture surgery centers; contract expenses are nearly 13 percent of direct expenses for nonjoint venture facilities versus 8 percent for centers with

physician owners. Furthermore, wages and salaries account for nearly 43 percent of direct expenses in joint venture facilities, compared to only 32 percent in nonjoint venture surgery centers; some of this difference may be due to the higher percent of contract expenses at nonjoint venture facilities. These differences are statistically significant.

The average total cost per patient treated in a multispecialty joint venture surgery center is about \$634. The average total cost per patient in a multispecialty nonjoint venture facility is \$757, which is \$123 or almost 20 percent higher on average than in the joint venture surgery centers. Although other overhead expense per patient is comparable for the two ownership groups, both contract expense per patient and interest expense per patient are lower in joint venture surgery centers than in nonjoint venture facilities. The difference in contract expense per patient is statistically significant.

List charges per procedure were reported in two ways. Facilities with an all-inclusive list charge schedule were asked to report these all-inclusive facility fees. Alternatively, if the facility did not have an established all-inclusive fee schedule, or if these fees were not applicable to all patients, the facilities were asked to report numbers of procedures and the total gross revenues generated by the performance of these surgical procedures. If both indicators of list charges were reported, the list charge employed here is the greater of the all-inclusive list charge and the average charges (gross revenues divided by numbers of procedures performed). Thus, the list charge comparisons are based on the reported all-inclusive list charge if applicable or the average total gross charges per procedure for those cases where an all-inclusive list charge did not apply.

Table 2.2 presents a comparison of list charges for twenty-three procedures commonly performed in freestanding ambulatory surgical facilities. Nonjoint venture surgery centers have higher average list charges than joint venture centers for 17 of the 23 common procedures reported. It is important to recognize, however, that nonjoint venture facilities reported larger percent discounts and contractual adjustments (24.2 percent versus 12.6 percent), so that a difference of about 13 percent would indicate that there is no effective difference in net charges. For seven of these seventeen procedures, the disparity in charges between nonjoint venture and physician owned surgery centers exceeds 15 percent. For example, the charge for a tonsillectomy and adenoidectomy is, on average, over \$1,000 in nonjoint venture facilities, compared to \$884 in physician owned surgery centers. Thus, the charge for this surgical procedure is \$164 more or 18.5 percent higher in nonjoint venture facilities than in surgery centers owned by physicians.

Even though list charges tend to be higher in nonjoint venture surgery centers, these facilities have a higher average discount

rate than joint venture facilities. The average discount rate is exceeds 24 percent for the nonjoint venture group, where it is about 13 percent for the joint venture facilities. Applying the average discount rate to these list charges to compute discounted charges decreases the differences, and in some cases change the results.

C. Characteristics of Ambulatory Surgical Facilities  
Specializing in Eye Surgery

This section compares key characteristics of joint venture and nonjoint venture ambulatory surgical facilities specializing in ophthalmological procedures. Table 2.3 presents means and standard deviations for these key variables by ownership status. Nearly 87 percent of the patients treated at joint venture eye surgery centers are referred by physician owners.

Access

Access to the various payer groups is indicated by the percent of total revenue received from the various payer categories. A second indicator is the proportion of gross revenues attributable to bad debt and/or charity care. The findings in Table 2.3 show that joint venture freestanding ophthalmological surgery centers receive almost 75 percent of their revenues from services provided to Medicare patients. Nonjoint venture eye surgery centers receive an even larger share, about 79 percent of their revenues from Medicare. Differences for the other payer groups are trivial. On the other hand, joint venture eye surgery centers writeoff nearly 21 percent of their revenues as bad debt and charity care compared to about 15 percent for their nonjoint venture counterparts.

Economic and Financial Characteristics

Nonjoint venture eye surgery centers treat, on average, almost 38 percent more patients than eye surgery facilities owned by physicians; the average number of patients is 947 for the physician owned facilities and 1,305 for the nonjoint venture centers. Joint venture eye surgery facilities perform, on average, 1.23 surgical procedures per patient compared to 1.3 procedures per patient in nonjoint venture eye surgery centers. The difference in the number of surgical procedures per patient by ownership group is trivial.

Upon initial examination, the average gross revenue (charges) per patient in nonjoint venture eye surgery centers appears to be much higher than the average gross revenue (charges) in physician owned facilities performing ophthalmologic surgical procedures. Nonjoint venture eye facilities charge, on average, \$1,742, whereas the mean charge for the eye surgery centers with physician owners is just under \$1,100. This disparity is significant and suggests that average charges are 60 percent higher in nonjoint venture eye surgery clinics than in those with one or more physician owners.

A meaningful average discount and contractual adjustment rate could not be computed as gross revenues minus net revenues divided by net revenues expressed in percentage terms. The reason is that many joint venture eye centers reported net revenues (before expenses) as gross revenues. Since these facilities are small and often maintain their accounting records on a cash basis, gross charges generally represent actual dollars collected. The majority of the nonjoint venture eye surgery centers are large facilities. Because of their size, most of these facilities kept separate records of billable charges and actual money collected. Thus, the \$1,084 average charge of the physician owned eye surgery facilities more closely approximates net charges after discounts and contractual adjustments. Therefore, the average charges for nonjoint venture facilities must be discounted to be compared to the joint venture eye surgery centers. Given these considerations, it is more appropriate to compare net revenue per patient.

Net revenue per patient is \$932 in physician owned eye surgery facilities and averages \$1,136 in their nonjoint venture counterparts. This difference, which exceeds \$200, indicates that net revenue per patient is about 22 percent higher in nonjoint venture facilities than in their physician owned counterparts.

For eye surgery facilities, the numbers computed for gross revenue per patient and net revenue per patient are used to calculate an average discount and contractual adjustment rate. The difference between the gross revenue per patient (\$1,084) and net revenue per patient (\$932) in joint venture eye surgery centers is \$152. This suggests that joint venture eye surgery centers discount their charges per patient, on average, about 14 percent. For nonjoint venture eye surgery facilities, the difference between gross and net revenue per patient is \$606; this implies that the average discount rate of nonjoint venture eye surgery facilities is about 35 percent.

The percent operating incomes before contract expenses for nonjoint venture eye surgery centers are 37.9 percent and 34.5 percent for physician owned and nonjoint venture facilities respectively. After making the necessary adjustments for contract expenses, joint venture eye surgery facilities are still more profitable than their nonjoint venture counterparts. The percent operating income adjusted for contract expenses is 36.3 percent for physician owned eye surgery centers and 29.6 percent for the nonjoint venture facilities. The operating income per patient is about 19 percent higher in joint venture eye surgery facilities than in their nonjoint venture counterparts (\$390 versus almost \$327). Adjusting for contract expenses, widens the disparity in operating income per patient because nonjoint venture eye surgery centers have higher contract expenses.

The results also indicate that payments for contracted services represent a smaller proportion of direct expenses in

physician owned eye surgery facilities than in nonjoint venture eye surgery centers. Contract expenses relative to total direct expenses are less than three percent for joint venture facilities whereas these expenses are nearly ten percent of direct expenses for nonjoint venture eye surgery centers. Wages and salaries account for a larger share of the direct expenses of joint venture eye surgery centers than their nonjoint venture counterparts. Almost 40 percent of the direct expenses of the physician owned eye specialty facilities are wages and salaries. For nonjoint venture eye surgery centers, wages and salaries represent a smaller share, only 27.5 percent, of total direct expenses. The differences between the ownership groups with respect to contract expenses and wages and salaries are statistically significant.

As discussed above, expenses are expressed in terms of the number of patients treated rather than procedures because surgeons may perform more than one procedure per patient. Here again, the average total cost of treating a surgical patient is best measured as the sum of direct expense per patient and fixed expense per patient.

The average total cost per patient treated in a physician owned ophthalmologic specialty surgery center is about \$751. By comparison, the average total cost per patient in nonjoint venture facilities is \$1,118. Thus, the cost in nonjoint venture facilities is \$367 or almost 49 percent more than the average total cost per patient in physician owned eye surgery facilities. This significant disparity in the average total cost may be due to the nonjoint venture facilities performing more complicated, time-intensive surgical procedures, or alternatively it may indicate that joint venture facilities are more efficient. Further contract expense per patient is also significantly higher in nonjoint venture eye surgery centers.

The last two rows of Table 2.3 show the gross average list charges for two common surgical procedures performed in ophthalmologic ambulatory surgical facilities. Since these represent gross charges, they must be adjusted by the average discount rate to make meaningful comparisons. The differences between gross revenue per patient and net revenue per patient imply that the average discount rates for joint venture and nonjoint venture eye surgery centers are 14 and 35 percent respectively. The average list charge for a cataract excision with lens is \$1,323 in physician owned facilities whereas the charge for this procedure is nearly \$1,707 in nonjoint venture facilities. This difference in charges is statistically significant. Adjustment of these gross charges by the appropriate discount rate yields net charges of \$1,138 in physician owned eye surgery centers and \$1,110 in nonjoint venture facilities. Hence, after discounts and contractual adjustments, the difference in net charges for a cataract excision with lens operation is slightly higher in physician owned facilities than in nonjoint venture facilities.

The second frequently performed ophthalmological procedure is ocular muscular surgery. The gross charges for this procedure are almost the same in joint venture and nonjoint venture facilities. Accounting for the effects of discounting reduces the list charge in nonjoint venture facilities from \$920 to \$598. Similar adjustments to the average list charge in joint venture eye surgery centers yields a net charge of \$789. In this case, the average net charge after discounting is approximately 32 percent higher in joint venture eye surgery centers than in nonjoint venture facilities.

D. Summary

Multispecialty ambulatory surgical facilities are relatively homogenous with respect to costs, charges, and profitability. The major difference between joint venture and nonjoint venture multispecialty surgery facilities arises with respect to access. In particular, joint venture multispecialty surgery centers treat a negligible number of Medicaid patients relative to their nonjoint venture counterparts. A second difference is that nonjoint venture multispecialty surgery centers have significantly higher discount and contractual adjustment rates than physician owned multispecialty surgery centers.

Ambulatory surgery centers specializing in eye surgery are relatively homogenous with respect to access, charges, utilization and profitability. Nonjoint venture facilities have higher list charges and gross revenues per patient, but these centers also have higher average discounts that appear to offset their higher average charges. Hence, differences in net revenue per patient by ownership are small. Nonjoint venture eye surgery centers also have significantly higher direct expense per patient. These results, however, represent small samples sizes; further study is needed for definitive conclusions.

Table 2.1 Characteristics of Multispecialty Ambulatory Surgical Facilities

Variable	JOINT VENTURE FACILITIES (N=21)		NONJOINT VENTURE FACILITIES (N=10)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	63.8%	(33.3)	--	--	
<b>Access</b>					
Percent of Revenue/ Medicare	40.6%	(26.3)	46.0%	(19.7)	
Percent of Revenue/ Medicaid	.4%	(.82)	2.8%	(5.9)	.045
Percent of Revenue/ Managed Care	7.4%	(10.6)	11.6%	(14.6)	
Percent of Revenue- Blue Cross/ Commercial Insurers	43.9%	(21.2)	20.5%	(15.3)	.005
Percent of Revenue/ Self Pay	2.0%	(6.0)	--	--	
Percent of Revenue/ Other Including Contract Work	6.7%	(13.0)	20.8%	(24.7)	.036
Percent of Revenue/ Bad Debt and Charity Care	5.6%	(7.3)	5.4%	(9.6)	
<b>Utilization</b>					
Number of Patients	2,573	(2,130)	2,410	(1,485)	
Procedures Per Patient	1.47	(.47)	1.33	(.30)	
<b>Charges and Costs</b>					
Gross Revenue Per Patient	\$996	(456)	\$1,065	(251)	

Table 2.1 Characteristics of Multispecialty Ambulatory Surgical Facilities (continued)

Variable	JOINT VENTURE FACILITIES (N=21)		NONJOINT VENTURE FACILITIES (N=10)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Discounts and Contractual Adjustments	12.6%	(11.4)	24.2%	(5.2)	.010
Net Revenue Per Patient	\$870	(383)	\$971	(434)	
Percent Operating Income Excluding Contract Expense	38.0%	(21.5)	41.3%	(12.5)	
Percent Operating Income Adjusted for Contract Expense	33.6%	(22.8)	33.9%	(13.8)	
Operating Income Per Patient Excluding Contract Expenses	\$367.86	(302.70)	\$384.84	(142.71)	
Operating Income Per Patient Adjusted for Contract Expenses	\$333.95	(310.22)	\$314.91	(145.88)	
Contract Expense as a Percentage of Direct	8.1%	(11.7)	13.1%	(12.1)	
Wages and Salaries as a Percentage of Direct Expense	44.9%	(13.9)	35.8%	(13.7)	
Direct Expense/ Patient	\$501.83	(202.16)	\$586.40	(381.69)	
Fixed Expense/ Patient	\$132.43	(96.58)	\$170.47	(137.55)	
Contract Expense/ Patient	\$37.48	(42.16)	\$69.93	(64.74)	.057
Other Overhead/ Patient	\$57.21	(73.49)	\$59.02	(91.59)	
Interest Expense/ Patient	\$67.75	(77.84)	\$85.98	(180.08)	

Table 2.2 List Charges for Surgical Procedures in Multispecialty Ambulatory Surgical Facilities

Surgical Procedure	JOINT VENTURE FACILITIES (N=21)		NONJOINT VENTURE FACILITIES (N=10)	
	Mean	Standard Deviation	Mean	Standard Deviation
Tonsillectomy and Adenoidectomy	\$884	(358)	\$1,048	(303)
Myringotomy	\$601	(282)	\$708	(145)
Nasal Fracture	\$792	(366)	\$821	(207)
Bronchoscopy	\$536	(136)	\$633	(157)
Colonoscopy	\$448	(149)	\$492	(141)
Esophagoscopy	\$574	(418)	\$555	(201)
Upper GI Endoscopy/Biopsy	\$512	(137)	\$561	(193)
Cataract Excision with Lens	\$1,295	(640)	\$1,405	(182)
Ocular Muscular Surgery	\$935	(751)	\$688	(180)
Barthol Cyst Excision	\$614	(221)	\$806	(175)
Conization of Cervix	\$801	(357)	\$697	(183)
Diagnostic D&C	\$717	(286)	\$765	(163)
Diagnostic Laparoscopy	\$868	(319)	\$932	(178)
Knee Arthroscopy/Surgery	\$1,328	(600)	\$1,179	(221)
Carpal Tunnel Release	\$745	(415)	\$861	(134)
Hammer Toe (fusion)	\$738	(199)	\$935	(150)
Morton's Neuroma Excision	\$746	(315)	\$808	(135)
Hemorrhoidectomy	\$942	(493)	\$864	(115)
Breast Biopsy	\$739	(287)	\$840	(134)
Inguinal Hernia	\$894	(346)	\$950	(246)
Pilonidal Cyst Incision	\$888	(544)	\$816	(95)
Rectal Polypectomy	\$627	(129)	\$610	(308)
Septoplasty	\$918	(458)	\$1,100	(486)

Table 2.3 Characteristics of Eye Specialty Ambulatory Surgical Facilities

Variable	JOINT VENTURE FACILITIES (N=19)		NONJOINT VENTURE FACILITIES (N=8)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	86.6%	(22.3)	--	--	
<b><u>Access</u></b>					
Percent of Revenue/Medicare	75.3%	(19.4)	79.0%	(15.0)	
Percent of Revenue/Medicaid	0.4%	(1.2)	0.9%	(1.8)	
Percent of Revenue/Managed Care	5.6%	(15.5)	4.8%	(8.8)	
Percent of Revenue/Blue Cross or Commercial Insurers	17.6%	(16.8)	15.3%	(7.6)	
Percent of Revenue/Self Pay	--	--	--	--	
Percent of Revenue/Other Including Contract Work	1.0%	(1.7)	--	--	
Percent of Revenue/Bad Debt and Charity Care	20.7%	(32.8)	14.8%	(17.2)	
<b><u>Utilization</u></b>					
Number of Patients	947	(849)	1,305	(983)	
Procedures Per Patient	1.23	(.33)	1.30	(.77)	
<b><u>Charges and Costs</u></b>					
Gross Revenue Per Patient	\$1,084	(589)	\$1,742	(934)	
Net Revenue Per Patient	\$932	(534)	\$1,136	(612)	

Table 2.3 Characteristics of Eye Specialty Ambulatory Surgical Facilities (continued)

Variable	JOINT VENTURE FACILITIES (N=19)		NONJOINT VENTURE FACILITIES (N=8)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Operating Income Excluding Contract Expense	37.9%	(16.3)	34.5%	(27.7)	
Percent Operating Income Adjusted for Contract Expense	36.3%	(16.6)	29.6%	(27.7)	
Operating Income Per Patient Excluding Contract Expenses	\$389.57	(349.58)	\$326.98	(351.12)	
Operating Income Per Patient Adjusted for Contract Expenses	\$377.29	(349.07)	\$276.31	(328.03)	
Contract Expense as a Percentage of Direct Expenses	2.6%	(4.1)	9.5%	(15.5)	
Wages and Salaries as a Percentage of Direct Expense	40.6%	(18.5)	29.5%	(8.9)	.010
Direct Expense/Patient	\$543.00	(259.34)	\$809.51	(813.88)	
Fixed Expense/Patient	\$208.12	(164.38)	\$308.81	(316.35)	
Contract Expense/Patient	\$12.27	(17.64)	\$50.68	(69.30)	
Other Overhead/Patient	\$89.85	(161.00)	\$69.60	(97.28)	
Interest Expense/Patient	\$48.28	(123.66)	\$31.07	(38.00)	

Table 2.3 Characteristics of Eye Specialty Ambulatory Surgical Facilities (continued)

Variable	JOINT VENTURE FACILITIES (N=19)		NONJOINT VENTURE FACILITIES (N=8)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
<b>List Charges</b>					
Average List Charge-Cataract Excision with Lens	\$1,323.52	(490.87)	\$1,706.91	(219.25)	
Average List Charge-Ocular Muscular Surgery	\$917.57	(105.59)	\$920.00	(28.28)	

## CHAPTER III

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF SERVICES BY CLINICAL LABORATORIES

#### A. Introduction

This chapter analyzes the effects of joint ventures on the provision of services by independent clinical laboratories. The diagnostic testing performed in clinical laboratories examines materials and specimens taken from the human body to provide information needed for use in the diagnosis, prevention or treatment of disease and medical conditions. Clinical laboratories are licensed under Chapter 483, Part I, Florida Statutes. Historically, some physicians had employed laboratory technicians on a part or full time basis to perform laboratory tests within their practice. Also, physicians would often contract for laboratory services with an independent lab to perform tests for their patients at discounted rates; the physicians would then bill the patients for the laboratory work at marked up charges.

The practice of adding substantial mark-ups to bills for laboratory work performed by outside laboratories has been cited as unethical by the American Medical Association. The Florida legislature addressed the mark-up problem with the passage of a law during the 1979 session. Under this law when a physician is intending to bill for services rendered by an independent laboratory, the fee the physician charges to the patient must be no greater than the amount charged by the laboratory. Nonetheless, although the practice of marking-up charges is prohibited under Florida law, this prohibition on mark-ups has never been strictly enforced.

More recently, at the federal level, Congress enacted the Clinical Lab Improvement Act (CLIA, 1988) in an attempt to monitor and ensure the quality of clinical laboratory testing. This legislation prohibited payments for clinical procedures performed in labs that did not meet the necessary licensure requirements. The Medicare program also restricted payments to certain referring "shell" laboratories. A "shell" laboratory conducts very little testing on site; instead, most of the tests are performed at a reference lab. To receive Medicare payments for lab work, seventy percent of all diagnostic tests during the year must be performed on site. Finally, in 1989 Congress passed a law prohibiting physicians from referring their Medicare patients to clinical laboratories in which the physician has an ownership interest. This law becomes effective January 1, 1992.

The results reported in chapter I indicate that approximately 50 percent of the clinical laboratories in Florida are owned by one or more referring physicians. Another twelve percent of these labs are owned solely by pathologists. These physician owners generally

provide services on a consultation basis and thus do not usually refer patients to the lab for diagnostic testing. For purposes of this study, laboratories were grouped into four categories. The first group includes laboratories that provide courier services to surrounding areas, either within the same county or surrounding counties. Presumably, these laboratories would tend to offer a more extensive scope of services and are apt to be licensed to perform more categories of tests. Laboratories not offering courier services constitute the second group; these labs are likely to be more limited in the scope of services provided, with more modest capital investment by their owners. The third category of labs are those which are owned solely by pathologists. The fourth group is comprised of labs which specialize in certain types of services, such as allergy testing, drug screenings or infertility testing. Twenty-five specialized labs and twenty labs owned solely by pathologists filed completed surveys.

The analysis below examines two groups in detail: 1) laboratories which provide courier services, and 2) clinical laboratories without courier services. Labs owned by pathologists, who are not in a position to make referrals and generally provide a more extensive scope of services, are not comparable to labs owned by referring physicians. This is also the case for specialized laboratories as the types of diagnostic testing provided by specialized labs vary significantly. As a consequence, it is difficult to make general meaningful comparisons between either pathologist owned labs or specialized labs and two groups of labs that perform routine diagnostic tests. For this reason, only limited comparisons for pathologist owned labs and general labs performing routine tests are reported in section D. The two ownership categories for clinical laboratories with and without courier services are: 1) joint venture with referring physician owners, and 2) not joint venture (no referring physician owners).

The State of Florida, Department of Health and Rehabilitative Services licenses clinical laboratories. To obtain a license laboratories must demonstrate that they meet state minimum standards of proficiency.

Clinical laboratories may vary with respect to the scope of service in terms of the amount of time that is required to report the results of the testing to the referring physician. Data was collected on the average length of time for tests to be returned to providers. Similar data was reported on the average length of time required for STAT services to be returned to the referring physician (STAT tests are tests that are needed immediately for diagnoses of critical situations by physicians).

Also, in cases where the laboratory sends out large proportions of tests, the laboratory essentially collects a fee for simply serving as an intermediary, which provides no real services except to possibly slow down the turn around time on the diagnostic

procedure. Such laboratories have been earmarked as suspect by the Office of the Inspector General.

## B. Characteristics of Courier Service Clinical Laboratories

### Access

Table 3.1 reports key characteristics of joint venture and nonjoint venture courier service clinical laboratories. Results on referrals indicate that joint venture courier service labs receive, on average, about 69 percent of their referrals from physician owners. (This percentage is calculated using only those facilities that reported referral information.)

Access to patients is measured by the percent of total revenue received from each of the various payer groups. The results reported in Table 3.1 show that nonjoint venture courier service clinical laboratories receive a larger share of their revenues from Medicare patients than joint venture courier service labs. Nonjoint venture labs receive in excess of 45 percent of their revenues from Medicare, compared to about 34 percent for otherwise similar labs owned by referring physicians.

Joint venture providers treat significantly fewer Medicaid patients than their nonjoint venture counterparts. Courier service labs with physician owners receive less than one percent of their revenues from Medicaid, whereas nonjoint venture facilities generate nearly five percent of their revenues from Medicaid patients.

Joint venture courier service clinical labs receive less than ten percent of their revenues from services provided to self-pay patients. In contrast, nonjoint venture courier service labs earn almost 22 percent of their revenues from diagnostic tests performed on self-pay patients. This difference in the proportion of revenues received from self-pay patients is statistically significant.

Other differences in measures of access are not statistically significant; however, physician owned courier service clinical labs render more bad debt and charity care than nonjoint venture labs offering a similar scope of services. The percentages are 6.4 for joint venture labs and 3.8 for the nonjoint venture facilities.

### Economic and Financial Characteristics

Table 3.1 also reports utilization and financial statistics for courier service clinical laboratories by ownership status (joint venture versus nonjoint venture). Clinical labs owned by referring physicians perform almost twice as many diagnostic procedures per patient treated as similar nonjoint venture labs. The number of procedures performed per patient is 3.3 in physician

owned labs which is significantly higher than the 1.7 procedures per patient rendered by their typical nonjoint venture labs with courier services. The difference in gross revenue per lab procedure by ownership status is negligible.

The higher utilization per patient which characterizes physician owned labs results in significantly higher gross revenues per patient. Joint venture courier service labs generate almost twice as much revenue per patient as their nonjoint venture counterparts. The gross revenue per patient is about \$38 for labs with referring physician owners compared to just under \$20 for nonjoint venture facilities.

On the other hand, joint venture courier service labs have slightly greater discount and contractual adjustment rates than nonjoint venture labs. The average discount and contractual adjustment rate is nearly 19 percent for the labs owned by referring physicians, compared to almost 17 percent for nonjoint venture labs. While this difference is not statistically significant, it does indicate that the higher average gross charges per patient at joint venture labs are not reduced by discounts and contractual adjustments.

Overall firm profitability is indicated by the operating income as a percent of net revenue; this ratio, expressed as a percentage, is defined as net revenues (after deductions and discounts) minus direct expenses divided by net revenues. This definition of direct expenses excludes depreciation, lease and rental payments, as well as the purchase of services under contract. The numerator of this ratio is defined as operating income. When this indicator is "adjusted for contract services", expenses for purchases under contract are included in direct expenses.

The results show that ownership has little impact on the operating income as a percent of net revenue (excluding contract expenses) of courier service clinical laboratories. Making the necessary adjustments for contract expenses substantially reduces the operating income as a percent of net revenue of the joint venture courier service labs because these facilities send out more tests to reference labs under contractual arrangements. In contrast, nonjoint venture courier service facilities are frequently the labs to which the physician owned labs send their testing. Hence, it is not surprising that the contract adjustments have a negligible effect on the operating income as a percent of net revenue of the nonjoint venture providers. As a result, after contract adjustments the nonjoint venture courier service labs appear to be more profitable than their physician owned counterparts. These differences, however, are not statistically significant.

The average operating income per procedure (adjusted for contract expense) is \$3.82 in joint venture clinical labs with courier services compared to an average operating income per procedure of \$3.63 in courier service labs not owned by referring physicians. Thus, the operating income per procedure does not differ significantly by ownership group.

Expenses are computed in terms of procedures rather than the number of patients treated because physicians may order more than one test per patient. The average total cost of a diagnostic procedure performed in a clinical laboratory is the sum of direct expense per procedure, fixed expense per procedure, and contract expense per procedure. In the case of clinical labs, contract expenses are included in the calculation of average cost per procedure because most clinical labs are not licensed to perform all categories of tests. Smaller labs generally send out tests for which they are not licensed to perform to larger labs under a contract agreement. The reasons for excluding other overhead and interest expense from the computations of the average cost of a procedure are presented in the Introduction.

The average total costs of a diagnostic procedure performed in a physician owned courier service clinical laboratory is approximately \$12.85. By comparison, the average total costs per procedure in a courier service nonjoint venture lab is \$9.55, which is \$3.30 or about 25 percent less than the average cost per procedure in the joint venture labs. The lower average cost of the nonjoint venture labs can be attributed in part to the greater volume of diagnostic procedures performed and the size of these facilities. Physician owned labs also have higher overhead expense per procedure as well as higher interest expense per procedure. Again, this is due in part to the larger volume of procedures performed in the nonjoint venture labs. Additional analyses of variance were performed controlling for regional variations in cost of production. These results show that there is no discernible pattern of either higher or lower production costs by region within Florida.

Purchases of services under contract represent a higher percentage of direct expenses in physician owned labs than in nonjoint venture labs (20.5 percent for the joint ventures versus 15.8 percent for the nonjoint venture facilities). This difference arises in part because the physician owned labs send out a relatively larger proportion of their lab work to reference labs than nonjoint venture facilities. Salaries and wages for licensed lab technicians account for a similar share of direct expenses for both ownership groups.

#### Scope of Services Provided by Courier Service Labs

Clinical laboratories were requested to report information on the scope of services offered. The most important findings are

summarized here. The results show that physician owned labs send out a significantly higher proportion of total procedures to other labs than nonjoint venture facilities. Joint venture labs send out almost 19 percent of their diagnostic procedures, while nonjoint venture labs send out 11 percent of their lab work to other laboratories. These results imply that physician owned labs provide a more limited scope of testing and that these facilities are more prone to be labs which serve as intermediaries.

Nonjoint venture courier service labs are licensed to perform a more extensive range of tests than physician owned labs. The average number of categories of licensure is 8.3 for the nonjoint venture labs which is significantly different from the 5.6 for their joint venture counterparts. This is also the case regarding categories of certification.

Other indicators of service show that nonjoint venture labs employ, on average, 1.4 more couriers than physician owned labs offering a similar scope of services. Nonjoint venture laboratories are significantly more likely to provide STAT services than their joint venture counterparts. For example, the proportion of nonjoint venture facilities providing STAT testing is 92 percent compared to 80 percent of the joint venture clinical labs. The collection stations of nonjoint venture labs are also opened, on average, 1.5 more hours per day than physician owned labs (3.5 hours versus 2 hours). These differences are all statistically significant. Other differences such as turnaround time on both routine and STAT procedures reveal a similar pattern; however, these results are not statistically significant.

#### C. Characteristics of Clinical Laboratories Without Courier Services

Table 3.2 compares key characteristics of joint venture and nonjoint venture clinical laboratories that do not offer courier services. These labs tend to be smaller and provide a more limited scope of services than clinical laboratories with courier services. Physician owned labs without courier services receive, on average, about 60 percent of their referrals for laboratory testing from owners. (This percentage is calculated using only those facilities that reported referral information.)

##### Access

The findings regarding access reported in Table 3.2 indicate that joint venture labs receive a slightly larger share of their revenue from Medicare than nonjoint venture providers (43.5 percent for the joint ventures versus 40.7 percent for the nonjoint venture facilities). As is the case with the courier service labs, joint venture labs without courier service treat only a small number of Medicaid patients. Thus, joint venture labs without courier service receive a trivial amount of their revenues from tests

performed for Medicaid patients. Nonjoint venture labs, on the other hand, earn almost five percent of their revenue from tests rendered to Medicaid patients; this difference is statistically significant.

Physician owned labs without courier services generate a larger proportion of their revenues from services provided to self-pay patients. More than 29 percent of the revenue of joint venture labs is generated by services rendered to self-pay patients; nonjoint venture labs offering a similar scope of services receive about 11 percent of their revenues from self-pay patients.

The "other" payer group, which includes contract work for other health care providers and physicians' offices, represents almost 25 percent of the revenue generated by nonjoint venture labs. Physician owned labs earn significantly less as only five percent of their revenue is derived from services provided to the "other" payer group. Finally, bad debt and charity care account for a slightly larger share of gross revenues of joint venture labs than nonjoint venture labs.

#### Economic and Financial Characteristics

Table 3.2 also reports utilization and financial characteristics of joint venture and nonjoint venture clinical labs without courier services. Clinical labs with referring physician owners perform, on average, about 40 percent more procedures per patient than nonjoint venture facilities. The average number of procedures per patient is 2.8 in joint venture facilities compared to 2.0 for the nonjoint venture facilities. This difference in utilization per patient is statistically significant.

In contrast, the average gross revenue (charges) per procedure is higher in nonjoint venture facilities; the average charge per procedure is \$16.52 in nonjoint venture labs without courier services, compared to \$13.61 for physician owned facilities. The gross revenue (charges) generated per patient in physician owned labs is approximately \$36, which is \$5.52 or close to 18 percent more than the gross revenue (charges) per patient in nonjoint venture labs. The differences in revenue (charges) per procedure and revenue (charges) per patient are not statistically significant. The mean discount and contractual adjustment rate of the joint venture labs is 21.5 percent, whereas the average discount and contractual adjustment rate for nonjoint venture labs offering a similar scope of services is 20 percent. Hence, the difference in the discount and contractual adjustment rate by ownership group is negligible.

Comparisons of average list charges for a set of common procedures are provided in Table 3.4. Discussions of differences in average list charges are presented in the section that compares pathologist owned labs to other labs.

Firm profitability is reflected by the operating income as a percent of net revenue. This concept, as well as operating income are defined in the Introduction. The results show that before adjustments for contract expenses, the percent operating income is higher for joint venture facilities. This is also the case after adjusting for contract expenses, although the disparity in the average operating income as a percent of net revenue is narrowed somewhat. The difference in operating income per procedure between the two ownership groups is negligible. These results indicate no significant difference in measures of profitability.

The average total cost of a diagnostic procedure performed in a clinical lab is the sum of direct expense per procedure, fixed expense per procedure, and contract expense per procedure. The average total cost of a diagnostic procedure performed in a joint venture clinical lab without courier services is almost \$15; in nonjoint venture labs without courier services the average total costs per procedure is \$15.79. Thus, there is only a negligible difference by ownership group in the average per unit production costs. Further breakdowns of the per unit expenses by the four geographic regions revealed that there is no systematic regional variation in per unit production costs.

Other overhead per procedure is significantly higher in nonjoint venture labs without courier services (\$2.20 versus \$.36). In contrast, interest expense per procedure and contract expense per procedure do not vary significantly by ownership group.

In clinical labs without courier services, contract expenses account for a similar share of total direct expenses in both joint venture and nonjoint venture facilities. On the other hand, salaries and wages represent a significantly larger share of total direct expenses in joint venture facilities than in nonjoint venture businesses. Almost 51 percent of the direct expenses of joint venture labs are accounted for by salaries and wages, compared to about 38 percent for the nonjoint venture labs. Nonetheless, both ownership groups spend almost the same proportion of direct expenses on salaries and wages for licensed lab technicians.

#### Scope of Services Provided by Labs Without Courier Services

Indicators of the scope of services offered were analyzed by ownership group for clinical laboratories that do not offer courier services. The most important findings are summarized here and are not reported in a separate table.

Physician owned labs send out a significantly higher proportion of total procedures to other labs than nonjoint venture facilities. These physician owned labs send out an average of 33.5 percent of their procedures, whereas the nonjoint venture labs send

out less than 15 percent of their diagnostic procedures to reference labs. This difference is statistically significant.

Nonjoint venture labs are licensed and certified to perform significantly more categories of procedures than joint venture facilities. The mean number of categories of licensure is 4.6 for joint venture labs versus 7.6 for the nonjoint venture facilities. The findings regarding categories of certification are similar.

Contrary to the findings reported for the courier service labs, joint venture clinical labs without courier services are more likely to offer STAT services than their nonjoint venture counterparts (73.9 percent versus 57.1 percent). Other differences are not significant.

These results show that joint venture laboratories without courier service send out significantly more tests than their nonjoint venture counterparts. Nonjoint venture labs offer a significantly broader scope of services than similar labs owned by referring physicians.

D. Characteristics of Pathologist Owned Clinical Laboratories and Characteristics of Combined Clinical Laboratories.

Twenty clinical laboratories reported only pathologists as physician owners. Three of these labs were specialized and seventeen provide common clinical laboratory services. These seventeen pathologist owned labs reported that they had no referring physician owners. Table 3.3 reports characteristics of these pathologist owned labs, characteristics of the clinical labs with referring physicians as owners and characteristics of nonjoint venture labs.

Clinical labs owned by referring physicians receive, on average, nearly 37 percent of their referrals from owners. Measures of access are not reported in Table 3.3 because only two of the responding pathologist owned labs reported usable payer class information. For those two, access characteristics were similar to the averages for labs with referring physicians as owners. Characteristics of laboratory service for pathologist owned labs were similar to characteristics of courier service nonjoint venture labs and these characteristics are not described in Table 3.3.

Significance levels reported in Table 3.3 are based on a one-way analysis of variance F test; the assumed null hypothesis is that the averages are equal for all three groups. Average labs procedures per patient differ significantly; labs with referring physician owners have utilization rates that exceed the other two averages by more than 35%. Average gross revenues per procedure differ significantly by ownership group. Gross revenue per procedure in pathologist owned labs exceeds the average gross

revenue per procedure in joint venture labs and nonjoint venture labs by about 72 and 56 percent respectively. Gross revenue per lab patient and net revenue per lab patient are both significantly different. The average gross revenue for both groups of physician owned labs is at least 50 percent higher than the average gross revenue in nonjoint venture clinical labs. The differences in net revenue per patient by ownership group reveal a similar pattern.

Differences in measures of profitability are not statistically significant and these differences parallel differences noted for courier service and noncourier service labs. Averages for contract expense per procedure differ significantly; both groups of physician owned labs send out more procedures than their nonjoint venture counterparts. The percent of total procedures sent out differ significantly with both groups of physician owned labs reporting higher averages.

Table 3.4 reports average list charges for these three groups of clinical laboratories. Tests of significance indicate significant differences for several list charges. Pairwise comparisons of these differences would not lead to rejection of the null hypothesis that joint venture lab list charges are the same as or lower than the list charges at nonjoint venture labs. This result seems curious as joint venture labs have higher gross and net revenues per patient. These results suggest that nonjoint venture labs must do more low-charge procedures.

#### E. Summary

This chapter compares the characteristics of joint venture and nonjoint venture clinical laboratories. The effects of ownership are examined for three types of clinical laboratories: 1) labs with courier services, 2) labs without courier services, and 3) labs that are owned by pathologists. Only limited comparisons are made with labs owned by pathologists because these physician specialists are not in a position to refer patients to their own facility.

In terms of access, nonjoint venture courier service labs render significantly more services to Medicare and Medicaid patients than their nonjoint venture counterparts. Courier service labs owned by referring physicians, on the other hand, writeoff a larger percentage of their gross revenues as bad debt and/or charity care. Comparisons between labs without courier services show that nonjoint venture facilities generate significantly more of their revenues from Medicaid than otherwise similar labs owned by physicians. Joint venture labs without courier services, however, perform substantially more testing for self-pay patients.

Physician owned labs have significantly higher utilization rates and significantly higher revenue per patient than labs without physician owners. Courier service clinical labs owned by referring physicians perform almost twice as many diagnostic tests

per patient treated as similar nonjoint venture labs perform. The number of tests per patient is 3.3 in physician owned labs compared to 1.7 in their nonjoint venture counterparts. Joint venture and nonjoint venture labs with courier services generate approximately the same amount of revenue per procedure. The higher utilization of the joint venture labs, however, results in higher gross revenues per patient. The gross revenue is about \$38 for courier service joint venture labs which is significantly higher than the \$20 for their nonjoint venture counterparts.

Among clinical labs without courier services, joint venture facilities perform significantly more tests per patient (2.8 versus 2.0 tests). Joint venture labs without courier service charge less per procedure than their nonjoint venture counterparts (\$13.61 versus \$16.52), but generate more revenue per patient (\$36.30 versus \$30.78) than otherwise similar labs without physician owners.

Average production costs per procedure are significantly lower in courier service nonjoint venture labs than in similar labs owned by referring physicians. The cost differential is due to facility size and economies of scale in production. For clinical labs without courier services, there is only a negligible difference in average per unit production costs.

For the most part, the service characteristics reported indicate that nonjoint venture courier service labs provide a greater scope of services than their joint venture counterparts. A similar pattern emerges for the clinical labs without courier services. Thus, the results on scope of services suggest that nonjoint ventured clinical labs offer a broader scope of services than labs owned by referring physicians.

Thus, the findings indicate that both groups of joint venture clinical labs perform more tests per patient, and that courier service joint venture labs have higher charges per patient than nonjoint venture clinical labs.

Table 3.1 Characteristics of Courier Service Clinical Laboratories

Variable	JOINT VENTURE FACILITIES (N=30)		NONJOINT VENTURE FACILITIES (N=25)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	69.0%	(40.4)			
<b>Access</b>					
Percent of Revenue/Medicare	33.9%	(28.3)	45.5%	(14.1)	
Percent of Revenue/Medicaid	0.9%	(1.8)	4.6%	(6.4)	.049
Percent of Revenue/Managed Care	5.5%	(9.9)	1.7%	(3.7)	
Percent of Revenue-Blue Cross/Commercial	16.9%	(24.1)	12.0%	(16.2)	
Percent of Revenue/Self Pay	9.7%	(13.7)	21.8%	(12.8)	.043
Percent of Revenue/Other including Contract Work	22.6%	(29.3)	19.7%	(22.1)	
Percent of Revenue/Bad Debt and Charity Care	6.4%	(9.6)	3.8%	(2.8)	
<b>Utilization</b>					
Lab Procedures Per Patient	3.3	(1.6)	1.7	(.51)	.000
<b>Charges and Costs</b>					
Gross Revenue/Lab Procedure	\$12.78	(5.89)	\$12.86	(7.13)	
Gross Revenue/Lab Patient*	\$38.23	(23.03)	\$19.84	(11.02)	.005
Net Revenue/Lab Patient*	\$31.53	(16.21)	\$17.52	(9.59)	.001
Discounts and Contractual Adjustments	18.9%	(15.2)	16.6%	(11.4)	
Operating Income as a Percent of Net Revenue Excluding Contract Expense	34.6%	(37.9)	36.2%	(34.6)	
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	24.2%	(35.6)	35.6%	(17.6)	

\*Excludes contract procedures done for other providers.

Table 3.1 Characteristics of Courier Service Clinical Laboratories (continued)

Variable	JOINT VENTURE FACILITIES (N=30)		NONJOINT VENTURE FACILITIES (N=25)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Operating Income Per Procedure Adjusted for Contract Expense	\$3.82	(2.53)	\$3.63	(2.49)	
Direct Expense/Procedure	\$9.86	(7.81)	\$7.40	(5.48)	
Fixed Expense/Procedure	\$1.74	(2.91)	\$1.11	(1.14)	
Contract Expense/Procedure	\$1.25	(1.92)	\$1.04	(1.33)	
Other Overhead/Procedure	\$1.69	(2.29)	\$1.15	(2.14)	
Interest Expense/Procedure	\$.28	(.69)	\$.09	(.23)	
Contract Expenses as a Percentage of Total Direct Expenses	20.5%	(32.2)	15.8%	(16.9)	
Salaries and Wages as a Percentage of Total Direct Expenses	55.4%	(21.3)	58.6%	(19.4)	
Salaries and Wages Paid to Licensed Lab Technicians as a Percentage of Total Direct Expenses	21.1%	(19.6)	20.5%	(21.1)	

Table 3.2 Characteristics of Clinical Laboratories Without Courier Services

Variable	JOINT VENTURE FACILITIES (N=23)		NONJOINT VENTURE FACILITIES (N=20)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	60.2%	(48.0)			
<b>Access</b>					
Percent of Revenue/Medicare	43.5%	(31.6)	40.7%	(39.7)	
Percent of Revenue/Medicaid	0.2%	(0.4)	4.8%	(7.7)	.038
Percent of Revenue/Managed Care	.02%	(.05)	2.6%	(3.3)	
Percent of Revenue/Blue Cross/Commercial	10.9%	(20.5)	9.5%	(16.4)	
Percent of Revenue/Self Pay	29.2%	(28.9)	11.2%	(11.9)	
Percent of Revenue/Other Including Contract Work	5.5%	(12.7)	24.6%	(49.1)	
Percent of Revenue/Bad Debt and Charity Care	11.1%	(14.8)	9.7%	(13.0)	
<b>Utilization</b>					
Lab Procedures Per Patient	2.8	(1.6)	2.0	(0.9)	.028
<b>Charges and Costs</b>					
Gross Revenue/Lab Procedure	\$13.61	(6.24)	\$16.52	(10.98)	
Gross Revenue/Lab Patient	\$36.30	(27.0)	\$30.78	(18.36)	
Net Revenue/Lab Patient*	\$30.39	(20.91)	\$27.51	(14.45)	
Discounts and Contractual Adjustments	21.5%	(8.1)	20.0%	(21.0)	

\*Excludes contract procedures done for other providers.

Table 3.2 Characteristics of Clinical Laboratories Without Courier Services (continued)

Variable	JOINT VENTURE FACILITIES (N=23)		NONJOINT VENTURE FACILITIES (N=20)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Operating Income as a Percent of Net Revenue Excluding Contract Expenses	40.2%	(33.7)	30.6%	(31.6)	
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	29.0%	(31.7)	22.6%	(29.0)	
Operating Income Per Procedure Adjusted for Contract Expenses	\$4.92	(3.93)	\$5.22	(4.66)	
Direct Expense/ Procedure	\$12.67	(19.88)	\$13.08	(16.33)	
Fixed Expense/ Procedure	\$1.19	(1.97)	\$1.59	(1.58)	
Contract Expense/ Procedure	\$1.10	(1.89)	\$1.12	(1.85)	
Other Overhead/ Procedure	\$0.36	(.70)	\$2.20	(2.36)	.001
Interest Expense/ Procedure	\$0.06	(.13)	\$0.04	(0.4)	
Contract Expenses as a Percentage of Total Direct Expenses	10.4%	(23.4)	9.8%	(17.5)	
Salaries and Wages as a Percentage of Total Direct Expenses	50.6%	(26.4)	37.9%	(21.2)	
Salaries and Wages Paid to Licensed Lab Technicians as a Percentage of Total Direct Expenses	22.4%	(16.9)	21.6%	(22.7)	

Table 3.3 Characteristics of Combined Clinical Laboratories

Variable	PATHOLOGIST-OWNERS ONLY (N=17)		REFERRING PHYSICIAN OWNERS (N=54)		NO PHYSICIAN OWNERS (N=46)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	
<b>Utilization</b>							
Lab Procedures Per Patient	2.3	(1.9)	3.1	(1.6)	1.8	(0.7)	.000
<b>Charges and Costs</b>							
Gross Revenue/Lab Procedure	\$22.55	(20.3)	\$13.14	(6.00)	\$14.50	(9.11)	.005
Gross Revenue/Lab Patient	\$41.27	(31.59)	\$37.46	(24.42)	\$24.97	(15.67)	.015
Net Revenue/Lab Patient	\$32.28	(21.19)	\$31.13	(17.80)	\$21.80	(12.71)	.026
Discounts and Contractual Adjustments	29.5%	(22.9)	20.2%	(11.9)	17.6%	(14.1)	
Operating Income as a Percent of Net Revenue Excluding Contract Expense	30.2%	(31.0)	37.0%	(36.0)	33.7%	(33.0)	
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	16.0%	(27.3)	26.2%	(33.4)	29.6%	(24.0)	
Operating Income Per Procedure Adjusted for Contract Expense	\$3.93	(3.19)	\$4.28	(3.19)	\$4.28	(3.55)	
Direct Expense/Procedure	\$17.22	(17.63)	\$11.06	(14.12)	\$9.97	(11.89)	
Fixed Expense/Procedure	\$1.46	(1.35)	\$1.53	(2.59)	\$1.30	(1.34)	

Table 3.3 Characteristics of Combined Clinical Laboratories (continued)

Variable	PATHOLOGIST-OWNERS ONLY (N=17)		REFERRING PHYSICIAN OWNERS (N=54)		NO PHYSICIAN OWNERS (N=46)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	
Contract Expense/ Procedure	\$2.66	(4.86)	\$1.18	(1.88)	\$1.07	(1.54)	.049
Other Overhead/ Procedure	\$1.55	(2.47)	\$1.15	(1.93)	\$1.59	(2.26)	
Interest Expense/ Procedure	\$0.14	(0.26)	\$0.19	(0.55)	\$0.07	(0.19)	
Percent of Total Procedures Sent Out of Other Laboratories	17.9%	(30.2)	25.4%	(31.0)	12.6%	(17.1)	.032
Percent of Total Procedures Performed Under Contract for Other Providers	15.5%	(34.6)	8.4%	(24.4)	10.5%	(25.4)	

Table 3.4 Comparison of List Charges for Clinical Laboratory Test Procedures

Laboratory Test Procedure	PATHOLOGIST-OWNERS ONLY (N=17)		REFERRING PHYSICIAN OWNERS (N=54)		NO PHYSICIAN OWNERS (N=46)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
19 or more blood/urine tests	\$26.93	(5.73)	\$27.27	(10.12)	\$39.87	(27.18)
Urinalysis, routine with microscopy	\$20.96	(21.83)	\$10.23	(2.89)	\$16.14	(15.57)
Automated-hemogram, manual WBC-CBC count	\$20.00	(2.82)	\$13.71	(4.37)	\$18.40	(7.82)
Surgical pathology complete	\$45.52	(7.15)	\$41.20	(14.26)	\$53.95	(32.66)
Cytopathology, PAP Smear	\$13.85	(3.59)	\$16.74	(12.57)	\$14.38	(6.37)
Thyroid stimulating hormone (TSH) RIA OR EIA	\$40.95	(13.94)	\$37.49	(7.84)	\$55.73	(48.97)
Nose or throat culture, bacteria	\$22.50	(8.43)	\$21.14	(6.09)	\$28.29	(12.46)
Antithrombin III, Antigen Assay	\$87.94	(41.58)	\$69.95	(39.93)	\$74.94	(40.81)
Glucose; except urine	\$11.43	(2.93)	\$11.41	(4.72)	\$13.92	(6.57)
Urine culture; bacterial	\$26.17	(5.95)	\$21.71	(5.99)	\$31.42	(14.04)
Automated hemogram and platelet count	\$14.00	(2.53)	\$16.93	(7.75)	\$21.19	(7.38)
Lipoprotein, HDL by precipitation method	\$20.50	(6.03)	\$18.60	(6.92)	\$25.22	(11.64)
Test feces for blood	\$11.71	(4.07)	\$9.53	(5.44)	\$13.17	(6.76)
Hemoglobin, colorimetric	\$10.40	(2.60)	\$7.90	(3.32)	\$11.09	(5.94)
Assay serum cholesterol	\$12.86	(3.62)	\$12.54	(5.17)	\$14.93	(8.25)
Hematocrit	\$9.86	(3.08)	\$8.52	(4.24)	\$10.42	(5.43)
Automatic hemogram and platelet count	\$14.53	(2.52)	\$16.48	(5.30)	\$20.09	(6.72)

Table 3.4 Comparison of List Charges for Clinical Laboratory Test Procedures (continued)

Laboratory Test Procedure	PATHOLOGIST-OWNERS ONLY (N=17)		REFERRING PHYSICIAN OWNERS (N=54)		NO PHYSICIAN OWNERS (N=46)	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Sedimentation rate, Westergren Type	\$14.21	(4.65)	\$11.21	(3.79)	\$16.54	(13.67)
13-16 clinical chemistry tests	\$22.57	(2.76)	\$26.03	(10.53)	\$31.11	(15.19)
Lipoprotein cholesterol fractionation-formula	\$25.39	(7.23)	\$26.51	(6.84)	\$30.86	(16.49)
17-18 clinical chemistry tests	\$25.50	(3.2)	\$24.52	(9.40)	\$36.16	(26.77)
Free thyroxine index (T-7)	\$23.54	(4.24)	\$23.79	(6.30)	\$25.32	(12.18)

## CHAPTER IV

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF SERVICES BY DIAGNOSTIC IMAGING CENTERS

#### A. Introduction

This chapter presents a limited analysis of the effects of joint ventures on the provision of services by freestanding diagnostic imaging centers. Analysis of the impacts of joint ventures on access, utilization rates, costs, and charges for diagnostic imaging services are limited because almost all freestanding diagnostic imaging centers in Florida have one or more referring physician owners.

Diagnostic imaging procedures are utilized in diagnosing patient illnesses. These services include magnetic resonance imaging (MRI), computerized axial tomography, x-rays, ultrasound and nuclear medicine. Magnetic resonance imaging and CAT scan procedures are more complex and costly than other imaging services. Except for x-ray machines, diagnostic imaging machines and the facilities where these services are performed are not licensed by the state of Florida. Furthermore, diagnostic imaging facilities are not registered with the state of Florida. Since a complete list indicating the location of these facilities was not available, a mailing list was compiled from Blue Cross claims records for imaging services.

Additionally, Certificate of Need does not regulate the provision of these services unless the services are located within a hospital. This lack of regulation is indicated by the large number of centers that provide these services throughout Florida. Indeed, some physician practices have MRI machines or CAT scan machines in their offices. In the past five years these services have proliferated throughout the country where they are not regulated by Certificate of Need or other licensure requirements. This is the case in Florida where almost all metropolitan areas have more than one freestanding imaging center.

As reported previously, 93 percent of the diagnostic imaging centers that returned a completed survey are joint venture facilities. Moreover, only one of the eleven nonjoint venture diagnostic centers provides magnetic resonance imaging and CAT scan services: nine of the remaining ten nonjoint venture facilities perform only x-rays. A similar pattern emerges among the nonresponding imaging centers; all but two of the nonrespondents that perform MRIs and/or CAT scans are owned by referring physicians.

For comparison purposes, diagnostic imaging centers are classified by type of services provided and ownership (joint venture versus nonjoint venture). Diagnostic imaging facilities may either specialize in the provision of one type of service or

they may offer an array of services. Hence, these facilities are classified into five groups according to the type of service: 1) magnetic resonance imaging (MRI) services only; 2) "comprehensive or full" services: MRI, computerized axial tomography (CAT) scans, x-rays, and "Other Imaging" services; 3) CAT scans, x-rays, and "Other Imaging" services, but no MRIs; 4) "Other Imaging" services such as ultrasound, mammography, and nuclear medicine; and 5) x-ray procedures only. Except for centers specializing in x-rays, meaningful comparisons of facilities within Florida cannot be made because all but one of the centers have physician owners.

Diagnostic imaging centers require initial investments that depend on the type of services provided. For more complex diagnostic services, including CAT scans, MRI services, and other more recent developments of high tech imaging services, such as PET scans, the initial investment may seem quite large. In recent years the initial cost of a CAT or MRI machine is between \$1,000,000 and \$1,500,000. These costs plus the cost of the building and related equipment would generally result in an initial cost for a high tech imaging center of somewhere in the neighborhood of \$4,000,000. Given the potential to generate revenues if the equipment is heavily utilized, these costs are relatively small. The costs for imaging centers with less expensive, less sophisticated imaging equipment could be substantially lower.

The number of imaging centers have grown in Florida because many physicians have individually or collectively decided to open their own centers rather than using hospital outpatient services for imaging. Indeed, in this project the researchers received copies of a prospectus indicating that physicians can participate in ownership with a very small initial investment, and that the initial investment could essentially be covered by a personal loan, thereby requiring little or no out-of-pocket investment by the physician. The projection in this prospectus indicated that revenues and payments to owners would retire any debt incurred for the initial investment and then, within a year or two, the physician investors would receive substantial payments. In the following, sections, characteristics of joint venture imaging centers in Florida are described. Limited comparisons of the effects of joint venture ownership comparisons of the effects of joint venture ownership on costs, charges and utilization are also provided.

#### B. Characteristics of Joint Venture Imaging Centers

All of the responding MRI centers, all of the comprehensive imaging centers except one, all of the imaging centers specializing in CAT scans and other imaging procedures, and all of the centers specializing in "Other Imaging" procedures reported that they have physician owners. This data, therefore, does not allow an assessment of the impact of joint ventures on access, costs and charges, utilization and quality in provision of these services within Florida. The only result that allows for any inference

about the impact of joint ventures is the average percent operating income for these four facility types. These averages and other descriptive statistics on indicators of access, costs and charges, utilization, and quality are reported in Tables 4.1 through 4.5. All results reported in tables 4.1 through 4.5 are dependent on the particular mixes of services provided by the various types of imaging centers and cannot generally be compared.

Access is a problem regardless of the type of service provided. Joint venture diagnostic imaging facilities treat a negligible number of Medicaid patients. In comparison, nonjoint venture acute care hospitals in Florida generate approximately six percent of their revenues from services rendered to Medicaid patients. The various types of imaging centers indicated that between 30 and 58 percent of the imaging procedures performed are referred by physicians with who have an ownership interest in the facility.

Profitability, as measured by the average percent operating income, can be compared across these types of centers and can also be compared to analogous measures for other facility types. Tables 4.1 - 4.5 report average percent operating incomes excluding contract expenses that are highest for imaging centers specializing in the production of MRI scans (74.0 percent) and lowest for imaging centers specializing in CAT scan and other imaging services (59.1 percent). A similar pattern occurs for average percent operating income adjusted for contract expenses; in this case, the average percent operating income ranges from a high of 54.0 percent to a low of 42.5 percent. These measures of profitability are substantially higher than other facility types reported on in this study and an analysis of these results is provided in section D below.

Table 4.5 shows the results for joint venture imaging centers providing only x-ray services. The average percent operating income, excluding contract expenses, is 41.9 percent and when adjusted for contract expenses, the average percent operating income is 25.7 percent. Both of these averages are lower than mean percent operating income reported for the other four groups of imaging centers.

C. Effects of Joint Ventures on the Utilization of MRI and CAT Scans

Utilization rates were computed for the number of MRI scans per 1000 population in each of the Florida counties. Similar utilization rates were also computed for the number of CAT scans per 1000 population in each of the Florida counties. Measuring utilization rates as the number of diagnostic or surgical procedures per 1000 population in the county or MSA is the usual approach employed by researchers in the health economics and medical literature. (See, for example, studies by Wilensky and Rossiter (1983); Fuchs (1978); or Cromwell and Mitchell (1986). Metropolitan statistical areas are established by the U.S. Bureau

of the Census. In Florida, many of the MSAs (metropolitan statistical areas) are comprised of a single county.

Information regarding the number of MRI scans performed in Florida counties with joint venture diagnostic centers is presented in Table 4.6. These figures include data on the number of MRI scans performed in nonresponding diagnostic imaging centers which was obtained during the telephone followup of nonresponding facilities. Only one facility simply refused to report the number of MRI and CAT scans performed during FY 1989. Column one of Table 4.6 shows the number and percentage of MRI scans performed in hospital outpatient departments. The number and proportion of total MRI scans performed in joint venture freestanding facilities are displayed in column two. The total MRI scans and the MRI scans per thousand population in each county are given in the third and fourth columns of Table 4.6.

The results show that in every county except for Duval county, over 70 percent of the MRI procedures are performed in freestanding joint venture diagnostic centers; only 36 percent of the MRI scans in Duval county are performed in joint venture facilities. In seven counties -- Brevard, Charlotte, Lee, Leon, Marion, Okaloosa, and St. Lucie -- all of the MRI centers are physician owned. Thus, 100 percent of the MRI scans in these counties are performed in joint venture facilities. In the four counties with the highest number of MRI procedures -- Broward (46,830), Dade (37,412), Hillsborough (23,993), and Pinellas (18,027) -- over 80 percent of the scans are performed in joint venture diagnostic centers. The number and percentage of total scans performed in joint venture centers in each of these counties are: Broward--43,840 (93.6%), Dade--30,849 (82.5%), Hillsborough--20,633 (86.0%) and Pinellas--15,770 (87.4%). The utilization rates or the number of MRI procedures performed per thousand population in each county ranges from 10.2 in Okaloosa county to 38.6 in Broward county.

Table 4.7 shows the number of CAT scans performed in Florida counties with joint venture diagnostic centers. These statistics understate both the total number and the utilization of CAT scans per thousand population because they exclude the number of procedures performed on CAT scan machines located in physicians' offices.

With few exceptions, the majority of the CAT scans in each of the Florida counties with joint venture diagnostic centers are performed in hospital outpatient diagnostic radiology departments. Nonetheless, in all but two counties, the number of CAT scans performed in joint venture facilities ranges between 20 and 80 percent of the total number performed. (The exceptions are Escambia county, where only 1.5 percent of the scans are performed in joint venture facilities, and Lee county where nearly all (97.5%) are performed in joint venture diagnostic centers.)

Since all but three of the freestanding diagnostic centers (one responding facility and two nonrespondents) that perform MRIs and CAT scans in Florida are joint venture arrangements, data was

obtained from the Maryland Health Services Cost Review Commission on facilities performing MRIs and CAT scans in the Baltimore metropolitan statistical area (MSA). The Baltimore MSA data provide a reasonable basis for comparison for at least two reasons.

First, in 1989 only four MRI machines in Baltimore were located in freestanding diagnostic imaging centers. All other MRI machines were located in hospital outpatient diagnostic radiology centers. Two of the freestanding facilities are owned solely by radiologists. These physician specialists read and interpret MRI scans and other radiologic films and thus are not in a position to refer patients to these centers for diagnostic testing. The other two freestanding centers were established midyear in 1989 and therefore were only operational for six months. One of these facilities is a joint venture between a group of retired physicians and a hospital, while the other is owned by a group of referring physicians. Thus, only one of the freestanding MRI centers in the Baltimore MSA has referring physician owners.

The second reason the Baltimore MSA represents a reasonable comparison group is that this geographic area is relatively isolated. Thus, the likelihood that individuals residing in suburban Baltimore will cross market area borders to receive diagnostic services is small. Moreover, since two major teaching hospitals (Johns Hopkins and the University of Maryland) are located in Baltimore, any bias in utilization rates should be towards higher utilization of MRI or CAT scan procedures than in a similar area without two medical schools, especially since Johns Hopkins is an internationally renowned institution.

The number of MRI scans performed at outpatient diagnostic centers in the Baltimore MSA during 1989 was 28,838. The utilization rate for MRIs per thousand population in the Baltimore MSA is 12.3. The number of CAT scans performed during 1989 in the Baltimore MSA was 65,498. The utilization rate for CAT scans per thousand population in the Baltimore MSA is 27.9.

Comparisons were made between Baltimore and three Florida MSAs that have comparable socioeconomic characteristics. These three Florida MSAs are: Jacksonville, Orlando, and Miami. The populations in all four MSAs have a similar proportion of elderly and similar per capita personal income. These statistics are reported in Table 4.8, the similarities are highlighted below.

First, the percent elderly in these four MSAs are comparable so that higher utilization of the services for elderly persons should not substantially affect utilization. Second, the results reported in Tables 4.1 through 4.5 show that Medicare patients account for between 23 and 31 percent of the gross revenues of freestanding diagnostic imaging centers. (These averages are for all Florida imaging centers and include centers located in counties with a much higher percentage of elderly persons.) Third, while per capita income in Baltimore is about ten percent higher than in the Florida MSAs, the cost-of-living indices for Miami and

Baltimore are comparable. (Orlando and Jacksonville have cost of living index values that are about 10 percent lower than Baltimore). Finally, one difference between the Baltimore MSA and the Florida MSAs is that Maryland is a rate-setting state; rates in Maryland are set substantially below the average rates for the Florida MSAs. The Maryland rate setting system is an all payer rate structure that should, other things constant, increase the utilization of services.

Table 4.9 presents a comparison of the utilization rates of MRIs and CAT scans between the Baltimore MSA and the three Florida MSAs. The results for MRI scans per thousand population show that the utilization rates of outpatient MRI scans in the Florida MSAs are substantially higher than the utilization rate of outpatient MRIs in Baltimore. The relative percentage differences between the utilization rates for MRIs in each of the Florida MSAs and Baltimore MSA are: Jacksonville (13.8%), Miami (65%), and Orlando (35%).

A similar pattern emerges from a comparison of the number of outpatient CAT scans performed in each of the Florida MSAs and the Baltimore MSA. Again, the utilization of CAT scans per thousand population in each of the Florida MSAs exceed the utilization rate of CAT scans in the Baltimore MSA. The relative percentage differences between the utilization rates for CAT scans in each of the Florida MSAs and the Baltimore MSA are: Jacksonville (5.4%), Miami (28%), and Orlando (14.3%).

Thus, these results indicate that the provision of diagnostic services in joint venture facilities leads to high utilization of MRIs and CAT scan procedures per thousand population. If utilization rates were not systematically higher for the Florida MSAs, the probability that all six utilization rates would be higher than the corresponding Baltimore utilization rate is less than 0.02.

#### D. Risk and Return Comparisons for Diagnostic Imaging Centers

To compare returns from alternative investments with different risk characteristics the coefficient of variation (the standard deviation divided by the mean) is useful. This measure indicates the number of units of risk per unit of return and is described in most basic texts on financial management or on investments. It is also common to use measures that are related to the reciprocal of this measure to indicate the number of units of return per unit of risk (reward-to-risk ratios). The reward-to-risk ratio is employed here; higher values of this ratio indicate more return per unit of risk.

Table 4.10 summarizes mean operating profits as a percent of net revenue and corresponding standard deviations for each entity type and for both ownership groups. Since the amounts invested by owners of the facilities are unknown, rates of return cannot be directly computed. However, the reward-to-risk ratio based on just

operating income as a percent of net revenues will approximate a reward-to-risk ratio computed on percent operating returns.

The results in Table 4.10 confirm that after adjusting for the relative riskiness of the operating income streams, diagnostic imaging centers are more profitable than other Florida health care businesses. The null hypothesis that the reward-to-risk measures for the four specialized diagnostic imaging centers, all with physician owners, (excluding the X-ray only group) was the same as or less than the reward-to-risk results for other Florida health care businesses reported in this study was tested using a Mann-Whitney U statistic. The significance level for the observed results is less than .005. This evidence suggests that these joint venture imaging centers are significantly more profitable (relative to the riskiness of these investments). As stated in the introduction, such profitability can be achieved only charging excessive prices or producing lower cost services (either by producing lower quality services or by producing services more efficiently).

#### E. Summary

Almost all reporting freestanding diagnostic imaging centers are joint ventures with physician owners. All but eleven of the responding freestanding imaging centers indicated that they have physician owners. Ten of the eleven nonjoint venture imaging centers provide only x-ray services. These results preclude meaningful comparisons of results for joint venture and nonjoint venture imaging centers within Florida. This chapter reports descriptive statistics for specialized and for comprehensive imaging centers. Access is a problem regardless of the type of service provided, as joint venture diagnostic facilities treat a negligible number of Medicaid patients. The results show all types of imaging centers (except x-ray services centers) have higher average percent operating income than other facility types covered by this study. Higher percent operating income indicates proportionately higher net charges or lower expenses as a percent of net charges. Such results indicate that these joint venture imaging centers in Florida are far more profitable than most nonjoint venture Florida healthcare businesses.

Utilization and average charges are summarized for MRI scans and CAT scans in Florida but utilization comparisons were also problematic because of the prevalence of joint venture ownership of imaging centers. To overcome this problem, comparisons were made to utilization rates for the Baltimore MSA (metropolitan statistical area) and three Florida MSAs with similar socioeconomic status characteristics; the three Florida MSAs are Jacksonville, Orlando and Miami. Baltimore has relatively few joint venture diagnostic imaging centers. These comparisons indicate that the utilization of outpatient MRI scans and CAT scans in the Florida MSAs are substantially higher than the utilization rate of outpatient MRI and CAT scans in Baltimore. The extent of higher utilization of MRIs in the Florida MSAs relative to Baltimore

ranged from 14 to 65 percent. The relative percentage differences between the utilization rates for CAT scans in each of the Florida MSAs and the Baltimore MSA ranged from five to 28 percent. The chances that these results would occur when there is no systematic difference in utilization rates are less than one in fifty.

Reward-to-risk ratios were computed as the mean operating income as a percent of net revenues divided by the standard deviation for all the facility types covered by the survey. Comparisons between specialty imaging centers and other Florida health care providers examined in this study show that specialty imaging centers (providing MRIs, CAT scans, or "Other" imaging procedures) have significantly higher reward-to-risk measures. Such higher levels of profitability can be achieved only by charging excessive prices or by producing services at lower costs (either by producing lower quality services or by producing services more efficiently).

Thus, the limited comparisons afforded by the Florida joint venture imaging centers provide indications of excessive charges and of higher utilization for imaging services. Indications of excessive charges are based on the substantially higher than average percent operating income for these facilities. Indications of higher utilization rates were found by comparing utilization rates for three Florida MSAs to the utilization rates for the Baltimore MSA.

Table 4.1 Characteristics of Joint Venture Magnetic Resonance Imaging Centers (N=22)

Variable	Mean	Standard Deviation
Percent Referrals by Physician Owners	42.1%	(24.7)
<b><u>Access</u></b>		
Percent of Revenue/Medicare	23.7%	(15.8)
Percent of Revenue/Medicaid	0.4%	(0.7)
Percent of Revenue/Managed Care	6.0%	(13.0)
Percent of Revenue/Blue Cross and/or Commercial	44.4%	(28.3)
Percent of Revenue/Self Pay	3.5%	(4.4)
Percent of Revenue/Other including Contract Work	22.0%	(25.9)
Percent of Revenue/Bad Debt and Charity Care	9.8%	(8.6)
<b><u>Utilization</u></b>		
Number of MRI Procedures Per Facility	2,923	(1,164)
MRI Procedures/Machine	2,730	(1,007)
<b><u>Charges and Costs</u></b>		
Gross Revenue/MRI Procedure	\$787.28	(133.39)
Net Revenue per Procedure	\$701.73	(92.21)
Discounts and Contractual Adjustments	7.4%	(5.6)
Operating Income as a Percent of Net Revenue Excluding Contract Expenses	74.0%	(15.7)
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	54.0%	(18.1)
Operating Income Per Procedure	\$520.94	(134.3)
Direct Expense/Procedure	\$177.45	(113.96)

*Table 4.1 Characteristics of Joint Venture Magnetic Resonance Imaging Centers (N=22) (continued)*

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
Fixed Expense/Procedure	\$190.27	(116.09)
Contract Expense/Procedure	\$137.62	(143.59)
Other Overhead/Procedure	\$59.90	(75.38)
Interest Expense/Procedure	\$35.15	(33.41)

Table 4.2 Characteristics of Joint Venture Comprehensive Diagnostic Imaging Centers (N=17)<sup>a</sup>

Variable	Mean	Standard Deviation
Percent Referrals by Physician Owners	30.3%	(24.5)
<b>Access</b>		
Percent of Revenue/Medicare	23.3%	(10.9)
Percent of Revenue/Medicaid	.95%	(1.5)
Percent of Revenue/Managed Care	19.6%	(16.9)
Percent of Revenue/Blue Cross and/or Commercial	37.2%	(18.2)
Percent of Revenue/Self Pay	10.7%	(6.1)
Percent of Revenue/Other including Contract Work	13.4%	(15.7)
Percent of Revenue/Bad Debt and Charity Care	7.6%	(7.4)
<b>Utilization</b>		
Number of MRI Procedures	2,960	(1,748)
MRI Procedures/Machine	2,725	(1,658)
Number of CAT Scans	2,403	(977)
CAT Scans/Machine	2,237	(923)
Number of "Other Imaging" Procedures	16,732	(21,520)
<b>Charges and Costs</b>		
Gross MRI Revenue/MRI Procedure	\$779.82	(191.63)
Gross CAT Scan Revenue/CAT Scan Procedure	\$466.13	(105.52)
Gross X-Ray Revenue/X-Ray Procedure	\$97.35	(23.68)
Gross "Other Imaging" Revenue/"Other Imaging" Procedure	\$124.86	(66.13)
Net Revenue Per Procedure	\$769.49	(294.51)
Discounts and Contractual Adjustments	16.9%	(7.5)

Table 4.2 Characteristics of Joint Venture Comprehensive Diagnostic Imaging Centers (N=17)<sup>a</sup> (continued)

Variable	Mean	Standard Deviation
Operating Income as a Percent of Net Revenue Excluding Contract Expenses	67.7%	(12.3)
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	45.1%	(15.3)
Operating Income Per Procedure	\$500.22	(145.4)
Direct Expense/Procedure	\$276.73	(210.61)
Fixed Expense/Procedure	\$179.26	(72.39)
Contract Expense/Procedure	\$181.50	(101.99)
Other Overhead/Procedure	\$51.87	(98.11)
Interest Expense/Procedure	\$31.65	(43.68)

Notes: <sup>a</sup>Comprehensive diagnostic imaging centers provide MRIs, CAT Scans, X-Rays and "Other Imaging" services (ultrasound, mammography, nuclear medicine). Procedures represent the sum of MRI procedures and CAT scan procedures unless otherwise noted.

Table 4.3 Characteristics of Joint Venture Diagnostic Imaging Centers Without MRI Services (N=39)

Variable	Mean	Standard Deviation
Percent Referrals by Physician Owners	35.8%	(32.6)
<b><u>Access</u></b>		
Percent of Revenue/Medicare	31.0%	(16.6)
Percent of Revenue/Medicaid	3.0%	(16.0)
Percent of Revenue/Managed Care	5.7%	(7.7)
Percent of Revenue/Blue Cross and/or Commercial	31.8%	(19.8)
Percent of Revenue/Self Pay	19.5%	(19.3)
Percent of Revenue/Other including Contract Work	9.9%	(17.3)
Percent of Revenue/Bad Debt and Charity Care	7.6%	(8.8)
<b><u>Utilization</u></b>		
Number of CAT Scans	1,648	(1,540)
CAT Scans/Machine	1,530	(1,040)
Number of X-Rays	10,134	(7,563)
Number of "Other Imaging" Procedures	6,032	(5,431)
<b><u>Charges and Costs</u></b>		
CAT Scan Revenue/CAT Scan Procedure	\$430.25	(110.63)
Gross X-Ray Revenue/X-Ray Procedure	\$107.73	(52.87)
Gross "Other Imaging" Revenue/"Other Imaging" Procedure	\$225.97	(214.82)
Net Revenue/Procedure	\$241.55	(190.84)
Discounts and Contractual Adjustments	16.1%	(10.6)
Operating Income as a Percent of Net Revenue Excluding Contract Expenses	59.1%	(26.2)

Table 4.3 Characteristics of Joint Venture Diagnostic Imaging Centers Without MRI Services (N=39) (continued)

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	42.5%	(27.3)
Operating Income Per Procedure	\$148.67	(118.82)
Direct Expense/Procedure	\$92.88	(106.43)
Fixed Expense/Procedure	\$58.06	(57.55)
Contract Expense/Procedure	\$37.83	(49.36)
"Other" Overhead/Procedure	\$17.71	(33.73)
Interest Expense/Procedure	\$8.98	(13.13)

Table 4.4 Characteristics of Joint Venture Diagnostic Imaging Centers Performing "Other Imaging" Procedures (N=22)

Variable	Mean	Standard Deviation
Percent Referrals by Physician Owners	58.1%	(38.9)
<b><u>Access</u></b>		
Percent of Revenue/Medicare	49.7%	(31.4)
Percent of Revenue/Medicaid	1.2%	(4.7)
Percent of Revenue/Managed Care	3.5%	(4.8)
Percent of Revenue/Blue Cross and/or Commercial	22.5%	(16.9)
Percent of Revenue/Self Pay	18.1%	(24.8)
Percent of Revenue/Other including Contract Work	6.3%	(10.8)
Percent of Revenue/Bad Debt and Charity Care	13.8%	(13.9)
<b><u>Utilization</u></b>		
Number of "Other Imaging" Procedures	6,776	(17,962)
<b><u>Charges and Costs</u></b>		
"Other Imaging" Revenue/Procedure	\$296.53	(304.50)
Net Revenue/"Other Imaging" Procedure*	\$305.35	(316.14)
Discounts and Contractual Adjustments	14.6%	(12.5)
Operating Income as a Percent of Net Revenue Excluding Contract Expenses	59.6%	(21.3)
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	44.6%	(26.6)
Operating Income Per Procedure	\$187.35	(230.93)

\*This is net revenues (including X-ray revenues) divided by "other imaging" patients only.

Table 4.4 Characteristics of Joint Venture Diagnostic Imaging Centers Performing "Other Imaging" Procedures (N=22)  
(continued)

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
Direct Expense/Procedure	\$118.00	(123.12)
Fixed Expense/Procedure	\$37.54	(35.34)
Contract Expense/Procedure	\$56.73	(101.90)
"Other" Overhead/Procedure	\$33.92	(62.01)
Interest Expense/Procedure	\$7.04	(12.07)

Table 4.5 Characteristics of Joint Venture Diagnostic X-Ray Centers (N=35)

Variable	Mean	Standard Deviation
Percent Referrals by Physician Owners	35.1%	(35.6)
<b><u>Access</u></b>		
Percent of Revenue/Medicare	37.6%	(25.9)
Percent of Revenue/Medicaid	1.6%	(5.1)
Percent of Revenue/Managed Care	6.5%	(12.8)
Percent of Revenue/Blue Cross and/or Commercial	16.9%	(15.2)
Percent of Revenue/Self Pay	29.7%	(28.9)
Percent of Revenue/Other including Contract Work	10.7%	(21.2)
Percent of Revenue/Bad Debt and Charity Care	4.3%	(8.6)
<b><u>Utilization</u></b>		
Number of X-Rays	5,909	(5,211)
<b><u>Charges and Costs</u></b>		
Gross X-Ray Revenue/X-Ray Procedure	\$86.23	(25.33)
Net X-Ray Revenue/X-Ray Procedure	\$78.14	(29.56)
Discounts and Contractual Adjustments	14.9%	(16.1)
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	41.9%	(24.6)
Operating Income as a Percent of Net Revenue Including Contract Expenses	25.7%	(26.0)
Operating Income Per Procedure	\$34.27	(21.98)
Direct Expense/Procedure	\$41.66	(17.82)
Fixed Expense/Procedure	\$12.97	(9.35)

Table 4.5 Characteristics of Joint Venture Diagnostic X-Ray Centers (N=35) (continued)

<b>Variable</b>	<b>Mean</b>	<b>Standard Deviation</b>
Contract Expense/Procedure	\$12.60	(13.86)
"Other" Overhead/Procedure	\$6.75	(11.88)
Interest Expense/Procedure	\$2.87	(4.46)

Table 4.6 Comparison of Outpatient MRI Scans Performed in Florida Counties with Joint Venture Diagnostic Imaging Centers, 1989

County	Number and Percentage of Total Outpatient MRI Scans Performed in Hospital Outpatient Departments	Number and Percentage Of Total Outpatient MRI Scans Performed in Joint Venture Facilities	Total Outpatient MRI Scans	Outpatient MRI Scans per Thousand Population
Brevard	--	7,229 (100.0%)	7,229	18.6
Broward	2,990 (6.4%)	43,840 (93.6%)	46,830	38.6
Charlotte	--	2,111 (100.0%)	2,111	22.6
Collier	853 (21.4%)	3126 (78.6%)	3979	29.7
Dade	6,563 (17.5%)	30,849 (82.5%)	37,412	20.3
Duval	8,090 (64.0%)	4,559 (36.0%)	12,649	18.7
Hillsborough	3,360 (14.0%)	20,633 (86.0%)	23,993	29.0
Lee	--	7,401 (100.0%)	7,401	24.1
Leon	--	5,114 (100.0%)	5,114	28.0
Marion	--	3,222 (100.0%)	3,222	17.7
Okaloosa	--	1,573 (100.0%)	1,573	10.2
Orange	3,755 (28.0%)	9,628 (72.0%)	13,383	21.5
Palm Beach	4,733 (31.5%)	10,279 (68.5%)	15,012	18.1
Pasco	940 (21.6%)	3,417 (78.4%)	4,357	16.5
Pinellas	2,257 (12.5%)	15,770 (87.5%)	18,027	21.5
St. Lucie	--	2,925 (100.0%)	2,925	21.6
Sarasota	37 (1.1%)	3,444 (98.9%)	3,481	13.5

Table 4.7 Comparison of Outpatient CAT Scans Performed in Florida Counties with Joint Venture Diagnostic Imaging Centers, 1989

County	Number and Percentage of Total Outpatient CAT Scans Performed in Hospital Outpatient Departments		Number and Percentage of Total Outpatient Scans Performed in Joint Venture Facilities		Total Outpatient CAT Scans	Outpatient CAT Scans per Thousand Population
Brevard	6,605	(38.0%)	10,779	(62.0%)	17,384	44.8
Broward	21,168	(60.9%)	13,602	(39.1%)	34,770	28.7
Charlotte	5,645	(80.9%)	1,334	(19.1%)	6,979	74.6
Collier	2,342	(53.6%)	2,029	(46.4%)	4,371	32.6
Dade	36,422	(56.3%)	28,228	(43.7%)	64,650	35.7
Duval	19,302	(72.8%)	7,225	(27.2%)	26,527	39.2
Escambia	7,343	(98.5%)	115	(1.5%)	7,458	26.4
Hillsborough	16,785	(55.8%)	13,294	(44.2%)	30,079	36.5
Indian River	2,123	(49.9%)	2,127	(50.1%)	4,250	48.6
Lake	4,384	(75.5%)	1,425	(24.5%)	5,809	41.3
Lee	502	(2.5%)	19,064	(97.5%)	19,566	63.6
Leon	5,727	(69.3%)	2,540	(30.7%)	8,267	45.3
Manatee	8,325	(72.0%)	3,232	(28.0%)	11,557	61.6
Marion	1,310	(23.3%)	4,314	(76.7%)	5,624	30.9
Martin	2,690	(53.7%)	2,322	(46.3%)	5,012	54.2
Okaloosa	2,997	(67.9%)	1,416	(32.1%)	4,413	28.7
Orange	20,620	(77.9%)	5,846	(22.1%)	26,466	42.5
Palm Beach	22,121	(76.4%)	6,842	(23.6%)	28,963	34.9
Pasco	5,622	(64.1%)	3,150	(35.9%)	8,772	33.2
Pinellas	19,153	(76.2%)	5,973	(23.8%)	25,126	30.2
Polk	8,345	(63.4%)	4,818	(36.6%)	13,163	32.9
Sarasota	6,465	(70.2%)	2,743	(29.8%)	9,208	35.7
St. Lucie	2,802	(63.3%)	1,625	(36.7%)	4,427	32.7

Table 4.8 Selected Socioeconomic Characteristics of Three Florida MSAs and the Baltimore MSA

Variable:	Metropolitan Statistical Area (MSA)			
	Baltimore <sup>(1)</sup>	Jacksonville <sup>(2)</sup>	Miami <sup>(2)</sup>	Orlando <sup>(2)</sup>
1988 Total Population:	2,342,000	902,065	1,838,000	984,574
<b><u>1988 Percent in Population Age Groups:</u></b>				
0-17	24.3%	27.1%	24.0%	25.5%
18-64	63.5%	63.1%	61.4%	63.1%
65 and over	12.2%	10.8%	14.6%	11.4%
<b><u>1987 per Capita Personal Income:</u></b>				
	\$17,785	\$14,225	\$15,689	\$14,639

Sources: <sup>(1)</sup>Maryland Health Services Cost Review Commission Data

<sup>(2)</sup>Florida County Comparisons 1989, Florida Department of Commerce

Table 4.9 Comparisons of Outpatient MRI Scan and Outpatient CAT Scan Utilization Rates

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1989 UTILIZATION RATES		
MSA:	Outpatient MRI Scans per Thousand Population	Outpatient CAT Scans per Thousand Population
Jacksonville	14.0	29.4
Miami	20.3	35.7
Orlando	16.6	31.9
Baltimore	12.3	27.9

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Table 4.10 Reward-to-Risk Measures for Florida Health Care Entities<sup>a</sup>

	JOINT VENTURE PROVIDERS		NONJOINT VENTURE PROVIDERS		REWARD-TO-RISK RATIO <sup>b</sup>	
	OPERATING INCOME AS A PERCENT OF NET REVENUES					
Type of Facility	Mean	Standard Deviation	Mean	Standard Deviation	Joint Venture Providers	Nonjoint Venture Providers
Ambulatory Surgery: Multispecialty	33.60	22.80	33.90	13.80	1.47	2.46
Ambulatory Surgery: Ophthalmic	36.30	16.60	29.60	27.70	2.19	1.07
Clinical Laboratory: Courier Service	24.20	35.60	35.60	17.60	0.68	2.02
Clinical Laboratory: Without Courier Service	29.00	31.70	22.60	29.00	0.91	0.78
Durable Medical Equipment Supplier	38.00	22.50	31.00	30.70	1.69	1.01
Home Health Agency: Private	12.90	8.90	14.70	18.00	1.45	0.82
Home Health Agency: Medicare	5.20	16.00	18.40	16.20	0.33	1.14
Hospital: Acute Care	15.10	9.70	11.50	11.50	1.56	1.00
Nursing Home: 90 Beds or More	5.90	12.20	9.70	15.0	0.48	0.65
Nursing Home: Less Than 90 Beds	6.70	9.70	1.8	20.1	.69	0.09
Physical Therapy: Physical Therapy Services Only	37.80	18.60	26.70	20.50	2.03	1.30
Physical Therapy: Comprehensive Services	43.30	19.90	28.10	20.80	2.18	1.35

Table 4.10 Reward-to-Risk Measures for Florida Health Care Entities (continued)

	JOINT VENTURE PROVIDES		NONJOINT VENTURE PROVIDES		REWARD-TO-RISK RATIO <sup>a</sup>	
	OPERATING INCOME AS A PERCENT OF NET REVENUES					
Type of Facility	Mean	Standard Deviation	Mean	Standard Deviation	Joint Venture Providers	Nonjoint Venture Providers
Diagnostic Imaging: MRI Services (with no CT)	54.00	18.10			2.98	
Diagnostic Imaging: Comprehensive (CT and MRI)	45.10	15.30			2.95	
Diagnostic Imaging: CT Services (with no MRI services)	42.50	27.30			1.56	
Diagnostic Imaging: "Other" Imaging Services	44.60	26.60			1.68	
Diagnostic Imaging: X-Ray Services Only	25.70	26.00			0.99	

Notes: <sup>a</sup> Results from Radiation Therapy are not included in this comparison because of uncertainty as to average reported direct expenses. Also, only five nonjoint venture businesses and 16 joint venture radiation therapy centers reported usable results.

<sup>b</sup> This is the mean operating income as a percent of net revenues divided by the standard deviation.

## CHAPTER V

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF SERVICES BY DURABLE MEDICAL EQUIPMENT SUPPLIERS

#### A. Introduction

This chapter examines the effect of joint ventures on the provision of services by suppliers of durable medical equipment. These businesses rent and/or sell various types of medical equipment and supplies to patients who have health conditions that require specialized medical equipment or accessories. Some of these businesses rent and/or sell all types of equipment, whereas others specialize in providing selected types of services, such as oxygen supplies and the related equipment.

In Florida, a large proportion of these firms are small. Other providers of durable medical equipment and medical supplies are firms owned and operated by large publicly traded corporations such as Foster-Abbey or American Home Patient Care. Many of the remaining businesses are owned by referring physicians. As reported previously, at least 20 percent of the durable medical equipment and supply businesses that filed a completed survey have some physician owners.

The analysis presented below only examines the effect of joint ventures on access and the profitability of durable medical equipment supply businesses. Results regarding the impact of physician ownership on utilization, costs and charges of durable medical equipment rentals and sales are not reported for two reasons.

First, many of these firms are very small businesses, that have never been subject to any reporting requirements by the state. As a consequence, most of these small business do not maintain detailed records of numbers of rental items and supplies sold. The situation is further complicated by the fact that many of these businesses do not maintain detailed accounting records for revenue and expense items. Thus, because these businesses generally did not maintain records that allowed inference on utilization rates, expense per item rented or sold, as well as charges per item rented or sold could not be computed.

A second complicating factor relates to the diverse nature of the services provided by durable medical equipment and supply businesses. Consider, for example, two medical equipment dealers, one who specializes in the rental of oxygen equipment and supplies, while the other rents only hospital beds and wheelchairs. A comparison of these two equipment dealers would cause one to draw erroneous conclusions regarding the impacts of joint ventures on the provision of these services because the utilization, costs and charges of these items differ substantially. Thus, meaningful

comparisons cannot generally be made for these firms due to the diverse nature of these businesses.

Durable medical equipment and supply businesses may involve a substantial initial fixed investment if the primary function of the business is the rental of equipment. If this is the case, the labor and other direct costs represent a relatively smaller proportion of total costs because a majority of these firms are owned by one or two individuals who manage the operation of the business. These businesses sometimes employ delivery and repair workers on a part-time basis. If the medical equipment business specializes in the rental of oxygen equipment and supplies, the business may also employ licensed respiratory therapists. Some oxygen rental and supply businesses may lower costs by employing nonlicensed medical workers to administer respiratory therapy to patients. Employing nonlicensed medical workers as substitutes for licensed respiratory therapists is likely to have adverse effects of the quality of services provided.

One factor that may inhibit competition relates to the structure of many of the joint venture durable medical equipment and supply businesses. The details of such suspect joint venture arrangements were outlined in a special "Fraud Alert" issued by the Office of the Inspector General in 1989. In some cases, the joint venture is established between two parties, one of which is an ongoing entity already engaged in a particular line of business. This type of joint venture arrangement is characterized as a "shell" company. In this situation, the "shell" company owns very little of the durable medical equipment; rather, these risks are incurred by the already established entity. The risks are further minimized because the "shell" company allows the ongoing entity to assume responsibility for the day-to-day operations of the businesses. Under these conditions, the joint venture may be able to avoid the financial losses that are incurred in the establishment of a new business. Firms which reported all direct expenses as purchases of services under contract are regarded as "shell" corporations. Although the researchers identified some of these "shell" durable medical equipment dealers, the data problems described above prohibit a more detailed comparison of the utilization, cost and charges of these "shell" joint ventures and the nonjoint venture providers. Given the potential problems associated with "shell" arrangements, further examination of these joint ventures is required.

B. Characteristics of Durable Medical Equipment Suppliers

Table 5.1 reports the results comparing joint venture and nonjoint venture durable medical equipment suppliers. Businesses owned by physicians reported that they receive, on average, more than 43 percent of their patient referrals from physician owners.

Access to patients is measured as the percent of revenue received from each of the various payer groups. Physician owned durable medical equipment businesses receive a larger share of their revenues from Medicare than nonjoint venture businesses (about 50 percent for joint venture firms versus 37 percent for those without physician owners). This difference is statistically significant. Differences in the share of revenue received from Medicaid or managed care patients are negligible.

Physician owned businesses generate an average of 38 percent of their revenues from Blue Cross and commercial insurers, compared to close to 44 percent for the nonjoint venture equipment businesses. Nonjoint venture providers generate more of their revenues from the rental and sale of equipment and supplies to self-pay patients than businesses owned by physicians (9.7 percent versus 6.9 percent). These differences, however, are not statistically significant. Nonjoint venture providers also generate significantly more of their revenue from "other" sources (12.1 percent for the nonjoint venture businesses compared to 2.2 percent for joint venture firms). Finally, physician owned businesses render slightly more bad debt and/or charity care than nonjoint venture durable medical equipment businesses. This difference is not statistically significant.

#### Economic and Financial Characteristics

For the reasons outlined above, only limited financial statistics are reported for durable medical equipment and supply businesses. The results for percent operating income show that joint venture durable medical equipment and supply firms are significantly more profitable businesses than their nonjoint venture counterparts. This is true even after adjusting for contract expenses.

Nonjoint venture equipment businesses also discount their services significantly more than joint venture firms; the average discount is 17.5 percent for nonjoint venture businesses compared to 8.5 percent for facilities with physician owners. This result indicates that net charges to consumers of equipment and supplies rented and/or sold by nonjoint venture firms are lower than net charges of these items in physician owned companies.

Since expenses per unit sold or rented cannot be computed, it is impossible to determine whether production costs vary by ownership type and by geographic region.

#### C. Summary

The diverse nature of the services provided by durable medical equipment and supply businesses prohibits an indepth analysis of the impact of joint ventures on this industry. Because of the services provided, it is impossible to compute per unit

utilization, expense, and charge measures. Thus, in the case of durable medical equipment dealers, the analysis would be like comparing "apples and oranges". For this reason, the results are limited to the issues of access, profitability and percent discounts and contractual adjustments.

Another consideration that may inhibit competition relates to joint venture durable medical equipment businesses that are characterized as "shell" companies. In this situation, the "shell" owns none of the durable medical equipment and thus assumes no risk. Instead, these risks are incurred by an ongoing business. Under these conditions, the joint venture is able to avoid the losses that are generally incurred in establishing a business. This type of arrangement has been labelled as suspect by the Office of the Inspector General. Firms which report all expenses as purchases of services under contract are characterized as "shell" corporations. While some of the responding businesses could be characterized as "shells", there were not enough of these facilities to make meaningful comparisons. This type of arrangement is problematic in the medical equipment and supply industry, and needs to be addressed.

Nonjoint venture patients generate a larger share of their revenues from Medicare and self-pay patients than their joint venture counterparts. This suggests that the nonjoint venture equipment dealers may provide greater access to patients with limited ability to pay. Nonjoint venture businesses discount their charges significantly more than physician owned firms. If gross charges are similar, this finding suggests that nonjoint venture providers are less expensive than joint venture businesses. Finally, equipment businesses owned by physicians are significantly more profitable than nonjoint venture firms. These findings suggest that joint venture equipment dealers have relatively higher charges than their nonjoint venture counterparts. More comprehensive data is needed to evaluate the impacts of joint venture ownership on the utilization and expenses for durable medical equipment services.

Table 5.1 Characteristics of Durable Medical Equipment Suppliers

Variable	JOINT VENTURE FACILITIES (N=48)		NONJOINT VENTURE FACILITIES (N=161)		
	Mean	Standard Deviation	Mean	Standard Deviation	Significance Level
Percent Referrals by Physician Owners	43.4%	(42.1)			
<b>Access</b>					
Percent of Revenue/Medicare	49.8%	(30.3)	37.1%	(32.3)	.008
Percent of Revenue/Medicaid	1.5%	(3.5)	1.5%	(3.3)	
Percent of Revenue/Managed Care	1.0%	(5.2)	1.7%	(6.8)	
Percent of Revenue-Blue Cross/Commercial	38.7%	(32.0)	44.4%	(38.3)	
Percent of Revenue/Self Pay	6.9%	(13.5)	9.7%	(19.6)	
Percent of Revenue/Other Including Contract Work	2.0%	(9.1)	5.6%	(16.1)	.074
Percent of Revenue/Bad Debt and Charity Care	6.6%	(15.2)	5.6%	(15.2)	
<b>Charges and Costs</b>					
Operating Income as a Percent of Net Revenue Excluding Contract Expense	40.6%	(21.3)	34.3%	(28.1)	.083
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	38.0%	(22.5)	31.0%	(30.7)	.072
Discounts and Contractual Adjustments	8.5%	(6.8)	17.5%	(11.3)	.006

## CHAPTER VI

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF HOME HEALTH SERVICES

#### A. Introduction

This chapter analyzes the effects of joint ventures on the provision of home health services. Home health agencies provide a variety of services. Some agencies specialize in nursing services, while others provide a complete range of home health services including skilled nursing services, home health aids, housekeeping services, licensed physical therapy services, licensed occupational therapy services, licensed speech therapy services, psychiatric nursing services, home infusion services, interostomal services, infusion therapy services, and other high tech services. In addition, some home health agencies provide home delivery of medical supplies and/or durable medical equipment as a part of their services. Costs, charges, and utilization rates can vary widely for each of the services described even within the same home health agency.

To make meaningful comparisons the analysis focuses on general purpose home health agencies. Specialized agencies that provide home infusion therapy services are not analyzed because they are not comparable to the general purpose agencies. Additionally, staffing agencies sometimes provide some home health services. In these cases, the revenue and cost figures would be distorted relative to revenue and cost figures for an agency that provides only home health services. Hence, staffing agencies are excluded from the analysis.

Finally, the home health industry in Florida is subdivided into agencies that are Medicare certified and agencies that are not Medicare certified. Florida Certificate of Need laws require home health agencies to obtain a Certificate of Need in order to provide Medicare home health care services. Costs, charges, and utilization rates will also be influenced by whether the agency is Medicare certified. Currently, Medicare reimburses home health services on a "reasonable cost" basis. Further, Medicare regulations tend to discourage Medicare certified agencies from providing services to non-Medicare patients. This limitation could further influence cost, charges, and utilization rates. Thus, results from Medicare certified home health agencies may not be comparable to results from non-Medicare home health agencies. Variations observed between these two groups could be due to differences in the population of patients served and/or differences in the reimbursement arrangement for the services. Additionally, Medicare certified agencies are not reimbursed under the Medicare program for home infusion services.

Production of home health services requires relatively small fixed investment. Thus, costs in home health services can be attributed to variable (direct) costs. Further, some agencies may utilize substantial numbers of persons that contract to provide services on a per-visit basis. Agencies may also employ nurses or other health care providers on a full time basis. Presumably, employment of full time persons by home health agencies would occur only when there is sufficient demand to ensure full utilization of that employee's services. Thus, for a given type of service average cost per visit adjusted for the standard length of a visit will indicate efficiency or lack of efficiency in providing the service. Further, economies of scale do not apply in this industry. A 1987 study for the Department of Health and Rehabilitative Services by Scott and Wheeler demonstrated that beyond 6,000 visits there is relatively little reduction in the average cost per visit for home health agencies.

For home health agencies, contract services are primarily wages and salaries paid to health care professionals such as R.N.s and L.P.N.s the provision of professional health care services. Thus, for home health agencies, contract services represent labor costs and generally exclude payments to owners. The other overhead category here could represent the possibility of additional payments that may accrue to owners. Thus, for home health agencies, contract services represent costs of purchased labor services, but higher other overhead expense per visit would be indicative of either inefficiency or compensation paid to owners.

An additional economic influence may occur if the standard length of a visit is longer. Part of the cost of providing home health services is the cost of travel time and costs of transportation for the care provider. Because of this, agencies that provide services with a full day basis or half day basis as a standard length of visit may have different cost and charges for their services. To control for this influence the services described here are reported on a standardized basis in terms of costs and charges. The standardized unit for "visits" is based on one hour units of time.

#### B. Characteristics of Private Home Health Agencies

Table 6.1 reports key characteristics of both joint venture and nonjoint venture, private (nonMedicare) home health agencies. Eliminating smaller agencies (agencies that provided less than 5,000 visits per year or served less than 200 patients per year) as well as agencies that had substantial components of their business from sources other than home health services, resulted in 23 private home health agencies being used for this analysis.

## Access

Most private agencies did not report payer class breakdowns so that inference about access may be limited for home health services. As expected, private agency services to Medicare patients are negligible. The joint venture non-Medicare agencies provide more services to Medicaid patients and more services to managed care patients than their nonjoint venture counterparts. A similar pattern emerges regarding the revenues generated by both commercially insured and self-pay patients. Finally, nonjoint venture private home health agencies writeoff a larger share of their gross revenues as bad debt and/or charity care.

## Economic and Financial Characteristics

Table 6.1 also reports information on financial and utilization characteristics for non-Medicare home health agencies that provided visits of a one-hour length as a standard service. This group constitutes a majority of non-Medicare home health agencies. Results for agencies providing visits with longer standard length are not included in the table; these represented a small subset and were all nonjoint venture agencies.

Joint venture private home health agencies render more visits per patient than their nonjoint venture counterparts (39.4 versus 35.1). The combined effect of utilization and charges result in total charges by physician owned home health agencies that are approximately \$800 more per patient than total patient charges for nonjoint venture agencies. This significant difference could be due to nonjoint venture agencies providing services at lower skill levels, or providing services that are less technical and expensive. A comparison of list charges reveals no systematic differences in the list charges for the various types of services. Thus, the difference in total charges per patient can be attributed to nonjoint venture agencies providing relatively lower cost services more frequently than the nonjoint venture home health agencies. The results on net revenue per patient parallel the results on gross revenue (charges) per patient. It should be noted that nearly all of the revenues for both ownership groups of private home health agencies is derived from the provision of home health services.

Results on utilization rates and charges show that joint venture agencies are more likely to offer lower cost services; the utilization rates for those services are higher than the services provided by nonjoint venture agencies. Further, since nonjoint venture agencies tend to have a larger patient base than their joint venture counterparts, these agencies are expected to be more profitable than their joint venture counterparts.

Expenses and profits are analyzed on a per patient basis here because the ultimate revenue generated for owners depends on both

the utilization in terms of number of visits per patient and in terms of the charges per visit. Therefore, comparisons on a per patient basis are more indicative of costs and profits than comparisons on a per visit basis.

Table 6.1 reports the average percent operating income for joint venture and nonjoint home health agencies. For these facilities, the operating income before contract adjustment is not necessarily indicative of profitability because contract services account for a substantial part of home health agency labor expenses. After adjustment for contract expenses the joint venture private home health agencies are slightly less profitable than their otherwise similar nonjoint venture counterparts. In contrast, operating income per patient is slightly higher in joint venture private home health agencies.

In terms of expenses per patient, the joint venture private home health agencies tend to have significantly higher average expenses per patient than their nonjoint venture counterparts. Making the necessary adjustments for contract expenses yields similar results. While fixed expense per patient is comparable, interest expense per patient is negligible, accounting for less than 1% of expenses per patient. The difference in "other" expenses could be due to home office costs, or costs of parent corporation administrative charges for these private agencies. Most home health agencies did not report making payments to their owners.

There are no ready indicators on the quality of service for home health services. A valid examination of quality differences would require field studies to assess considerations such as consumer satisfaction, i.e. was the appropriate care provided on a timely basis. Therefore, no meaningful statistics were available from this survey on quality of service.

### C. Characteristics of Medicare Certified Home Health Agencies

#### Access

Table 6.2 reports characteristics of Medicare home health care agencies. As expected, these agencies almost exclusively serve Medicare patients. Given that both nonjoint venture and joint venture agencies obtain almost all of their revenues from Medicare and that Medicare reimburses agencies on a reasonable cost basis, the percentages reported as bad debt and charity care represent services provided to Medicare patients. Since there is no substantial copayment for qualified Medicare patients, the average percent bad debt and charity care for joint venture agencies and nonjoint venture agencies necessarily represents Medicare contractual adjustments to list prices. These writeoffs and

contractual adjustments are almost 15 percent of joint venture agency revenues, but account for less than seven percent of the revenues generated by nonjoint venture Medicare certified agencies.

### Economic and Financial Characteristics

Table 6.2 reveals that the characteristics of Medicare home health agencies vary by ownership (joint venture versus not joint venture). The joint venture agencies provide an average of seven more visits per patient than their nonjoint venture counterparts (30 versus 23). This difference is statistically significant, and is based only on agencies with a standard nursing visit length of one hour. Both gross and net revenues per patient are higher for the physician owned agencies. These higher revenues per patient, however, are not statistically significant.

The percent operating income reported here are adjusted for the contract expenses because most agencies contract for services from independent health care providers such as R.N.s, L.P.N.s, therapists, and other independent health care practitioners. Nonjoint venture Medicare home health agencies appear to have significantly higher percent operating income than their joint venture counterparts. Given these results, it is not surprising that most expenses for patients are higher in joint venture agencies; only other overhead per patient is lower in joint venture agencies.

Joint venture Medicare agencies spend a lower percentage of their expenses on wages and salaries. While this difference indicates that other expenses for these agencies are higher, the difference cannot be attributed to disparities in payments for contracted services.

Here, as with private home health agencies, the data did not provide meaningful information on quality. Nevertheless, Medicare regulations and Medicare reviews tend to regulate quality for the provision of home health services to Medicare patients. Thus, substantial differences in quality would be unlikely.

#### D. Summary

This chapter reports characteristics of home health agencies in Florida. Home health agencies were subdivided into those that are Medicare certified and private non-Medicare certified agencies. The joint venture agencies while demonstrating some differences provide no clear pattern of greater profitability from the operation of home health services. Private non-Medicare agencies generate significantly higher gross and net revenue per patient than their nonjoint venture counterparts. Medicare certified joint venture agencies render significantly more visits per patients than otherwise similar nonjoint venture Medicare agencies. The significantly higher utilization that characterizes joint venture

Medicare home health agencies occurs because these agencies provide relatively lower cost, lower skilled services to their patients. The average gross revenue as well as net revenue per patient are higher for the Medicare joint venture home health care agencies.

The reported percent operating incomes were low for both groups; the disparities for private home health agencies are negligible. In contrast, Medicare nonjoint venture agencies are significantly more profitable than their nonjoint venture counterparts. The influence of contract expenses for this group of entities is important as many of these agencies contract for 10% or more of the health care services they render. Direct expenses per patient are higher for the joint venture agencies; this is true for both Medicare home health agencies and non-Medicare private home health agencies. Wages and salaries as a percent of total direct expenses tended to be relatively lower for the joint venture agencies in both Medicare and private agencies.

It should be noted that these discussions are limited to relatively large home health agencies and exclude smaller agencies or agencies that generate a substantial part of the revenues from sources other than home health services. This subset of home health agencies may be different from the agencies that perform other types of services or agencies that are smaller in scope. Joint ventures account for a relatively small percentage of these larger dedicated home health agencies. While characteristics are similar for most variables reported here, the joint venture Medicare home health agencies tended to have higher utilization. Both groups of joint venture agencies reported higher revenues and expenses per patient. These higher utilization rates did not produce higher percentage profits.

These results do not indicate the impact of joint ventures on the provision of home infusion therapy services. While it has been acknowledged that home infusion therapy services has been recognized as an area of concern, the data collected could not be used to evaluate the impact of joint ventures on the provision of these services.

Table 6.1 Characteristics of Private (NonMedicare) Home Health Agencies<sup>a</sup>

Variable	JOINT VENTURE FACILITIES (N=6)		NONJOINT VENTURE FACILITIES (N=17)		
	Mean	Standard Deviation	Mean	Standard Deviation	Significance Level
<b>Access</b>					
Percent of Revenue/Medicaid	3.9%	(7.8)	1.1%	(2.7)	
Percent of Revenue/Managed Care	9.2%	(18.4)	7.4%	(17.8)	
Percent of Revenue/Blue Cross and/or Commercial	31.2%	(34.7)	22.9%	(21.9)	
Percent of Revenue/Self-Pay	47.3%	(46.0)	42.3%	(28.3)	
Percent of Revenue/Other Including Contract Work	27.0%	(40.0)	32.3%	(31.7)	
Percent of Revenue/Bad Debt and Charity Care	2.2%	(4.1)	4.9%	(8.3)	
<b>Utilization</b>					
Number of Home Health Patients	497	(420)	683	(469)	
<b>Charges and Costs</b>					
Gross Revenue/Home Health Patient	\$2,782	(1,248)	\$1,974	(857)	.046
Net Revenue/Home Health Patient	\$2,705	(1,135)	\$1,899	(854)	.041
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	12.9%	(8.9)	14.7%	(18.0)	
Operating Income Per Patient	\$338	(303)	\$313	(459)	
Direct Expense/Patient	\$2,205	(1,048)	\$1,345	(602)	.011
Fixed Expense/Patient	\$53	(37)	\$47	(44)	

Table 6.1 Characteristics of Private (NonMedicare) Home Health Agencies (continued)<sup>a</sup>

Variable	JOINT VENTURE FACILITIES (N=6)		NONJOINT VENTURE FACILITIES (N=17)		
	Mean	Standard Deviation	Mean	Standard Deviation	Significance Level
Contract Expense/ Patient	\$163	(267)	\$273	(578)	
Other Overhead/ Patient	\$150	(189)	\$111	(149)	
Contract Expenses as a Percentage of Total Direct Expenses	10.3%	(15.8)	34.2%	(64.4)	
Salaries and Wages as a Percentage and Total Direct Expenses	67.3%	(24.6)	71.8%	(14.0)	

Note: <sup>a</sup> These results are based on information reported by private home health agencies that generate at least 70% of their gross revenues from provision of home health services. Only agencies reporting at least 5,000 visits per year and at least 200 patients per year were included.

Table 6.2 Characteristics of Medicare Home Health Agencies<sup>a</sup>

Variable	JOINT VENTURE FACILITIES (N=6)		NONJOINT VENTURE FACILITIES (N=93)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
<b>Access</b>					
Percent of Revenue/Medicare	98.4%	(1.3)	91.9%	(9.1)	.042
Percent of Revenue/Medicaid	0	0	1.4%	(2.3)	.091
Percent of Revenue/Managed Care	0	0	.9%	(3.1)	
Percent of Revenue/Blue Cross and/or Commercial	1.8%	(1.3)	3.2%	(4.3)	
Percent of Revenue/Self-Pay	0.1%	(0.2)	1.9%	(4.5)	
Percent of Revenue/Other Including Contract Work	--	--	1.5%	(3.3)	
Percent of Revenue/Bad Debt and Charity Care <sup>b</sup>	14.6%	(18.8)	6.5%	(14.2)	
<b>Utilization</b>					
Number of Home Health Patients	1,453	(1,453)	1,541	(1,439)	
Home Health Visits Per Patients <sup>c</sup>	30.0	(10.6)	23.0	(7.8)	.049
<b>Charges and Costs</b>					
Gross Revenue/Home Health Patient	\$1,796	(506)	\$1,523	(612)	
Net Revenue/Home Health Patient	\$1,387	(490)	\$1,232	(456)	
Discounts and Contractual Adjustments	16.2%	(14.6)	22.9%	(12.8)	

Table 6.2 Characteristics of Medicare Home Health Agencies<sup>a</sup> (continued)

Variable	JOINT VENTURE FACILITIES (N=6)		NONJOINT VENTURE FACILITIES (N=93)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Operating Income as a Percent of Net Revenues Adjusted for Contract Expenses	5.2%	(16.0)	18.4%	(16.2)	
Operating Income Per Patient	\$52	(162)	\$144	(1,011)	
Direct Expense/ Patient	\$1,196	(478)	\$942	(999)	
Fixed Expense/ Patient	\$63	(43)	\$39	(25)	.016
Contract Expense/ Patient	\$167	(139)	\$146	(142)	
Other Overhead/ Patient	\$112	(111)	\$165	(189)	
Interest Expense/ Patient	\$14.93	(23.79)	\$6.86	(37.66)	
Contract Expenses as a Percentage of Total Direct Expense	15.5%	(14.0)	17.1%	(14.7)	
Salaries and Wages as a Percentage and Total Direct Expenses	58.9%	(18.0)	71.6%	(22.3)	.087

Notes: <sup>a</sup> These results are based on information reported by Medicare agencies that generate at least 70% of their gross revenues from provision of home health services. Only agencies reporting at least 5,000 visits per year and at least 200 patients per year were included.

<sup>b</sup> These averages are inconsistent with averages for percent gross revenues from Medicare and with differences in averages for gross and net revenues per patient. This suggests respondents may have treated contractual adjustments for Medicare as bad debt/charity care.

<sup>c</sup> The results for this variable are based only on those agencies that reported that they have a one hour standard visit length for skilled nursing visits. All other "per patient" results include available data from all reporting agencies.

## CHAPTER VII

### THE EFFECT OF JOINT VENTURES ON THE PROVISION SERVICES BY ACUTE CARE HOSPITALS

#### A. Introduction

The hospital industry in Florida is regulated by a Certificate of Need law. Further, the Health Care Cost Containment Board regulates gross revenues of hospitals in Florida. The influence of joint ventures on hospital costs, in terms of hospitals that are owned by physicians, appears to be relatively limited. This result is based on the fact that only twelve hospitals were identified as having physicians owners. Nevertheless, hospitals are involved as owners of joint ventures. In some cases hospitals have wholly owned subsidiaries that provide outpatient health care services; in other cases the hospital may have established joint ventures with physicians or other health care providers in order to provide outpatient services. The nature of such arrangements was noted in the description of the general characteristics of joint venture arrangements in Florida and is not repeated here.

The extent to which such ownership arrangements affect hospital charges is unclear. A hospital's participation in one or more joint ventures need not result in higher costs and charges for hospital services for patients who utilize services at those hospitals. While a hospital's involvement in joint venture arrangements may indicate that these hospitals are higher charge or higher cost facilities, such investment need not influence the costs and charges for services provided by or within the confines of the hospital.

Only physicians are in a position to refer patients to hospitals. Therefore, the analysis classifies hospitals into two groups, those with physician owners and those that do not have physician owners. The influence of ownership on costs, charges, access, and utilization is evaluated by examining the physician owned facilities relative to those hospitals not owned by physicians.

The nature of the hospital service provided will have a substantial influence on costs and charges at a hospital. Facilities providing tertiary care services generally have higher costs than small community hospitals that provide limited services. To control for these influences, the Florida Health Care Cost Containment Board has classified hospitals into groups that are comparable with respect to the influences on costs and charges. These influences may be reflected in the writeoffs for bad debt/charity care, and the proportion of services provided to Medicaid patients, or the amounts of discounts offered to third party payor groups. Such influences also affect profits of the hospitals.

B. Characteristics of Joint Venture and Nonjoint Venture  
Acute Care Hospitals

Table 7.1 compares key characteristics of joint venture and nonjoint venture hospitals. Joint venture hospitals reported that, on average, about 42 percent of their patient referrals are made by physicians who have an ownership interest in the facility.

Access

Table 7.1 reports on access to various classes of patients treated at joint venture and nonjoint ventured acute care hospitals. Access is measured by the percent of total inpatient revenue received from the each payer group. The six payer groups are: Medicare, Medicaid, managed care (HMOs and PPOs), Blue Cross and commercial insurers, self-pay, and "Other".

The results in Table 7.1 show that joint venture acute care hospitals receive almost 47 percent of their inpatient revenues from services provided to Medicare patients. Nonjoint venture hospitals receive about 52 percent of their inpatient revenues from Medicare.

Joint venture acute care hospitals earn a slightly larger share of their inpatient revenue from treating Medicaid patients than nonjoint venture institutions. This difference occurs because smaller joint venture hospitals provide significantly higher proportions of services to Medicaid patients (11.4 percent), implying that smaller joint venture hospitals provide greater access to Medicaid patients.

Physician owned acute care hospitals receive a larger proportion of their inpatient revenue from managed care payers than nonjoint venture facilities (15.2 percent compared to 9.5 percent). This difference can be attributed to medium and larger sized joint venture hospitals providing between 18 and 20 percent of their services to managed care patients. There are only negligible differences by ownership in the share of revenues reimbursed by Blue Cross and commercial insurers.

Nonjoint venture acute care hospitals earn a larger share of their inpatient revenues from treating self-pay patients than their joint venture counterparts (6.6 percent for the nonjoint venture versus 3.1 percent for joint venture hospitals). The proportion of inpatient revenue received from "Other" payers, which include workers compensation patients, is 10.2 percent for joint venture hospitals compared to less than five percent for acute care hospitals not owned by physicians. Differences in payer class by facility size appear to be minimal.

Nonjoint venture acute care hospitals writeoff a significantly larger percentage of their gross revenues as bad debt and/or

charity care than joint venture hospitals (7.0 percent for nonjoint venture facilities versus 4.7 percent for the joint ventures). The differences in self-pay and "other" patients noted above are likely to account for by this higher percentage of bad debt and charity writeoffs.

### Economic and Financial Characteristics

The results in Table 7.1 also show that nonjoint venture acute care hospitals are significantly larger than facilities owned by physicians. The mean number of beds of the nonjoint venture hospitals is 211, which is approximately 75 more than the mean number of beds of the physician owned facilities. While there is little difference in occupancy rates by ownership group, nonjoint venture hospitals report almost twice as many inpatient days as their joint venture counterparts. This difference is probably due to the larger size and more extensive scope of services provided by nonjoint venture hospitals.

Results on average charges and expenses are not compared here because of the substantial differences in size and scope of services offered. The results on percent operating income show that joint venture acute care hospitals are somewhat more profitable than nonjoint venture institutions; the average percent operating income is 15.1 percent for the joint venture hospitals, versus 11.5 percent for the nonjoint venture group. This result is consistent for all three size groups of joint venture hospitals. The difference in the average percent operating income between the two ownership groups is attributable to the small nonjoint venture hospitals which have substantially lower percent operating incomes than medium and large nonjoint venture acute care hospitals. Finally, the average patient discount and contractual adjustment rate appears to be significantly larger in joint venture hospitals; about 30 percent for joint ventures compared to 26 percent for nonjoint ventures.

#### C. Prevalence, Scope and Ownership Structure of Outpatient Services in Acute Care Hospitals

Table 7.2 compares the scope of outpatient services available in joint venture and nonjoint venture acute care hospitals. Four of these joint venture hospitals have less than 100 beds, six facilities have between 100 and 225 beds, and the other two hospitals are classified as large (more than 225 beds). All of the joint venture acute care hospitals offer outpatient surgery, clinical laboratory services, and diagnostic imaging services. Ten of the twelve joint venture hospitals also offer outpatient physical therapy and/or rehabilitation services. Three of the hospitals with physical therapy services are small, five are regarded as medium sized facilities (100 to 225 beds), and two are classified as large (more than 225 beds). In joint venture hospitals, nearly all of these outpatient services are provided in

hospital outpatient departments. None of these joint venture institutions, however, provide radiation therapy, home health, durable medical equipment, mental health counseling, or cardiac catheterization services on an outpatient basis.

In contrast, all of these specialized services are available on an outpatient basis in at least some of the acute care nonjoint venture hospitals. More than 85 percent of the nonjoint venture hospitals offer clinical laboratory services, rehabilitation services, diagnostic imaging services and surgical services on an outpatient basis. The other types of services are less common, and for the most part are only available in larger facilities.

The four most common services, outpatient surgery, clinical laboratory testing, physical therapy and diagnostic imaging are concentrated in medium (100 to 225 beds) or large (more than 225 beds) sized facilities. For example, of the 189 nonjoint venture hospitals which provide outpatient surgical services, 37 percent are medium sized and 39 percent are large facilities. A similar pattern occurs with respect to the other three frequently offered services: clinical laboratory testing, physical therapy, and diagnostic imaging. For each of these services, less than 28 percent of the nonjoint venture acute care hospitals providing these services are classified as small (less than 100 beds).

The other more highly specialized outpatient services are concentrated in acute care hospitals with more than 450 beds. For example, 82 percent of the 50 hospitals that provide outpatient radiation therapy have more than 450 beds. In the case of cardiac catheterization services, 73 percent of the 78 hospitals with this specialized service are large.

Table 7.3 describes the ownership structure of outpatient services provided in nonjoint venture acute care hospitals. This information reveals the extent to which nonjoint venture acute care hospitals have joint venture partnerships and other contractual arrangements to provide these outpatient services. The six ownership categories are: 1) hospital department --not legally separate, 2) wholly owned subsidiary, 3) partially owned with one or more health care providers, 4) partially owned where all other owners are not health care providers, 5) leased to nonrelated parties, and 6) services provided under contract with an outside provider.

All of the 189 nonjoint venture facilities with outpatient surgical services offer these services in hospital departments which are not legally separate businesses. Almost 93 percent (187) of the clinical labs in nonjoint venture facilities are also hospital departments and are not legally separate units. Another six percent of the hospitals with clinical laboratory services provide these services under a contract agreement with an outside provider.

Most of the outpatient radiation therapy services available in acute care institutions are departments of the hospital and not freestanding legally separate businesses. Six of the 50 hospitals with radiation therapy services offer these services through a contractual agreement with an outside provider. Most of these are joint venture arrangements where the hospital manages the freestanding facility which is owned by a group of physicians.

Only half of the hospitals which offer home health services have established these services as a department of the hospital. Another 26 percent (12) of these home health agencies are subsidiaries which are wholly owned by the hospital. Six of these home health agencies are joint venture partnerships between the hospital and other health care providers.

Nearly 85 percent of the nonjoint venture hospitals provide imaging services in hospital outpatient departments, which are not freestanding legally separate entities. Less than two percent of the imaging services are subsidiaries which are wholly owned by the hospital. About 3 percent are joint venture arrangements with physicians, while nearly 11 percent have contractual agreements with an outside provider. Here again, these contractual arrangements are mostly joint ventures where the hospital manages the freestanding imaging center which is owned by physicians.

Close to 35 percent of the 23 hospitals with durable medical equipment services provide these services in hospital departments. Another 35 percent of these services are available through a contractual arrangement with an outside provider. Only 4 of the 23 are joint ventures between the hospital and another health care providers.

Over 80 percent of the hospitals with outpatient mental health services are departments of the hospital that are not legally separate businesses. This is also the case for hospitals which have physical therapy and/or rehabilitation services. About 17 percent of the 197 acute care hospitals with physical therapy offer these services under a contractual agreement with physical therapists. Almost 90 percent of the cardiac catheterization units in hospitals are departments that are not legally separate entities.

These results indicate that a large proportion of nonjoint venture hospitals provide ancillary services, and that most of these services are departments of the hospital, which are not legally separate businesses. Thus, most hospitals provide outpatient services through departmental units located within the hospital. These hospital units compete with freestanding joint venture and nonjoint venture facilities in the provision of outpatient services. A charge comparison between hospitals and freestanding entities would be misleading, however, because the average rate of discounts and contractual adjustments for hospital

revenues is substantially larger than the average discount for freestanding entities.

#### D. Compensation Arrangements Between Physicians and Hospitals

Tables 7.4 and 7.5 provide information on the nature of compensation arrangements that have been established between hospitals and certain specialty groups of physicians who provide most of their services to patients in hospitals. These physician specialties include radiology, anesthesiology, emergency room, pathology, cardiology, pulmonary, and "other".

The results for the joint venture acute care hospitals are reported in Table 7.4. All 12 joint venture hospitals indicated they had at least one type of arrangement with a physician specialty group. Most of joint venture hospitals indicated they had no contractual or compensation arrangement with any of these groups. Several others indicated they had a contractual arrangement with no compensation arrangement. Seven of the joint venture hospitals reported that they had an agreement with emergency room physicians in which the payment was a base compensation amount or a guaranteed sum.

Table 7.5 contains the results on compensation and contractual arrangements between nonjoint venture hospitals and certain specialty groups of physicians who provide most of their services in hospitals. The majority of the hospitals reported that they had a contractual arrangement with these physician specialties that did not involve any compensation. Those reporting compensation arrangements tended to pay a base amount or a guaranteed sum. Such compensation arrangements are most frequently established with emergency room physicians, pathologists, and pulmonary specialists. A large proportion of nonjoint venture hospitals also reported that there was no contractual or compensation arrangement with any of the physician specialties examined.

#### E. Summary

Only 12 of the acute care hospitals are owned by physicians. The typical joint venture hospitals tend to be smaller than the typical nonjoint venture facilities (only two joint venture hospitals had more than 225 beds). Further, while there are some regional variations in the characteristics of hospitals, these variations do not appear to be related to joint venture ownership arrangements.

Some differences in access indicators occur. Nonjoint venture receive a larger share of their revenues from Medicare patients, and self-pay patients. Nonjoint venture hospitals write off a larger proportion of their revenues as bad debt and charity care. Contrary to the pattern observed for other types of freestanding facilities, smaller joint venture hospitals generate a larger share

of their gross inpatient revenues from services provided to Medicaid patients than similar sized nonjoint venture hospitals. Thus, while joint venture hospitals generally provide less bad debt and charity care, they provide greater access to Medicaid patients.

The percent operating income is higher for joint venture acute care hospitals, especially for small (less than 100 beds) facilities. The overall percent operating income (before charges for depreciation, lease and rental payments and interest) average 15.1 percent for the joint venture acute care hospitals and 11.5 percent for the nonjoint venture hospitals. The difference is due primarily to smaller joint venture hospitals which had higher percent operating income than similar sized nonjoint venture facilities. Furthermore, the average rate of discounts and contractual adjustments is significantly larger in joint venture hospitals.

The scope of outpatient services offered is largely a function of hospital size. Almost all acute care hospitals, regardless of ownership type, offer outpatient surgical services, outpatient clinical laboratory services, outpatient diagnostic imaging services and outpatient physical therapy and rehabilitation services. Only a few nonjoint venture hospitals did not provide these four types of services. The 12 joint venture hospitals did not offer any of the other more highly specialized services. Nonjoint venture hospitals that offer these services are primarily large facilities (more than 225 beds).

All of the outpatient services offered in joint venture hospitals are provided through hospital departments. The results on ownership structure of outpatient services in nonjoint venture acute care hospitals also show that most of these services are provided through hospital departments, that are not legally separate businesses. The most common type of joint venture arrangement involving nonjoint venture acute care hospitals is diagnostic imaging services. Twenty eight of 184 nonjoint venture acute care hospitals that offer diagnostic imaging services are structured as joint ventures with other health care providers.

Most contractual arrangements between hospitals and physicians do not involve payments to physicians regardless of ownership status. Almost all of the hospitals reporting contractual arrangements that involved payments tended to have a base payment or guaranteed sum amount. A few hospitals reported other payment arrangements; these arrangements generally represented a percentage of professional fees for emergency room, pathology, cardiology and pulmonary services at nonjoint venture hospitals.

The results reported here show that physician ownership of acute care hospitals in Florida is not common. Further, such physician ownership arrangements appear to have little impact on access, costs, and charges for inpatient services. Nonjoint

venture hospitals have limited involvement in joint venture arrangements for the provision of outpatient services. Most such joint ventures arrangements exist to provide outpatient diagnostic imaging services.

Table 7.1 Characteristics of Acute Care Hospitals in Florida

Variable	JOINT VENTURE FACILITIES (N=11)		NONJOINT VENTURE FACILITIES (N=203)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals for by Physician Owners	41.9%	(34.8)			
<b><u>Access</u></b>					
Percent of Revenue/Medicare	46.7%	(17.4)	51.2%	(18.0)	
Percent of Revenue/Medicaid	7.2%	(7.4)	6.2%	(7.4)	
Percent of Revenue/Managed Care	15.2%	(21.4)	9.5%	(14.6)	
Percent of Revenue/Blue Cross and/or Commercial	21.5%	(12.0)	22.5%	(15.3)	
Percent of Revenue/Self Pay	3.1%	(2.1)	6.6%	(7.5)	.068
Percent of Revenue/Other including Contract Work	10.2%	(15.4)	4.9%	(9.5)	.056
Percent of Revenue/Bad Debt and Charity Care	4.7%	(2.8)	7.0%	(4.0)	.049
<b><u>Utilization</u></b>					
Number of Beds	136	(93)	211	(197)	
Occupancy Rate	47.2%	(16.6)	47.0%	(23.1)	
Total Inpatient Days	23,446	(16,714)	45,905	(52,803)	
<b><u>Charges and Costs</u></b>					
Operating Income as a Percent of Net Revenue	15.1%	(9.7)	11.5%	(11.5)	
Discounts and Contractual Adjustments	30.2%	(3.5)	25.9%	(10.1)	.098

Table 7.2 Scope of Outpatient Services in Acute Care Hospitals in Florida

Type of Service	JOINT VENTURE FACILITIES (N=12)	NONJOINT VENTURE FACILITIES (N=215)
	Number and Percentage of Facilities Offering the Service	Number and Percentage of Facilities Offering the Service
Outpatient Surgery Services	12 (100.0%)	189 (88.0%)
Outpatient Clinical Laboratory Services	12 (100.0%)	202 (94.0%)
Outpatient Radiation Therapy Services	--	50 (23.3%)
Home Health Services	--	46 (21.4%)
Outpatient Diagnostic Imaging Services <sup>a</sup>	12 (100.0%)	184 (85.6%)
Durable Medical Equipment Supplies	--	23 (10.7%)
Outpatient Mental Health Services	--	20 (9.3%)
Outpatient Physical Therapy and/or Rehabilitation Services	10 (83.3%)	197 (91.6%)
Outpatient Cardiac Catheterization Services	--	78 (36.3%)

Notes: <sup>a</sup>Diagnostic imaging includes magnetic resonance imaging, CAT scans and other imaging procedures such as ultrasound and nuclear medicine. It does not include X-rays since all hospitals offer X-ray services.

**Table 7.3 Ownership Structure of Hospital Outpatient Services in Nonjoint Venture Acute Care Hospitals**

<b>Ownership Structure</b>	<b>Outpatient Surgical Services</b>	<b>Clinical Laboratory Services</b>	<b>Radiation Therapy Services</b>	<b>Home Health Services</b>	<b>Diagnostic Imaging Services</b>	<b>Durable Medical Equipment Supplies</b>	<b>Outpatient Mental Health Services</b>	<b>Physical Therapy and/or Rehabilitation Services</b>	<b>Cardiac Catheterization Services</b>
<b>Frequency and Percentage of Total Facilities Offering the Service by Ownership</b>									
Hospital Department Not Legally Separate	189 (100.0%)	187 (92.6%)	44 (88.0%)	23 (50.0%)	156 (84.8%)	8 (34.8%)	16 (80.0%)	162 (82.2%)	70 (89.7%)
Wholly Owned Subsidiary	—	—	—	12 (26.1%)	3 (1.6%)	2 (8.7%)	—	—	—
Partially Owned With one or more Health Care Providers	—	—	—	6 (13.0%)	5 (2.7%)	4 (17.4%)	—	2 (1.0%)	—
Partially Owned where All Other Providers are not Healthcare Providers	—	2 (1.0%)	—	1 (2.2%)	—	1 (4.3%)	—	—	—
Leased to nonrelated Parties	—	—	—	—	—	—	—	—	1 (1.3%)
Services are Provided under Contract with an outside provider	—	13 (6.4%)	6 (12.0%)	4 (8.7%)	20 (10.9%)	8 (34.8%)	4 (20.0%)	33 (16.8%)	7 (9.0%)

Table 7.4 Compensation Arrangements Between Physicians and Joint Venture Hospitals (N= 11)

PHYSICIAN CATEGORY

Type of Compensation Arrangement	Radiology	Anesthesiology	Emergency Room	Pathology	Cardiology	Pulmonary	Other
No contractual or compensation arrangement	6	5	2	2	5	5	1
Contractual arrangement with no compensation arrangements	2	5	2	3	3	2	--
Percent of professional component revenues	--	--	--	--	--	1	1
Percent of gross or net departmental revenues	--	2	--	--	1	1	--
Percent of gross or net total revenues	--	--	--	--	--	--	--
Percent of gross or net departmental	--	--	--	--	--	--	--
Percent of total profits	--	--	--	1	--	--	--
Base compensation amount	--	--	4	2	--	1	--
Amount sum guaranteed	1	--	3	1	--	--	1
Other	--	--	--	1	--	--	--

Table 7.5 Compensation Arrangements Between Physicians and Nonjoint Venture Hospitals (N=203)

PHYSICIAN CATEGORY

Type of Compensation Arrangement	Radiology	Anesthesiology	Emergency Room	Pathology	Cardiology	Pulmonary	Other
No contractual or compensation arrangement	45	54	20	26	80	77	26
Contractual arrangement with no compensation arrangements	105	75	34	55	23	12	5
Percent of professional component revenues	3	1	30	10	15	6	7
Percent of gross or net departmental revenues	2	--	6	2	--	--	2
Percent of gross or net total revenues	--	--	--	1	--	--	1
Percent of total profits	--	--	--	1	--	1	--
Base compensation amount	6	18	60	63	24	46	42
Amount sum guaranteed	5	14	31	21	8	8	15
Other	11	13	24	18	22	20	26

## CHAPTER VIII

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF NURSING HOME SERVICES

#### A. Introduction

Nursing home services in Florida are regulated by Certificate of Need. The limitation on the number of nursing homes presumably results in more efficient production of nursing home services for Florida. Unlike most other health care services in Florida, the primary third party payor for nursing home services is the Medicaid program. The utilization of nursing home services by Medicaid patients has a significant influence on the demand for services.

Private pay patients constitute the next largest group in demanding nursing home services. Unlike most other health care services, relatively few patients have commercial insurance coverage or other third party payor arrangements. Thus, self-pay or private pay patients constitute the next largest group of patients for nursing home services. Other government programs including Medicare constitute the next largest group that demand nursing home services.

The payer mix in a nursing home substantially influences the profitability of the facility. The Medicaid program has a prospective payment for nursing home services, but this prospective payment system provides very limited opportunity for profits from nursing services provided to Medicaid patients. Private pay patients generally make substantially greater contributions to profitability than do Medicaid patients. This results in greater profitability for nursing homes that have a larger proportion of private pay patients.

In this study, ownership group refers to whether nursing homes have physician owners (joint venture facilities) or do not have physician owners (nonjoint venture facilities).

The nursing home industry basically provides services that have some economies of scale. Generally, it is presumed and has been verified by empirical studies, that, beyond 120 beds, the average cost per day of nursing home service does not decline substantially. However, smaller nursing homes tend to have higher average costs than do larger nursing homes. The State of Florida's Medicaid reimbursement system acknowledges this influence. This system establishes ceilings for the amounts that are paid for nursing home services based on these presumed cost influences. The state established four different ceiling rates based on whether the home is large or small. Homes with 100 beds or less are considered to be small nursing homes, while homes with more than 100 beds are considered to be large. These two size groups of homes are also subdivided into "North" and "South" to allow for differences in the

cost of labor and/or construction in north Florida relative to south Florida.

The costs of nursing home services are driven by the cost of skilled nursing labor per hour and the number of hours of skilled nursing services that are provided for each patient day. Skilled nursing services include services provided by registered nurses and licensed practical nurses. The cost per hour and number of hours per patient day for nursing assistants, other medical workers, and dietary and laundry workers will also determine costs. Additionally, costs of food and medical supplies per day constitute the direct patient care cost for nursing home services. The cost of maintenance and administrative support for the nursing home also contribute to costs but these do not vary directly with the number of patients that are in the nursing home. Rather these costs are determined by the size of operation.

Fixed costs other than the cost of maintenance and administration wages would tend to reflect the relative age of the nursing home. Thus, depreciation and rent charges for a nursing home would tend to be higher for a relatively new nursing home or, in cases where the nursing home has been resold, the most recent owner may have higher depreciation charges even though the nursing home may not be as new as a nursing home with a comparable amount of depreciation. While the program for reimbursement in the state of Florida controls for the amount of depreciation and/or lease payments that can be included as reasonable costs based on what is called the fair rental value system, the actual numbers reported as depreciation may not be the numbers that are used for computing the Medicaid reimbursement.

The limited entry into the nursing home industry in Florida imposed by C.O.N. regulation has led to a situation where investment into nursing homes in Florida is considered to be a relatively safe investment with stable operating revenues that will produce stable operating profits provided costs are controlled. This presumption assumes that the demand for services is constant and/or growing so that the nursing home, if efficient, can be expected to operate at or near full utilization thereby generating enough revenues to cover direct expenses and to cover the necessary costs of depreciation and interest on borrowed funds.

Given this situation and given a cost based reimbursement system, some nursing home businesses in Florida are heavily leveraged. This means that owners tend to put up a relatively small proportion of the costs of the nursing home when it is purchased and a high proportion of funds are borrowed creating interest obligations for the business. Thus, as a percent of the total cost of, or as a percent of the total revenue, interest expenses tend to be high for such nursing homes. The effect of these higher interest charges is to reduce the "bottom line profit" as a percent of revenues. Nevertheless, given that a relatively

small proportion of funds is provided by the owners and a large proportion of funds is borrowed the nursing home may offer a good rate of return for the amount invested by each owner.

Nursing home services are sometimes provided by government agencies at the local level and by not-for-profit or charitable organizations, such as churches. Costs at governmental and not-for-profit nursing homes tend to be higher than costs at for profit nursing homes, other things constant. While these influences are present, most nursing homes in Florida are for profit.

Many Florida nursing homes are operated by companies that own several facilities, which may influence the costs and charges for services at the nursing home. To the extent that management fees and home office costs are charged to a nursing home by a parent organization, these actual "expense items" may represent profits or payments to owners. Thus, profits in the nursing home business depend more so than in other areas on financing arrangements and the extent to which contractual services are purchased from owners of the nursing home.

Florida has a substantial number of continuing care retirement communities (CCRC's). These CCRC's tend to provide services to residents of the continuing care retirement facility. The nursing home service units for most CCRC's tend to be small and generally have costs and/or charges that are not comparable to costs and charges for community nursing homes. This variation in the costs and charges along with the fact that only one joint venture CCRC was reported in the surveys, led to elimination of the nursing home units that were identified as being part of a CCRC. Fifty-six of the nursing homes responding to this survey were identified as CCRC's and these were not included in the analysis presented here.

B. Comparisons of Joint Venture and Nonjoint Venture Nursing Homes

This comparison of nursing homes includes only community nursing homes. Continuing care retirement communities are not included in this comparison for reasons described above. Government homes are also excluded from the analysis. There are a total of 53 joint venture nursing homes and 380 nonjoint venture nursing homes that reported adequate and consistent data. The discussion below compares access and key financial and economic characteristics to evaluate the impact of joint venture arrangements on costs, utilization, and charges. The comparison subdivides nursing homes into two groups because nursing homes with relatively small numbers of beds tend to have different economies of scale. The dividing point between small and large employed here is ninety beds. Homes that have ninety or more beds are "large" while those with fewer than ninety beds are regarded as "small." This size grouping differs slightly from the size grouping used by the state of Florida. Further regional variations were examined

and are discussed in text although no separate tables are presented on a region-by-region basis.

### Access

Comparisons of percentages of revenues from the various payer group classes are presented in tables 8.1 and 8.2. For both size groups of nursing home, the joint venture facilities and nonjoint venture facilities have a similar relationship with respect to the percent of Medicare revenues. Nonjoint venture facilities have systematically higher percentages of Medicare revenues than joint venture facilities. Joint venture facilities in both size groups obtain approximately eight percent of their revenues from Medicare patients. Nonjoint venture facilities with more than ninety beds obtain 14.4 percent of their revenues from Medicare patients, while nonjoint venture facilities with less than ninety beds generate 11.6 percent of their revenues from Medicare.

Medicaid revenues account for approximately half of the gross revenues generated by nursing homes in Florida. Larger joint venture nursing homes receive approximately 45 percent of their revenues from Medicaid. Larger nonjoint venture nursing homes earn an even greater share of their revenues, about 56 percent from nursing care rendered to Medicaid patients. With smaller joint venture nursing homes, the percentage of Medicaid is substantially higher at nearly 64 percent. Nonjoint venture smaller nursing homes, on the other hand, generate about 50 percent of their revenues from services to Medicaid patients. Thus, the smaller joint venture facilities provide proportionately more Medicaid services than their nonjoint venture counterparts. On the other hand, the larger joint venture facilities provide proportionately less Medicaid services than their nonjoint venture counterparts.

A mirror image of this result emerges for self-pay patients. Self-pay patients account for approximately 38 percent of revenues at joint venture larger nursing homes and approximately 27 percent for nonjoint venture larger nursing homes. For smaller nursing homes, the reverse is again true with self-pay patients accounting for approximately 27 percent of the revenues for joint venture nursing homes and nearly 37 percent of the revenues for nonjoint venture nursing homes. This patient group is generally considered the key to financial success in providing nursing home services, whereas Medicaid patients are accepted when private pay patients are not available. Medicaid patients essentially cover the cost with very little opportunity for profit, while the number of private pay patients in the facility can substantially increase the profitability of a nursing home. The percent of revenue attributed to "other" is relatively inconsequential for both size groups and for both ownership arrangements. Ownership has only a negligible impact on the percent of revenue attributable to bad debt and/or charity care. For most nursing homes, these amounts represent writeoffs due to bad debts.

Although there are regional variations in the access to nursing home services, for large nursing homes these regional variations are very similar for both ownership groups. With smaller nursing homes, the joint venture facilities tend to provide an even higher proportion of services to Medicare patients than their nonjoint venture counterpart for all regions. For both size groups and for all ownership arrangements the provision of Medicaid services is substantially higher in north Florida; in this region Medicaid patients account for more than 60 percent of revenues. Elsewhere in the state, Medicaid patients account for less than 50 percent of revenues. Again, for smaller nursing homes the joint venture facilities render higher proportions of services to Medicaid patients. Proportions of services provided to self-pay patients complement the picture for the Medicaid group. As proportions of Medicaid patients increase, proportions of self-pay patients decrease and vice versa.

#### Impacts of Joint Ventures on Cost, Charges and Utilization of Nursing Home Services

Occupancy rates play a key role in determining the profitability of nursing homes. While fixed costs are not large relative to total nursing home revenues, profit margins tend to be relatively small for nursing homes, and fixed costs are generally financed with borrowed funds. Nursing homes that operate at occupancy level above a break even point can offer high returns on the small amount of equity investment required by an owner, correspondingly, nursing homes that operate below a break even occupancy level can generate substantial losses for the owners. Thus, the occupancy level as a percentage of the total beds plays a key role in determining profitability for nursing homes. Further, as noted above, the payer mix has a substantial influence on profitability as Medicaid patients (and Medicare patients) essentially cover the cost of the service but generate little profit for owners as services are essentially reimbursed on a cost basis. Private pay patients, on the other hand, can generate substantial profits. Thus, levels of utilization in terms of the percent of occupied beds and percent of private pay patients are key determinants of profitability.

The influence of an owner on utilization is somewhat limited, even if the owner is a physician. Physician ownership could influence utilization by having more patients referred to the facility than to other facilities and by retaining patients for longer lengths of stay. Both criteria require that the owner be the attending physician for the patient. Results on physician owner referrals to nursing homes in which the physician has a financial interest indicate that these physician owners have relatively little influence on utilization. The average percent of referrals from owners is less than 3%; this is true for both size groups. Thus, physicians who own nursing homes do not account for substantial referrals to those facilities.

Within the two size groups, the indications are that the joint venture nursing homes differ somewhat in relative size. The average number of licensed beds for joint venture small nursing homes is 65.5, while small nonjoint venture nursing homes average 60.8 licensed beds per nursing home. The average number of beds for the large size facilities are 131.4 for joint venture homes and 144.7 for nonjoint venture homes. The occupancy rates for larger nursing home are 89.7 percent for the joint venture ownership group and 90.7 percent for the nonjoint venture facilities. While this difference may seem relatively small, given the numbers of nursing homes represented here and given the economics of the nursing home industry, this is a substantial variation in occupancy levels.

Again, a mirror image of these results is presented by Table 8.2 for the smaller nursing homes. Occupancy rates for joint venture nursing homes average 95 percent, while occupancy rates at nonjoint venture average 91.6 percent. The total patient days are approximately ten percent higher for the small joint venture nursing homes due to the greater average number of licensed beds and the difference in the occupancy rates. For small nursing homes, the physician owned facilities tend to be larger than their nonjoint venture counterparts. Thus, while there are some variations in the occupancy rates in nursing homes, these variations are not likely to be due directly to physician referrals or physician influence. Since the reverse pattern emerges for occupancy rates for larger joint venture nursing homes, these results present no clear indication that ownership influences occupancy levels. This is not surprising given that the percent of referrals for the joint venture nursing homes is very small.

Average charges are also presented in tables 8.1 and 8.2. Charges are reported on a gross revenue per patient day basis as well as a net revenue per patient day basis. For the large nursing home group the joint venture facilities have lower average gross revenue per patient day by approximately \$1.50 per day and lower average net revenue per patient day by approximately \$2.00. Table 8.2 shows that gross revenues of small homes tend to be higher for joint venture facilities by approximately \$1.00 more per day, while the disparity in net revenue per patient day is negligible. Thus, although the results differ by size, there is no indication that joint venture facilities are overall more or less expensive than their nonjoint venture counterparts.

The percent discounts and contractual adjustments is approximately 12 percent for both sizes of nursing homes and both ownership groups; the joint venture larger nursing homes are an exception; the average discount rate is 1.7 percentage points higher than the other ownership groups. Thus, joint venture ownership appears to have relatively little influence on the rate of discounts. To the extent that it does, it appears that joint venture facilities have larger discounts than their nonjoint venture counterparts.

Small nonjoint venture homes have lower percent operating incomes, and thus are less profitable than small joint venture homes (6.7 percent for the joint ventures versus 1.8 percent for the nonjoint ventures). Operating income per patient day is also negative for the smaller nonjoint venture homes. The operating loss per patient day is about \$4. In contrast, joint venture smaller homes earn close to \$5 in operating income per patient day.

For large homes, the results regarding firm profitability are reversed. Nonjoint venture homes have higher percent operating incomes than their joint venture counterparts (9.7 percent for the nonjoint venture facilities versus 5.9 percent for the joint ventures). Large nonjoint venture facilities earn about two-thirds more operating income per patient day as the large joint venture facilities. Furthermore, regardless of ownership status or size, nursing homes located in south Florida are less profitable than homes located elsewhere.

With respect to the expenses per patient day, the joint venture facilities have lower expenses per patient day for both size categories. The difference for the large nursing homes is about one and one half percent (\$60.49 versus \$61.70), while the difference for the small nursing homes is about 16 percent (\$55.77 versus \$64.60). This expense difference for the small joint venture nursing homes may be due to the slightly larger size and the higher occupancy rates of these facilities relative to their nonjoint venture counterparts.

Fixed expenses per patient day present a similar pattern. The definition of fixed expenses differs for nursing homes in that fixed expenses here include interest charges for the facilities. Thus, differences in fixed expenses may be attributed to differences in depreciation, lease and rental payments, but may also be due to differences in financing arrangements.

For larger nursing homes, the difference between joint venture and nonjoint venture facilities is approximately 25 percent (\$9.43 versus \$11.76), while the difference for small facilities is negligible. The difference observed for the small nursing home group is to be expected given the higher utilization levels and larger scale of operations that have been noted. The difference in the larger nursing home group is somewhat surprising. Given lower occupancy levels and smaller scale operation with the same financing arrangements one would expect fixed expenses per patient day to be higher for this group. The observed difference is much lower. This difference could be attributable to these facilities having lower levels of depreciable assets, lower lease and rental charges or lower interest expenses.

The combined expenses per day are about \$3.50 less for the joint venture larger nursing homes (\$69.92 for the joint ventures versus \$73.46 for the nonjoint ventures). The difference by

ownership group for the small nursing homes is even greater (\$63.40 versus \$72.54). Thus, with respect to expenses per patient day the joint venture large and small nursing homes tend to have lower expenses per patient day than their nonjoint venture counterparts.

With respect to the proportions of wages and salaries as a percent of direct expense, the larger joint venture nursing homes pay a lower percentage than their counterparts (42.5 percent versus 44.8 percent). It appears that at least some of this difference is attributable to a lower proportion of skilled nurses in these homes. Joint venture facilities pay 11.2 percent of their direct expenses as salaries to skilled nurses, while nonjoint venture larger facilities pay 14.8 percent of their direct expenses to skilled nurses. The inclusion of nurses aides reduces the difference somewhat, however, joint venture facilities still pay a smaller share of their direct expenses as salaries and wages to nurses and nurses aides.

### C. Summary

The occupancy rates, charges, and the provision of skilled nursing care present a mirror image when small facilities are compared to large facilities with respect to the influence of joint venture ownership. For both groups it appears that the physician owners have relatively little influence on both referrals and utilization.

With respect to access, joint venture smaller nursing homes generate more revenues from Medicaid patients than their nonjoint venture counterparts; there are complimentary influences on provision of services to private patients. Charges are slightly lower for nonjoint venture smaller nursing homes and are higher for nonjoint venture larger nursing homes. Small nonjoint venture homes also have higher cost per patient day than similar sized joint venture facilities. This is also the case for larger homes. Provision of skilled nursing services occur at higher rates for joint venture smaller nursing homes than their nonjoint venture counterparts; the opposite is true for larger nursing homes. While there are regional variations, these regional influences do not dramatically affect costs, charges, and utilization of services with respect to the influence of joint venture ownership.

Thus, the results on nursing homes indicate that joint venture ownership has relatively little influence on utilization and that influences on charges tend to be positive or negligible. For the ten joint venture large nursing homes, average revenues are lower, and average costs are lower.

Small joint venture homes are more profitable than their nonjoint venture counterparts. The opposite is true for large nursing homes. Indicators of profitability show opposite results for large and small nursing homes. Large joint venture nursing

homes have lower operating income per day and lower percent operating income (5.9 percent versus 9.7 percent) than their nonjoint venture counterparts. Small joint venture nursing homes generate positive operating income per patient day, whereas small nonjoint venture nursing homes incur operating losses. The percent operating income for small joint venture nursing homes is about seven percent compared to less than two percent for their nonjoint venture counterparts.

In summary, joint venture ownership of nursing homes has little impact on the measures of access, costs, charges, and utilization reported here. Further, measures of profitability show that all nursing homes, regardless of size and ownership status, have only modest rates of profit.

Table 8.1 Characteristics of Nursing Homes with More than 90 Beds

Variable	JOINT VENTURE FACILITIES (N=10)		NONJOINT VENTURE FACILITIES (N=141)	
	Mean	Standard Deviation	Mean	Standard Deviation
Percent of Revenue/Medicare	8.0%	(9.6)	14.4%	(13.2)
Percent of Revenue/Medicaid	44.7%	(38.4)	56.0%	(25.8)
Percent of Revenue/Self-Pay	37.6%	(34.7)	27.3%	(22.2)
Percent of Revenue/Other including Contract Work	1.2%	(1.6)	1.2%	(2.5)
Percent of Revenue/Bad Debt and Charity Care	2.1%	(5.9)	.9%	(3.7)
Discounts and Contractual Adjustments	13.7%	(8.4)	12.0%	(8.5)
Occupancy Rate	89.7%	(13.3)	90.7%	(13.7)
Total Patient Days	43,333	(13,956)	47,971	(19,132)
Gross Revenue/Patient Day	\$74.68	(21.26)	\$76.26	(18.22)
Net Revenue/Patient Day	\$63.97	(17.42)	\$66.28	(14.50)
Operating Income as a Percent of Net Revenues	5.9%	(12.2)	9.7%	(15.0)
Operating Income Per Patient Day	\$3.48	(8.50)	\$5.71	(18.22)
Direct Expense/Patient Day	\$60.49	(19.24)	\$61.70	(21.07)
Fixed Expense/Patient Day	\$9.43	(4.12)	\$11.76	(7.35)
Salaries and Wages as a Percentage of Total Direct Expenses	42.5%	(9.8)	44.8%	(7.5)
Salaries and Wages Paid to Skilled Nurses as a Percentage of Total Direct Expenses	11.2%	(6.8)	14.8%	(6.4)

Table 8.1 Characteristics of Nursing Homes with More than 90 Beds (continued)

Variable	JOINT VENTURE FACILITIES (N=10)		NONJOINT VENTURE FACILITIES (N=141)	
	Mean	Standard Deviation	Mean	Standard Deviation
Salaries and Wages Paid to Skilled Nurses and Nursing Aides as a Percentage of Total Direct Expenses	29.8%	(15.1)	31.5%	(12.7)
Patient Days Per Skilled Nursing FTE	4,136	(4,678)	3,073	(2,025)

Table 8.2 Characteristics of Nursing Homes with Less than 90 Beds

Variable	JOINT VENTURE FACILITIES (N=42)		NONJOINT VENTURE FACILITIES (N=227)	
	Mean	Standard Deviation	Mean	Standard Deviation
Percent of Revenue/Medicare	8.1%	(7.8)	11.6%	(11.8)
Percent of Revenue/Medicaid	63.7%	(22.4)	49.4%	(27.3)
Percent of Revenue/Self Pay	26.7%	(19.6)	36.6%	(26.9)
Percent of Revenue/Other including Contract Work	1.3%	(2.6)	1.2%	(6.7)
Percent of Revenue/Bad Debt and Charity Care	2.5%	(7.3)	1.8%	(4.5)
Discounts and Contractual Adjustments	12.0%	(3.5)	12.1%	(3.0)
Occupancy Rate	95%	(4.0)	91.6%	(13.0)
Total Patient Day	23,179	(6,095)	20,230	(6,620)
Gross Revenue/Patient Day	\$67.63	(16.29)	\$66.90	(17.49)
Net Revenue/Patient Day	\$60.24	(13.81)	\$60.20	(15.16)
Operating Income as a Percent of Net Revenue	6.7%	(9.7)	1.8%	(20.1)
Operating Income Per Patient Day	\$4.70	(5.77)	-\$4.04	(30.69)
Direct Expense/Patient Day	\$55.77	(13.08)	\$64.60	(35.01)
Fixed Expense/Patient Day	\$7.63	(4.20)	\$7.94	(7.22)
Salaries and Wages as a Percentage of Total Direct Expenses	52.9%	(5.1)	50.9%	(19.0)
Salaries and Wages Paid to Skilled Nurses as a Percentage of Total Direct Expenses	16.9%	(16.0)	16.4%	(9.9)

Table 8.2 Characteristics of Nursing Homes with Less than 90 Beds (continued)

Variable	JOINT VENTURE FACILITIES (N=42)		NONJOINT VENTURE FACILITIES (N=227)	
	Mean	Standard Deviation	Mean	Standard Deviation
Salaries and Wages Paid to Skilled Nurses and Nursing Aides as a Percentage of Total Direct Expenses	30.1%	(6.0)	33.5%	(17.9)
Patient Days Per Skilled Nursing FTE	2,323	(966)	2,688	(1,896)

## CHAPTER IX

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF PHYSICAL THERAPY SERVICES

#### A. Introduction

This chapter analyzes the effects of joint ventures on the provision of services by freestanding comprehensive rehabilitation facilities as well as services rendered by centers specializing in physical therapy. Comprehensive rehabilitative facilities provide physical therapy, occupational therapy and speech pathology. Physical therapy involves the planning and administration of treatment programs that will assist injured or disabled patients in reaching maximum performance and functional levels. In recent years, 26 states have enacted direct access laws which allow physical therapists to evaluate and treat patients without a physician's referral for services. Florida and 23 other states have not enacted such direct access laws. Therefore, in Florida, a patient must be referred by a physician in order to obtain physical therapy treatments.

Unlike physical therapy, occupational therapy and speech pathology do not require a physician's referral. Occupational therapy instructs patients in compensatory methods for improving the level of independence in the activities of daily living and the work environment. Speech pathology involves the examination, evaluation, treatment and counseling of patients suffering from disorders that affect speech or language.

As reported in chapter I, approximately 40 percent of the rehabilitation and/or physical therapy facilities that completed a questionnaire have some ownership arrangement involving physicians who are in a position to make referrals to the facility.

Rehabilitation facilities are classified into two groups according to the type of service: 1) physical therapy services only; 2) comprehensive rehabilitation facilities providing physical therapy, occupational therapy, speech pathology, and in some cases "work hardening" for workers compensation patients. A third group of facilities provided occupational therapy and/or speech pathology services only; this group will not be examined in detail in the analysis because only 15 such centers completed surveys and only one has physician owners.

The two ownership categories for rehabilitation facilities are: 1) joint venture (with one or more physician owners) and 2) nonjoint venture (no physician owners). Some of the facilities are joint ventures between several referring physicians and a health care entity. In some cases, these health care entity owners are publicly traded corporations. For example, Healthsouth, is such a

company which has at least 15 such joint venture partnerships with physicians in Florida.

Joint ventures and self-referrals could either promote or lessen consumer interests. Physicians involved in joint ventures contend that these arrangements allow them to better monitor the quality of care provided to their patients. On the other hand, self-referral could enrich physicians without benefitting consumers through higher charges and excessive utilization of services. Since treatment by a physical therapist in Florida (as well as in 23 other states) requires referral by a physician, joint ventures may create a captive referral system which inhibits competition by nonjoint venture providers.

Profit motivated referrals may also affect the manner in which patients are treated. If physician owners are primarily motivated by profits, they could provide these services at minimal possible cost. One way to lower costs is to employ fewer licensed physical therapists and fewer licensed therapist assistants, and hire instead lower wage workers to perform physical therapy (nonlicensed aides and exercise specialists). Another way to reduce costs and to generate more revenue is to require the physical therapists and other workers to treat more patients per day; this can be accomplished by shortening the standard length of a physical therapy visit. Thus, if profit rather than quality concerns motivate physician ownership, then the ratio of visits to the number of full-time equivalent (FTE) licensed physical therapists should be higher in physician owned centers than in nonjoint venture facilities.

On the other hand, if the quality monitoring explanation motivates ownership, then the number of visits per licensed physical therapist should be comparable or even lower in physician owned centers than in nonjoint venture facilities. These arguments should also apply to comparisons of the ratio of visits to the sum of the licensed physical therapist FTEs and the licensed therapist assistant FTEs.

#### B. Characteristics of Physical Therapy Facilities

Table 9.1 reports statistics comparing the characteristics of facilities specializing in physical therapy services. About 66 percent of the patients treated at physician owned physical therapy centers are referred by physicians who have an investment interest in the facility. (This percentage is computed using only those facilities that reported the number of referrals from owners.)

##### Access

Access to various payer groups is indicated by the percent of total revenue received from each payer group. Another indicator is the proportion of gross revenues attributable to bad debt and

charity care. Nonjoint venture physical therapy facilities receive significantly more of their revenues from Medicare patients than joint venture physical therapy centers (15.5 percent for joint ventures versus 22.6 for nonjoint ventures). Nonjoint venture providers also generate a significantly larger share of their revenue from Blue-Cross and commercial insurers; nearly 48 percent for the nonjoint ventures compared about 37 percent for the joint venture physical therapy centers. The results further show that nonjoint venture physical therapy facilities write off significantly more of their gross revenues as bad debt and charity care (9.5 percent versus five percent).

Joint venture physical therapy centers, on the other hand, generate a significantly larger share of their revenues from workers compensation patients; nearly 31 percent of the revenue of physician owned physical therapy facilities is derived from workers compensation patients compared to twenty percent for their nonjoint venture counterparts.

#### Economic and Financial Characteristics

Table 9.1 also reports information on the utilization of physical therapy services. Joint venture facilities provide an average of close to 8000 visits per year, compared to 5,320 for nonjoint venture physical therapy centers; the difference is statistically significant. Thus, physician owned physical therapy render about 50 percent more visits each year than similar businesses without referring physician owners.

The difference in the mean number of physical therapy visits per patient is also statistically significant; the average is 16 for joint venture facilities compared to an average of 11.2 for those physical therapy centers with no physician owners. Thus, patients treated at physician owned physical therapy centers receive 43 percent (4.8) more visits per patient than patients treated at nonjoint venture physical therapy centers. In contrast, there is only a negligible difference in the number of procedures or modalities performed per visit. This finding is not surprising because many insurers have imposed limits on the number of billable modalities per visit in their efforts to control health care costs.

Joint venture facilities charge close to \$52 per physical therapy visit, whereas nonjoint venture centers charge slightly more than \$57 per visit. This 10 percent difference in revenue per visit is significantly higher but does not necessarily mean that patients pay 10 percent more. The higher average revenue per visit may be due to the delivery of more complex and costly procedures. Alternatively, the higher charge may be due to differences in the average length of a visit. (Results presented below corroborate these statements). The disparity in net revenue per visit is less, and is not statistically significant.

The differences in dollar amounts for average revenue per patient are significant and reflect the higher utilization rates that characterize physician owned physical therapy facilities. Joint venture facilities have charges that average slightly more than \$845 per patient compared to \$642 per patient for those without physician owners. Thus, physician owned physical therapy centers generate approximately 31 percent or \$200 more revenue per patient than nonjoint venture providers. Since the nonjoint venture ownership group has higher revenue per visit, this significant difference in revenue per patient is attributable to higher utilization of services in physician owned facilities.

The average percent operating income (excluding contract expenses) of physician owned physical therapy centers is significantly higher (42.6 percent versus 33.2 percent) than in otherwise similar nonjoint venture facilities. For physical therapy centers, the percent operating income adjusted for contract expenses is a better indicator of firm profitability because most of the contract expenses of these facilities are wages paid to therapists employed under contract. These adjustments to include payments for contract services in direct expenses further widens the disparity in the percent operating income between the two ownership groups. After contract adjustments, the percent operating income is also significantly higher for physician owned physical therapy centers (37.8 percent versus 26.7 percent).

Expenses are computed as the ratio of expenses to the total number of physical therapy visits provided per facility. Direct expense per visit is significantly higher for nonjoint venture facilities (\$37.45 versus \$29.10). The most representative measure of the average total cost of producing a physical therapy visit is the sum of direct expense per visit, fixed expense per visit, and contract expense per visit. Contract expenses are included in the calculation of the average total cost of a visit because in physical therapy and/or rehabilitation facilities, contract expenses are primarily paid as wages to licensed physical therapists.

The average total cost per visit in a joint venture physical therapy center is \$39.70. The average total cost of a visit in a nonjoint venture physical therapy center is \$51.66, which is approximately \$12 more than the joint venture facilities. The lower average cost per visit of joint venture facilities can be attributed in part to the greater number of visits that characterize joint venture providers of physical therapy services.

Salaries and wages represent a similar proportion of direct expenses of both ownership groups. Nevertheless, physician owned centers allocate significantly less direct expenses to salaries and wages for licensed physical therapists (32.7 percent versus 47.6 percent). These results suggest that physician owned centers

provide more physical therapy services with fewer licensed therapists.

The data reported in the last three rows of Table 9.1 show the number of visits per full-time equivalent (FTE) licensed physical therapist, visits per (FTE) licensed medical workers (therapists and licensed assistants), and visits per FTE medical workers (includes both licensed and nonlicensed employees). For all three measures, joint venture facilities generate significantly more visits per FTE.

Joint venture facilities render an average of 5,114 physical therapy visits per full-time equivalent physical therapist. In contrast, nonjoint venture facilities provide only 3,149 visits per FTE licensed physical therapist. Thus, joint venture facilities provide, on average, 1,965 (62 percent) more visits per licensed physical therapist than nonjoint venture physical therapy centers. Based on the standard assumption of 250 working days, a physical therapist employed by a joint venture facility treats an average of twenty patients per day, whereas in the typical nonjoint venture facility a physical therapist treats between 12 and 13 patients per day.

A similar pattern emerges when the number of visits are expressed relative to the sum of FTE licensed physical therapists and FTE licensed therapist assistants. This ratio is 3,735 for joint venture centers and 2,668 for nonjoint venture physical therapy centers. Based on these calculations, physician owned physical therapy facilities render about 40 percent or 1,067 more visits per FTE licensed physical therapy worker (includes licensed physical therapists and licensed therapist assistants) than nonjoint venture facilities. Again, assuming a standard of 250 working days per year, the average number of visits per day per FTE licensed medical worker (physical therapists and therapist assistants) in physician owned facilities is 15. The corresponding number for the typical nonjoint venture physical therapy center is between 10 and 11.

The inclusion of other FTE nonlicensed medical workers in the denominator reduces this ratio to 3,471 for joint venture facilities, a decline of about eight percent. For nonjoint venture facilities this ratio decreases only slightly from 2,668 to 2,594. These findings suggest that nonlicensed workers are substituted for licensed workers in the provision of physical therapy services in joint venture facilities. Nonetheless, this substitution does not make visits per FTE equal as would be expected if joint venture facilities and nonjoint venture facilities provide similar units of labor per visit.

These findings suggest that joint venture physical therapy centers provide a lower quality of care or provide simpler services because both licensed therapy workers and nonlicensed workers spend

less time with each patient. The finding that more visits are produced per unit of labor in physician owned physical therapy centers and that these centers use lower-paid labor explains why the direct expense per visit and average total cost per physical therapy visit is less in joint venture facilities than in nonjoint venture firms.

Table 9.2 compares list charges of joint venture and nonjoint venture physical therapy centers. These results show that there are only negligible differences in the average list charges of the two ownership types. Further breakdowns by region revealed that there is no consistent pattern of higher or lower charges within a particular region. For most of procedures or treatments reported in Table 9.2, the difference in average list charges is less than two dollars. Thus, while physician owned physical therapy service have higher utilization rates, there does not appear to be any substantial difference in the charges for these services between the two ownership groups. These results indicate that the higher average revenue per visit at nonjoint venture facilities is attributable to these facilities performing more complex treatments and procedures.

#### C. Characteristics of Comprehensive Rehabilitation Facilities

Table 9.3 contains statistics regarding the characteristics of comprehensive rehabilitation facilities. Both joint venture and nonjoint venture facilities earn about 80 percent of their total revenues from the provision of physical therapy services. The results on occupational therapy and speech pathology services are not presented here. Nonjoint venture comprehensive rehabilitation centers generate significantly less revenues per patient for occupational therapy services but significantly more revenues per patient for speech therapy services. Furthermore, about 61 percent of the patients treated at rehabilitation facilities are referred by physicians who have an investment interest in the facility. (This percentage is computed using only those facilities that reported referral information.)

##### Access

Access is measured by the percent of revenues received from each of the various payer groups. Nonjoint venture rehabilitation facilities generate significantly more of their revenues from Medicare than their physician owned counterparts (40 percent versus 21.3 percent). Physician owned facilities do not treat any Medicaid patients, whereas the nonjoint ventured centers generate an average of two percent of their revenues from services provided to Medicaid patients. Nonjoint venture facilities also generate a greater proportion of their revenues from treating self-pay patients (1.8 percent for joint ventures versus 7.7 percent for nonjoint ventures). This difference is statistically significant.

On the other hand, physician owned rehabilitation centers obtain significantly more revenues from Blue Cross and commercial insurers, (54.2 percent versus 29.2 percent) and they receive significantly more revenues from managed care patients (10.2 percent versus 2.7 percent). Other differences in sources of revenue were not significant.

Rehabilitation centers with referring physician owners provide about 50 percent (4,188) more physical therapy visits than rehabilitation centers without physician owners (12,600 versus 8,412 physical therapy visits. This difference is statistically significant.

The average number of physical therapy visits per patient in physician owned rehabilitation centers is significantly higher (13.8 for the joint venture facilities compared to 10.5 in nonjoint venture rehabilitation centers). Thus, patients treated at physician owned rehabilitation facilities receive 32 percent or 3.3 more physical therapy visits than patients obtaining physical therapy treatments at nonjoint venture facilities. Again, as is the case with facilities specializing in physical therapy, there is little difference between the two ownership groups in the number of procedures or modalities performed per physical therapy visit.

Joint venture rehabilitation facilities generate gross revenues of about \$65 per physical therapy visit, whereas nonjoint venture centers generate almost \$81 per physical therapy visit. This \$16.51 differential in average revenue per visit is significant but can be attributed to the nonjoint venture centers having a longer length of visit and performing more complex procedures during each visit than joint venture facilities. (Average list charges are lower at nonjoint venture facilities; these results are presented below.) The difference in net revenue per visit is about \$14 and is also statistically significant.

The impact of the higher utilization rates for physical therapy visits in joint venture rehabilitation centers become evident when one examines the amount of revenue generated by the average physical therapy patient. Physician owned facilities generate revenues of about \$916 per physical therapy patient, compared to \$834 of revenue per physical therapy patient treated in nonjoint venture facilities even though the average gross revenue per visit is lower. Patients receiving physical therapy treatments in joint venture facilities generate approximately 10 percent or \$82 more revenue than patients who obtain physical therapy services at nonjoint venture rehabilitation facilities. Yet, despite the fact that nonjoint venture providers generate more revenue per physical therapy visit, the difference in total revenue generated by the average physical therapy patient is still higher for the joint venture facilities due to the higher utilization of physical therapy services. The difference in gross revenue per patient is not statistically significant. (Further, as the list charge

comparison indicates joint venture facilities perform less complex procedures.) The difference in discounts and contractual adjustments by ownership status is also negligible.

The average percent operating income (excluding contract expenses) of joint venture rehabilitation centers is significantly higher (47.7 percent versus 40 percent) for rehabilitation facilities without referring physician owners. Since the production of rehabilitative services involves a significant amount of contract labor for licensed therapists, the percent operating income adjusted for contract expenses is a better measure of overall firm profitability. Making the necessary adjustments for contract expenses widens the disparity in the percent operating income between physician owned rehabilitation centers and those without physician owners; this difference is also statistically significant. After adjusting for contract expenses, the percent operating income is 43.3 percent for physician owned rehabilitation centers compared to 28 percent for nonjoint venture facilities. The difference in the mean operating income per visit between the two ownership groups is negligible.

Expenses are expressed relative to the total number of visits rendered per facility. As discussed in the preceding section, the most representative measure of the average total cost of producing a visit is the sum of direct expense per visit, fixed expense per visit, and contract expense per visit.

Here again, direct expenses per visit are significantly higher at nonjoint venture centers (\$43.84 versus \$32.41). Also fixed expense per visit and contract expense per visit are significantly higher for nonjoint venture facilities. The average total cost per visit in a physician owned rehabilitation facility is \$47.33. In nonjoint venture rehabilitation facilities, the average total cost of a visit is \$67.24, which is nearly \$20 more than the average total cost in joint venture facilities. The lower average cost per visit of joint venture facilities can be attributed, in part, to the larger numbers of visits rendered at joint venture rehabilitation facilities. Another reason these facilities have lower expenses is because they perform less complex treatments.

Salaries and wages represent a larger share of the direct expenses of joint venture rehabilitation facilities. Nevertheless, salaries and wages paid to licensed therapists account for a significantly lower percent of total direct expenses for facilities with physician owners (39.2 percent versus 47.9 percent).

The data reported in the last three rows of Table 9.3 show the total number of physical therapy visits by type relative to the number of full-time equivalent (FTE) licensed and nonlicensed physical therapy workers. Physical therapy services are expressed in three ways: visits per FTE licensed physical therapist; visits

per FTE licensed medical worker (physical therapist and licensed therapist assistants); and visits per FTE medical workers (includes both licensed and nonlicensed physical therapy workers).

Joint venture facilities generate, significantly more physical therapy visits per licensed physical therapist (4,024 versus 2,843). Thus, joint venture rehabilitation centers provide about 42 percent or 1,181 more physical therapy visits per licensed physical therapist than nonjoint venture facilities. Assuming a standard of 250 working days, a physical therapist treating patients in a joint venture rehabilitation facility sees more than 16 patients on a typical day. Physical therapists working in nonjoint venture facilities treat an average of 11 patients per day. These findings suggest that physical therapy visits rendered in physician owned rehabilitation centers are of shorter duration than physical therapy visits in nonjoint venture facilities or that services are not administered by licensed physical therapists.

The number of physical therapy visits relative to the sum of FTE licensed physical therapists and FTE licensed therapist assistants is also significantly higher (3,002 versus 1,985). Thus, the number of physical therapy visits per FTE licensed therapist and licensed therapist assistant is 51 percent or 1,017 visits more in joint venture facilities relative to nonjoint venture facilities. Under the assumption of 250 working days, the average number of visits per day per FTE licensed medical worker (physical therapists and therapist assistants) in physician owned rehabilitation centers is 12; in nonjoint venture facilities this ratio is 7.8 daily visits per licensed medical worker.

The inclusion of other FTE nonlicensed medical workers in the denominator does not substantially alter this ratio for either joint venture or nonjoint venture rehabilitation facilities. This evidence suggests that rehabilitation facilities do not lower costs by employing nonlicensed medical workers to provide physical therapy services. Rather, since the length of visit is one proxy for quality, these findings imply that nonjoint venture facilities provide higher quality services because their visits are of longer duration than the average visit in physician owned facilities. These results may also imply that licensed practitioners are not delivering these services.

Table 9.4 compares list charges for common procedures and treatments performed in rehabilitation facilities. For ten procedures, the list charges are significantly higher in joint venture rehabilitation facilities than in similar nonjoint venture businesses. In two cases, the charges in nonjoint venture rehabilitation facilities are higher, but the differences are not significant. These findings indicate that joint venture rehabilitation facilities charge more and have higher utilization rates than nonjoint venture facilities.

#### D. Summary

This chapter compares the characteristics of joint venture and nonjoint venture physical therapy and/or rehabilitation facilities. These facilities are grouped by type of service: 1) physical therapy services only, and 2) comprehensive rehabilitation facilities providing physical therapy, occupational therapy, speech pathology, and in some cases work hardening. Both types of joint venture facilities receive more than 60 percent of their referrals from owners.

Nonjoint venture facilities specializing in the provision of physical therapy services receive significantly higher percentages of their revenues from Medicare and Blue Cross and/or commercial insurers. Nonjoint venture providers also write off significantly more revenue for care provided to bad debt and charity patients. Joint venture providers, on the other hand, generate significantly more of their revenue from workers' compensation patients.

The access measures for rehabilitation facilities show that joint venture centers generate significantly more revenue from Blue Cross and commercial insurers and from managed care patients than their nonjoint venture counterparts. On the other hand, nonjoint venture facilities generate significantly more of their revenues from Medicare and self-pay patients in comparison to facilities owned by physicians. Joint ventured rehabilitation facilities do not treat any Medicaid patients, whereas their nonjoint venture counterparts generate about two percent of their revenues from this payer group.

The findings for facilities specializing in physical therapy show that the mean number of visits per patient is significantly higher (16 in joint venture facilities compared to 11.2 for the nonjoint venture centers). Thus, patients treated at physician owned facilities receive 43 percent (4.8) more visits per patient than patients treated at nonjoint venture physical therapy centers.

Joint venture physical therapy facilities average significantly less revenue per visit but generate significantly more revenue per patient. Joint venture facilities average 31 percent or \$200 more revenue per patient due to the higher utilization of services. Joint venture physical therapy facilities are also significantly more profitable than their nonjoint venture counterparts.

Joint venture physical therapy facilities provide on average 62 percent (almost 2,000) more visits per FTE licensed physical therapist; this difference is statistically significant. Physician owned physical therapy facilities also render about 40 percent more visits per FTE physical therapy worker (licensed physical therapist and licensed therapist assistants). Further, there is only minimal substitution of nonlicensed workers for licensed workers in the

provision of physical therapy services. These findings indicate that joint venture facilities provide a lower quality of care because both licensed therapy workers and nonlicensed workers spend less time with each patient. These results also explain why the average total cost of a physical therapy visit is less in joint venture facilities than in nonjoint venture facilities.

A comparison of list charges of joint venture and nonjoint venture physical therapy centers shows negligible differences in the average list charges of the two ownership groups. Thus, while nonjoint venture facilities generate significantly higher average revenue per visit, this difference occurs either because the treatment sessions are of longer duration or because these treatments are more complicated than those provided in joint venture facilities.

Patients treated at physician owned comprehensive rehabilitation facilities average 32 percent more physical therapy visits than patients treated at nonjoint venture facilities and this difference is statistically significant. The mean number is 13.8 visits for the joint venture versus 10.5 for the nonjoint venture.

Nonjoint venture rehabilitation facilities receive significantly more revenue per physical therapy visit, however, the average visit is longer than in joint venture facilities. Patients receiving physical therapy treatments in joint venture facilities generate 10 percent (\$82) more revenue than patients who receive physical therapy at nonjoint venture facilities. The higher revenue per patient is due to the higher utilization of physical therapy visits per patient which characterizes joint venture facilities.

Physician owned rehabilitation facilities are more profitable and have a lower average cost per visit than nonjoint venture providers. Joint venture rehabilitation facilities render about 42 percent more visits per licensed physical therapist than nonjoint venture facilities. The average number of annual visits per FTE licensed medical worker (physical therapists and therapist assistants) is 51 percent higher in joint venture facilities relative to nonjoint venture facilities. These findings imply that nonjoint venture facilities provide higher quality services because the visits are of longer duration than the average visit in joint venture facilities, and/or that the services are not administered by licensed practitioners.

In sum, for both joint venture physical therapy and rehabilitation centers, average utilization rates (visits per patient) are significantly higher and average revenue per patient is higher; this difference in average revenue per patient, however, is only statistically significant for facilities specializing in physical therapy services. Finally, both joint venture physical

therapy and rehabilitation facilities render significantly more visits per licensed physical therapist. This is also the case when visits are expressed relative to the sum of FTE licensed physical therapists and licensed therapist assistants. This suggest that joint venture facilities provide lower quality services than their nonjoint venture counterparts because the visits are of shorter duration. These findings may also imply that licensed practioners are not delivering these services.

Table 9.1 Characteristics of Physical Therapy Facilities

Variable	JOINT VENTURED FACILITIES (N=43)		NONJOINT VENTURED FACILITIES (N=74)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	65.8%	(26.5)	--	--	
<b>Access</b>					
Percent of Revenue/Medicare	15.5%	(20.5)	22.6%	(25.4)	.084
Percent of Revenue/Medicaid	--	--	--	--	
Percent of Revenue/Managed Care	11.0%	(15.4)	7.4%	(13.7)	
Percent of Revenue/Blue Cross and/or Commercial	36.6%	(28.1)	49.0%	(30.8)	.029
Percent of Revenue/Self-Pay	8.8%	(13.1)	12.3%	(22.5)	
Percent of Revenue/Other Including Contract Work	31.0%	(30.1)	19.9%	(27.4)	.041
Percent of Revenue/Bad Debt and Charity Care	5.1%	(9.0)	9.5%	(19.3)	.110
<b>Utilization</b>					
Physical Therapy Visits	7,967	(4,343)	5,320	(3,995)	.000
Physical Therapy Visits Per Patient	16.0	(5.7)	11.2	(2.5)	.000
Procedures (Modalities) Per Physical Therapy Visit	3.0	(.81)	2.8	(.62)	
<b>Charges and Costs</b>					
Gross Revenue Per Physical Therapy Visit	\$51.91	(20.56)	\$57.32	(21.71)	.084
Net Revenue Per Physical Therapy Visit	\$50.40	(17.81)	\$54.31	(21.23)	

Table 9.1 Characteristics of Physical Therapy Facilities (continued)

Variable	JOINT VENTURED FACILITIES (N=43)		NONJOINT VENTURED FACILITIES (N=74)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Gross Revenue Per Physical Therapy Patient	\$845.26	(479.09)	\$641.97	(312.72)	.001
Discounts and Contractual Adjustments	12.6%	(9.4)	11.6%	(8.6)	
Percent Operating Income Excluding Contract Expenses	42.6%	(18.6)	33.2%	(25.1)	.019
Percent Operating Income Adjusted for Contract Expenses	37.8%	(18.6)	26.7%	(20.5)	.002
Operating Income Per Visit	\$21.42	(12.65)	\$20.13	(14.36)	
Direct Expense/Visit	\$29.10	(12.98)	\$37.45	(19.12)	.008
Fixed Expense/Visit	\$7.73	(6.36)	\$9.15	(7.10)	
Contract Expense/Visit	\$2.87	(6.69)	\$5.06	(9.83)	
Other Overhead/Visit	\$3.34	(4.08)	\$4.21	(6.98)	
Interest Expense/Visit	\$.77	(1.04)	\$.59	(.93)	
Salaries and Wages as a Percentage of Total Direct Expense	68.2%	(18.4)	67.1%	(21.1)	
Salaries and Wages Paid to Licensed Physical Therapists as a Percentage of Total Direct Expense	32.7%	(16.8)	47.6%	(19.6)	.000
<b>Quality</b>					
Visits Per Full-time Equivalent (FTE) Licensed Physical Therapist	5,114	(2,388)	3,149	(1,808)	.000

Table 9.1 Characteristics of Physical Therapy Facilities (continued)

Variable	JOINT VENTURED FACILITIES (N=43)		NONJOINT VENTURED FACILITIES (N=74)		
	Mean	Standard Deviation	Mean	Standard Deviation	Significance Level
Visits Per (FTE) Licensed Physical Therapist and Licensed Therapist Assistants	3,735	(2,036)	2,668	(1,699)	.001
Visits Per (FTE) Medical Workers <sup>a</sup>	3,471	(2,049)	2,594	(1,682)	.006

Note: <sup>a</sup>Medical workers include licensed physical therapists, licensed physical therapist assistants, and nonlicensed medical workers (exercise/fitness specialists, technicians, and PT aides).

Table 9.2 List Charge Comparison for Physical Therapy Centers

Procedure or Treatment	JOINT VENTURED FACILITIES (N=43)		NONJOINT VENTURED FACILITIES (N=74)	
	Mean	Standard Deviation	Mean	Standard Deviation
Hot or Cold Packs	\$19.50	(5.25)	\$19.69	(5.25)
Ultrasound	\$21.48	(5.76)	\$21.65	(6.83)
Electrical Stimulation	\$23.58	(7.03)	\$23.08	(7.44)
Initial Evaluation	\$46.08	(16.28)	\$46.24	(23.30)
Tens Treatment	\$25.00	(6.56)	\$27.52	(11.76)
Activities of Daily Living (ADL)	\$33.83	(10.92)	\$34.75	(18.90)
Manual Muscle Testing	\$39.26	(15.35)	\$41.15	(15.19)
Therapeutic Exercise (30 minutes)	\$26.25	(9.53)	\$28.18	(12.75)
Neuromuscular Re-education (30 minutes)	\$25.33	(10.35)	\$26.46	(10.97)
Functional Activities	\$23.43	(7.01)	\$25.10	(8.61)
Stretching for Range of Motion	\$23.30	(7.95)	\$27.84	(13.71)
Cybex Exercise (each additional 15 minutes)	\$20.92	(15.22)	\$19.11	(6.70)
Kinetic Activities (initial 30 minutes)	\$32.70	(8.66)	\$33.62	(10.22)
Kinetic Activities (each additional 15 minutes)	\$20.98	(5.54)	\$21.08	(7.01)
Isokinetic Exercise	\$58.10	(49.32)	\$44.76	(24.67)
Computerized Extremity Testing (initial 30 minutes)	\$70.70	(46.73)	\$65.88	(28.00)

Table 9.3 Characteristics of Rehabilitation Facilities

Variable	JOINT VENTURED FACILITIES (N=28)		NONJOINT VENTURED FACILITIES (N=47)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	61.3%	(22.9)	--	--	
<b><u>Access</u></b>					
Percent of Revenue/Medicare	21.3%	(14.5)	40.0%	(27.4)	.001
Percent of Revenue/Medicaid	--	--	2.3%	(10.9)	
Percent of Revenue/Managed Care	10.2%	(21.7)	2.7%	(6.1)	.052
Percent of Revenue/Blue Cross and/or Commercial	54.2%	(30.3)	29.2%	(28.9)	.001
Percent of Revenue/Self-Pay	1.8%	(3.0)	7.7%	(16.9)	.082
Percent of Revenue/Other Including Contract Work	24.9%	(33.4)	30.4%	(32.4)	
Percent of Revenue/Bad Debt and Charity Care	13.2%	(13.8)	9.8%	(10.8)	
<b><u>Utilization</u></b>					
Physical Therapy Visits	12,600	(7,708)	8,412	(11,462)	.050
Physical Therapy Visits Per Patient	13.8	(3.5)	10.5	(4.1)	.000
Procedures (Modalities) Per Physical Therapy Visit	2.7	(.91)	2.6	(.62)	
<b><u>Charges and Costs</u></b>					
Gross Revenue Per Physical Therapy Visit	\$64.76	(27.02)	\$81.27	(43.55)	.044

Table 9.3 Characteristics of Rehabilitation Facilities (continued)

Variable	JOINT VENTURED FACILITIES (N=28)		NONJOINT VENTURED FACILITIES (N=47)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Net Revenue Per Physical Therapy Visit	\$61.87	(18.97)	\$75.49	(31.74)	.025
Gross Revenue Per Physical Therapy Patient	\$916.47	(410.47)	\$834.53	(712.69)	
Discounts and Contractual Adjustments	11.8%	(10.3)	11.4%	(12.3)	
Operating Income as a Percent of Net Revenues Excluding Contract Expenses	47.7%	(19.1)	40.1%	(21.1)	.087
Operating Income as a Percent of Net Revenue Adjusted for Contract Expenses	43.3%	(19.9)	28.1%	(20.8)	.004
Operating Income Per Visit	\$32.03	(17.04)	\$32.51	(27.13)	
Direct Expense/Visit	\$32.41	(12.60)	\$43.84	(20.14)	.010
Fixed Expense/Visit	\$8.95	(7.63)	\$13.00	(12.92)	.100
Contract Expense/Visit	\$5.97	(7.61)	\$10.40	(15.53)	.100
Other Overhead/Visit	\$10.80	(13.59)	\$11.59	(17.45)	
Interest Expense/Visit	\$1.25	(1.92)	\$1.79	(3.06)	
Salaries and Wages as a Percentage of Total Direct Expense	70.6%	(31.8)	71.7%	(19.0)	

Table 9.3 Characteristics of Rehabilitation Facilities (continued)

Variable	JOINT VENTURED FACILITIES (N=28)		NONJOINT VENTURED FACILITIES (N=47)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Salaries and Wages Paid to Licensed Physical Therapists as a Percentage of Total Direct Expense	39.2%	(14.0)	47.9%	(17.0)	.024
<b>Quality</b>					
Physical Therapy Visits Per Full-time Equivalent (FTE) Licensed Physical Therapist	4,024	(2,127)	2,843	(2,124)	.017
Physical Therapy Visits Per (FTE) Licensed Physical Therapists and Licensed Therapist Assistants	3,002	(1,825)	1,985	(1,759)	.013
Physical Therapy Visits Per FTE Medical Worker <sup>a</sup>	2,934	(1,820)	1,943	(1,698)	.013

Note: <sup>a</sup>Medical workers include licensed physical therapists, licensed assistants and nonlicensed medical workers such as exercise specialists and physical therapy aides.

Table 9.4 List Charge for Rehabilitation Centers

Variable	JOINT VENTURE FACILITIES (N=28)		NONJOINT VENTURE FACILITIES (N=47)	
	Mean	Standard Deviation	Mean	Standard Deviation
Hot or Cold Packs	\$22.32	(3.92)	\$19.92	(4.73)
Ultrasound	\$26.66	(8.05)	\$21.18	(5.28)
Electrical Stimulation	\$28.11	(7.24)	\$23.55	(8.07)
Initial Evaluation	\$48.66	(17.59)	\$49.73	(20.98)
Tens Treatment	\$31.37	(10.34)	\$28.42	(10.07)
Activities of Daily Living (ADL)	\$39.11	(12.19)	\$32.36	(7.00)
Manual Muscle Testing	\$49.00	(26.07)	\$37.31	(15.55)
Therapeutic Exercise (30 minutes)	\$35.44	(10.23)	\$32.79	(11.47)
Neuromuscular Re-education (30 minutes)	\$35.05	(17.53)	\$32.91	(14.11)
Functional Activities	\$42.05	(22.45)	\$28.15	(8.04)
Stretching for Range of Motion	\$34.18	(11.52)	\$26.53	(8.71)
Cybex Exercise (each additional 15 minutes)	\$25.95	(12.69)	\$20.31	(11.75)
Kinetic Activities (initial 30 minutes)	\$39.07	(11.92)	\$34.35	(10.12)
Kinetic Activities (each additional 15 minutes)	\$25.55	(10.74)	\$21.24	(5.03)
Isokinetic Exercise	\$51.57	(29.06)	\$56.65	(30.55)
Computerized Extremity Testing (initial 30 minutes)	\$86.13	(47.81)	\$78.68	(52.33)

## CHAPTER X

### THE EFFECT OF JOINT VENTURES ON THE PROVISION OF SERVICES BY FREESTANDING RADIATION THERAPY FACILITIES

#### A. Introduction

This chapter examines the effects of joint ventures on the provision of services by freestanding radiation therapy facilities. Radiation therapy is used in the treatment of cancer. Most often, radiation therapy is a specialty service provided by teaching and other large hospitals. In Florida, these services are also provided by approximately 31 freestanding centers. Of the 23 facilities that filed a completed survey, 80 percent indicate that they have some ownership arrangement that directly involves physicians. Some of these facilities are owned solely by radiation oncologists, who render the treatments and thus are not in a position to refer patients to their own facility.

Radiation therapy services require relatively large fixed investment in the equipment that produces the radiation treatments. Standard equipment typically includes diagnostic x-ray machines for purposes of treatment design as well as one or more megavoltage radiation machines for use in treatment. The labor costs and other direct costs represent a relatively small proportion of total costs. The personnel required for production of radiation therapy treatments include radiation therapy physicists (who compute the necessary dosages and develop treatment plans in consultation with physicians), licensed radiologic technicians, radiologic technical assistants, as well as administrative and clerical workers.

Treatment plans are required for each patient. At the outset, measurements are taken to assess the necessary dosages and a plan for treatment is developed that involves not only physical measurements, but determination of the actual number and dosage level for the treatments. Implementation of such plans by delivering radiation therapy treatments generates the bulk of the revenues.

#### B. Characteristics of Radiation Therapy Facilities

Table 10.1 reports on key characteristics of physician owned and nonjoint venture radiation therapy centers. Less than 17 percent of the patients receiving radiation therapy treatments are referred by physician owners. This is not surprising because many of these owners are radiation oncologists who are generally not in a position to refer patients to their own facility.

Access to patients is measured by the percent of total revenue received from each of the various payer groups. Physician owned and nonphysician owned radiation therapy facilities receive similar shares of revenues for all payer groups.

## Economic and Financial Characteristics

Table 10.1 also reports utilization and financial statistics for radiation therapy centers by ownership status (physician owned versus no physician owners). The average number of radiation treatments per patient is 45 for nonjoint venture facilities, compared to 36.8 procedures per patient in physician owned radiation centers.

Physician owned facilities charge an average of \$173 per radiation therapy treatment, whereas nonjoint venture facilities charge about \$116 per treatment. Thus, the average charge per treatment in physician owned radiation therapy centers is \$57 or close to 50 percent more than the average treatment charge in nonjoint venture radiation centers. Further analysis by region shows that gross revenue per procedure is higher for facilities with physician owners located in north Florida as well as for those in the southeast peninsula region.

The ultimate impact of the number of procedures and charges per procedure is revealed by the average revenue (charges) per radiation therapy patient. Physician owned facilities generate revenues of more than \$5,000 from treatments rendered to patients undergoing radiation therapy. Nonjoint venture radiation centers generate \$4,655 in revenue per patient, which is \$385 less than the average revenue of the physician owned centers. Further breakdowns by geographic region show that gross revenue per patient is lower for radiation therapy centers owned by physicians located in North Florida. On the other hand, gross revenue per patient is lower at nonjoint venture facilities located in the southeast peninsula regions. Average net revenue per patient in physician owned radiation therapy centers is \$4,079, which is \$514 less than their nonjoint venture counterparts.

Measurement of profitability is problematic because radiation therapy revenues may be for facility services only (i.e. technical fees) or may be for facility services and physician services (i.e. global fees). When global fees are paid, the expense of the physician services could be reflected in salaries or in contract expenses (or even reported as an adjustment to revenues rather than an expense). The data collected did not indicate the nature of fees or the extent and nature of expenses for physician services. Given the potential and expenses are not reported.

### C. Summary

Radiation therapy centers are predominantly owned by physicians. Regardless of ownership status, radiation therapy facilities generate comparable shares of their revenue from all payer classes. Radiation therapy centers not owned by physicians render more procedures per patient than their physician owned counterparts. On the other hand, physician owned radiation centers

charge more per procedure, which on net results in higher total charges per patient.

Table 10.1 Characteristics of Radiation Therapy Centers

Variable	JOINT VENTURE FACILITIES (N=18)		NONJOINT VENTURE FACILITIES (N=5)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Percent Referrals by Physician Owners	16.7%	(32.7)			
<b>Access</b>					
Percent of Revenue/Medicare	55.7%	(18.3)	57.3%	(18.2)	
Percent of Revenue/Medicaid	1.0%	(1.1)	1.1%	(1.2)	
Percent of Revenue/Managed Care	12.4%	(17.6)	10.8%	(10.8)	
Percent of Revenue/Blue Cross and/or Commercial	26.0%	(13.2)	27.6%	(24.1)	
Percent of Revenue/Self Pay	4.5%	(4.2)	2.9%	(2.3)	
Percent of Revenue/Other Including Contract Work	0.8%	(1.7)	0.4%	(0.4)	
Percent of Revenue/Bad Debt and Charity Care	16.9%	(18.8)	4.0%	(1.3)	
<b>Utilization</b>					
Number of Patients	446	(405)	407	(128)	
Radiation Procedures Per Patient	36.8	(13.3)	45.1	(18.1)	
<b>Charges and Costs</b>					
Revenue/Radiation Procedure	\$173	(105)	\$116	(64)	
Revenue/Radiation Patient	\$5,040	(1,371)	\$4,655	(1,509)	
Net Revenue/Radiation Patient	\$4,079	(1,171)	\$4,593	(1,325)	

Table 10.1 Characteristics of Radiation Therapy Centers (continued)

Variable	JOINT VENTURE FACILITIES (N=18)		NONJOINT VENTURE FACILITIES (N=5)		Significance Level
	Mean	Standard Deviation	Mean	Standard Deviation	
Salaries and Wages as a Percentage of Total Direct Expenses	52.1%	(20.7)	44.3%	(29.9)	
Salaries and Wages Paid to Licensed Lab Technicians as a Percentage of Total Direct Expenses	21.0%	(11.5)	22.3%	(4.3)	

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**JOINT VENTURES AMONG  
HEALTH CARE PROVIDERS IN FLORIDA**

**VOLUME III**

**OCTOBER 1991**

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STATE OF FLORIDA  
HEALTH CARE  
COST  
CONTAINMENT  
BOARD

**JOINT VENTURES AMONG  
HEALTH CARE PROVIDERS IN FLORIDA**

**VOLUME III**

**OCTOBER 1991**

**STATE OF FLORIDA  
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## PREFACE

This Volume III report represents completion of the special study conducted pursuant to Chapter 89-354, Section 6, Laws of Florida, (Appendix I) to evaluate the impact of ownership or compensation arrangements, i.e., "joint ventures", among health care providers in Florida.

The study effort, begun in the Fall of 1989, was assisted by a Technical Advisory Panel (TAP) for the entire course of the study. The TAP, established in accordance with legislative provisions, is comprised of representatives from medical associations, hospital industry, state agencies responsible for the enforcement of the anti-kickback laws, and other appropriate industry groups including the insurance industry. The Appendix VI lists the TAP members.

Volume I and Volume II reports completed in January 1991 and September 1991 respectively were prepared in conjunction with researchers from the Florida State University (FSU) and the Survey Research Laboratory at FSU. As required, Volume I and Volume II provided data-based conclusions regarding: 1) the scope and nature of joint ventures among health care providers, and 2) the impact of joint ventures on costs, access, utilization, and quality of health care services in Florida. As used in Volume II, the term "joint venture" means any ownership, investment interest or compensation arrangement between physicians and other health care professionals and entities to which they make referrals.

As its primary focus, this final volume provides recommendations for the regulation of joint ventures with the objective of protecting the citizens of Florida from unnecessary and costly health care expenditures. Requirements for specific study recommendations under the enabling legislation include: 1) recommendations on the effectiveness of disclosure requirements contained in Section 455.25, Florida Statutes; 2) recommendations to strengthen enforcement of the anti-kickback authority in Florida health care professional regulation statutes; and 3) recommendation on an interagency system of coordination to regulate the impact of joint ventures, consumer education, and regulation of health care providers.

Also included in this Volume III report are results of physicians' survey and results of survey of Florida and other state regulators responsible for the enforcement of existing anti-kickback and disclosure laws. Both of these surveys were conducted by Melissa Ahearn, Ph.D., Florida International University.

**JOINT VENTURES STUDY RECOMMENDATIONS  
AS ACCEPTED BY THE BOARD ON OCTOBER 24, 1991**

- A. **Prohibit physician owners from referring patients to those facility types that have been identified as problematic, i.e., clinical laboratories, diagnostic imaging centers, physical therapy/rehabilitation centers and radiation therapy centers. The exceptions to referral prohibitions contained in the Federal "Stark" legislation should be incorporated as they may be applicable to the provision of services in Florida; and**
- B. **Improve effectiveness of disclosure requirements contained in Section 455.25, Florida Statutes, by repealing Section 458.327(2)(c), Florida Statutes, and requiring specific and full disclosure of any financial interest in any entity providing health care goods and services; the disclosure statement to clarify that the patient is free to choose a different provider and to require identification of a specific convenient alternative in the community; and**
- C. **Strengthen enforcement of anti-kickback authority (contained in Section 395.0185, Florida Statutes and other health care professional regulation statutes) through legislation that incorporates AMA's requirements for ethical practice using operational standards as set in the Federal safe harbor on "investment interest".**

In addition, Board recommends that the following provisions be implemented concurrently.

- 1. **Institute licensing requirements for all ancillary services with licensing requirements to include a quality assessment component. Of the facility types surveyed and analyzed, diagnostic equipment centers, physical therapy centers and durable medical equipment suppliers are not currently required to be licensed by the state. These facilities are operating without minimum levels of regulation that is exercised through licensing procedures. These ancillary services provided in physicians' offices are not subject to the state licensing requirements.**
- 2. **Require information on direct and indirect ownership of health businesses as part of the state licensing requirements with specific identification of health practitioner owners. This information will be necessary for enforcing any restrictions on referrals for services to joint venture facilities.**
- 3. **Specifically authorize HCCB under Chapter 407, Florida Statutes, to collect financial and patient encounter data from all health care facilities for public dissemination and use in provider selection. Health care providers should be assessed to support this effort specifically. This data collection effort will facilitate effective use and enforcement of disclosure requirements, and will allow further evaluations of impacts of joint ventures especially in facility areas where the study results are inconclusive.**

## CHAPTER I

### Statement on the Effects of Joint Ventures

Over the past 10 years, changes in the way health care is reimbursed and delivered have provided impetus for investment in for-profit health care. Dr. Arnold S. Relman (former Editor-in-Chief of the New England Journal of Medicine) in an article in the Journal in 1980, referred to the rise of the "medical-industrial complex" as a new growth industry to supply health care for profit. Dr. Relman, noting that the key to control of this complex lies in the hands of physicians, cautioned that:

"as the visibility and the importance of the private health care industry grows, public confidence in the medical profession will depend on the public's perception of the doctor as an honest, disinterested trustee. That confidence is bound to be shaken by a financial association between the practicing physicians and the new medical-industrial complex."

In recent years, as physicians' investment in entities to which they make referrals have proliferated, these arrangements have come under increasing scrutiny by critics and legislators because of issues raised by apparent conflicts of interest. Until recently, the existing anti-kickback laws (federal and state) which prohibit payment for referrals provided the only mechanism for controlling abuse with respect to the provision of services in joint venture facilities by physician investors. The federal anti-kickback authority, commonly referred to as the "fraud and abuse" laws apply to services reimbursed under the Medicare or Medicaid programs only. Most states have anti-kickback laws similar to the Federal statute which apply to all payer groups.

In 1987, Congress strengthened the Federal anti-kickback statute by authorizing the Office of the Inspector General (OIG), U.S. Department of Health and Human Services (HHS) to exclude from the Medicare program anyone who violates the anti-kickback statute, and by requiring the HHS Secretary to develop regulations specifying what type of arrangements would not be subject to prosecution under the anti-kickback laws (i.e., "Safe Harbors").

On July 29, 1991, OIG issued the long awaited final "Safe Harbor" regulations to serve as a guide to complying with the federal anti-kickback laws.

Critics contend that existing anti-kickback laws are not effective in curbing fraud and abuse in the health care sector. Representative Pete Stark from California is a strong proponent of legislation to protect consumers from the abuses of joint ventures. In 1989, Congress enacted legislation sponsored by Representative Stark that provided a departure from reliance on the anti-kickback laws by prohibiting physicians from referring their Medicare patients to clinical laboratories where they have financial arrangements. At the state level, increasing number of states have acted to require disclosure of financial interest to patients. The state of Michigan forbids practitioners from "directing or requiring" patients to receive services in a facility in which they have a financial interest. Earlier this year, the state of New Jersey enacted a law which after the effective date of the law, prohibits referral of patients to any facility in which the practitioner acquires a financial interest. Additional federal and state initiatives are being contemplated in the near future.

The Florida study verifies the conclusions of earlier studies and anecdotal evidence that physician ownership of health care businesses is a common occurrence and that such arrangements result in higher utilization and higher charges in some facility types. The study is based on survey data of 2,200 health care providers with response rate of 82.4 percent in eleven different entity types. Nearly 30 percent of all the responding facilities reported they were either owned entirely by physicians or by physicians in combination with other health care professionals or professional association. At least 40 percent of physicians involved in direct patient care in Florida are owners of joint venture health care facilities to which they may refer their patients for diagnosis and/or treatment. Joint venture arrangements are significantly more common among certain types of facilities such as diagnostic imaging centers in which 93 percent of the facilities surveyed reported ownership by physicians. In contrast only five percent of the responding hospitals reported ownership by physicians. For three types of entities, i.e., clinical laboratories, diagnostic imaging centers, and physical therapy/rehabilitation centers, the results clearly indicated that joint ventures ownership had negative impacts on either access, costs, charges or utilization. Contrary to the claim of the proponents of joint ventures, the study also concluded that joint ventures do not increase access to rural or underserved indigent patients.

Chapter II of this volume reviews a survey that was conducted on a random sample of Florida physicians to obtain information on the practice patterns of physicians in joint ventures vs. physicians not involved in joint ventures. This survey did not yield sufficient responses to render statistically valid analysis regarding physician practice patterns. However, the survey did conclude that non-joint venture physicians treat significantly higher proportions of both Medicaid and self-pay (uninsured) patients.

Results of Survey of Florida regulators and regulators across states responsible for the enforcement of the anti-kickback authority regarding the effectiveness of current laws and recommendations for changes in the existing law for regulating joint ventures are covered in Chapter III of this volume. The majority of regulators surveyed felt that joint ventures probably increase costs and utilization and do not increase access or quality. The majority also felt that current regulations of joint ventures was ineffective. Most regulators believe that patients are too vulnerable to make effective use of disclosure requirements. Regulators prefer an ongoing program of data collection and analysis to be used to further refine regulations and to disseminate health care provider data for use in provider selection.

Chapter IV of this volume includes the regulatory options and recommendations. Four basic options are identified; ranging from the most restrictive, prohibiting referrals to facilities in which physicians have ownership, to the least restrictive, relying on data collection and disclosure to control abuse. Board recommended approach is included in this chapter.

## CHAPTER II

### Results of the Physicians' Survey

As part of the study regarding the scope and nature of joint ventures, a physician survey was sent to a random sample of Florida physicians. The survey was specifically designed to obtain information on the practice patterns of physicians not involved in joint ventures and those involved in such arrangements. The survey was designed to be anonymous. However, physicians were asked to fill out a certification form to be mailed back separately, certifying that they had filled out the survey.

#### **Description of the Survey Instrument**

The survey asked that physicians answer all questions based on the nature of their practice in 1989. Thus, physicians who are solo practitioners were asked to fill out the survey based on their solo practice; in contrast, physicians who practice in groups were asked to have the chief physician in the groups fill out the survey based on the entire group.

The first group of questions in the survey focus on demographic characteristics of physicians. These characteristics include location (by HRS district), type of setting in which physicians practice (solo, group, or other), the nature of the group (one vs. many specialties), specialty of the responding physicians, and hours per week the physician practices.

The second group of questions in the survey ask physicians for total procedures, charges, and patients for the following services rendered in the offices of the physician's medical practice: X-ray procedures, magnetic resonance imaging (MRI) services, CAT scan procedures, clinical laboratory procedures, physical therapy procedures, durable medical equipment or goods dispensed, and surgical procedures. In addition, for each of these, physicians were asked to report the total number of patients receiving that procedure in a joint-ventured facility vs. the total number receiving that procedure in a non-joint-ventured facility.

The third group of questions in the survey focus on the payer configuration of physicians' practices. More specifically, these questions ask for the percent of three types of prepaid patients (IPA, PPO, HMO), total number of patients, and percent of payer class across all payers (for a total of 100 percent). In addition, physicians were asked to what extent they discounted full charges and the percent of time spent providing services without charge.

The fourth group of questions in the survey focus on the characteristics of joint ventures. These include income derived from joint ventures, the extent of equity investment, reasons why physicians chose to become involved in joint ventures, type of joint venture (for example, physical therapy center or diagnostic imaging center), percentage of ownership, number of referrals, and the nature of goods and services provided to physicians through the joint ventures, and from physicians to the joint venture. Questions were also asked regarding whether notice of the joint venture was given to patients, and if so, how.

The final group of questions in the survey related to referrals to and income from financial arrangements (other than ownership interests) with entities to which physicians refer patients. In addition, physicians were asked to indicate the types of goods and services provided as a result of the financial arrangement.

The response rate across survey questions varied widely. Questions with usable responses from more than 50 percent of the respondents are analyzed in this report.

### **Response Rate of the Survey**

Surveys were mailed to 500 physicians who had been identified as joint-ventured physicians through the surveys of entities and to 500 physicians not identified as joint-ventured physicians. (Below, this group is referred to as the comparison group). The sample size was chosen to enable drawing statistically valid conclusions about subsets of physicians by geographic area and specialty. Meaningful analysis of sub-groups by region and specialty type would require 50 percent of the surveys to be returned with complete and internally consistent information.

The overall response rate was 34.7%, with 347 physicians indicating joint-ventured status; many of these responses were incomplete or provided internally inconsistent information. This response rate is based on surveys received before the designated deadline that show an attempt to fill out most of the survey. About 80 additional surveys were received that were not usable at all. Among the 347 surveys that were counted as having been completed, some questions were left blank. For example, questions requesting information about total income, income from joint ventures, total number of referrals for joint-ventured and non-joint ventured services, and equity interest show low response rates.

Of the 347 physicians who indicated whether they were joint-ventured, 158 physicians (45.5 percent) responded that they were joint-ventured, and 189 physicians (54.5 percent) responded that they were not joint-ventured. However, surveys were identifiable as to whether they were mailed to physicians known to be joint-ventured (through information collected in the entity survey discussed in Volumes 1 and 2) or mailed to physicians that had not been identified as joint-venture owners in the entity survey. Because the entity survey did not encompass the population of entities, some proportion of the physicians in the comparison group were expected to be joint-ventured.

Of 165 surveys mailed to physicians who were reported by entities to have been joint-ventured with the entity in 1989, 37 physicians (22 percent) reported non-joint-ventured status and 128 reported joint-ventured status. This difference could be due to several reasons. First, one can reasonably assume that some joint-ventured physicians preferred not to report their joint-ventured status. This preference would not be surprising for two reasons: reporting it would require completing an additional portion of the survey; and information from the survey could potentially result in regulatory constraints on physician activity with regard to joint ventures. A second reason that may have affected lack of reporting joint-ventures is misunderstanding the survey. For example, some physicians who are joint-ventured may not have understood the survey or its definitions. However, the survey was developed with the assistance of the technical advisory panel and the survey research lab at Florida State University so as to be as clear as possible. For example, the instructions clearly stated that

physicians should provide information about their status in 1989. However, some physicians who were joint-ventured in 1989 but have since become non-joint-ventured may have erroneously reported on their current status instead of their 1989 status as required by the survey. Finally, it is possible (but unlikely) that some entities gave erroneous information regarding the identity of owner in 1989.

Of 182 surveys received from the comparison of physicians, 30 physicians reported that they were joint-ventured. As indicated earlier, since the survey of entities did not encompass the population, some joint-ventured physicians could not be properly categorized as to joint-ventured status. Given results that some known joint-ventured physicians did not report their joint-ventured status, it is reasonable to assume that of the 152 physicians who were assumed to be non-joint-ventured and who responded that they were non-joint-ventured, some proportion failed to report their joint-venture. To project the number of physicians expected to be joint-ventured, the number of control-group physicians who reported joint-venture status (30) is multiplied by a factor of 1.289 (one plus the ratio of reported to non-reported joint-ventured physicians-- $37/128=28.9$  percent). The result is the adjusted number of joint-ventured physicians, 38, in the control group who can be presumed to be joint-ventured. Thus, 21.2 percent of the control group is presumably joint-ventured.

As shown in Table 1, overall response rates did not vary significantly between the joint-venture and the comparison group. **Standard survey techniques as suggested by Dillman indicate that the survey method employed here should have produced a 60 percent response rate. The actual response rate is substantially lower than 60 percent in spite of the importance of this survey and the fact that this survey was mandated by the Florida Legislature.**

The percentage of physicians reporting joint-venture ownership arrangements is substantially higher than prior research has shown. However, this proportion is in part due to an oversampling of physicians previously identified as owners of joint ventures. Results reported in Volume II of this study indicate that about 40 percent of office-based direct-care physicians are owners of health care businesses other than their practices. Thus, the oversampling of referring physicians is not as large as had been expected. Further, the 40 percent figure understates the joint-ventured proportion of referring physicians because some types of facilities were not surveyed and because nonresponding entities were found to be more likely to be joint-ventured proportion of referring physicians because some types of facilities were not surveyed and because nonresponding entities were found to be more likely to be joint-ventured than responding entities. Nevertheless, to the extent that oversampling took place, the oversampling provides a clearer picture of the practice characteristics of physicians involved in joint ventures.

Table 1: Physician Responses Regarding Joint-Ventured Status

Surveys Mailed to Known Joint-Ventured Physicians

Reported Joint Venture	128
Did Not Report Joint Venture	37
Total Responses	165 (33%)
No Response	331 (67%)

Surveys Mailed to Presumed Non-Joint-Ventured Physicians

Reported Joint-Venture	30
Reported No Joint Venture	152
Total Responses	182 (36%)
No Response	318 (64%)

<u>Total Reported Joint Ventured Physicians</u>	158 (45.5%)
<u>Total Reported Non-Joint Ventured Physicians</u>	189 (54.5%)

<u>Total Joint Ventured Physicians</u> <u>(Unreported and Reported)</u>	195 (56%)
<u>Total Non-Joint Ventured Physicians</u>	152 (44%)

<u>Total Physicians</u>	347 (100%)
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## **The Nature and Scope of Joint Ventures and Joint-Ventured Physicians: Descriptive Statistics**

Surveys with joint-venture status and specialty indicated were analyzed as to distribution of joint-venture status across specialties (see Table 2). Physicians known to be joint-ventured in 1989 but who reported non-joint-ventured status (37 physicians) are excluded from this analysis. As shown, specialties most likely to be involved in joint ventures include internal medicine (41.4 percent of joint ventured physicians), surgery (18.4 percent), general practice (11.8 percent). In comparing the number of joint-ventured vs. non-joint-ventured physicians across specialties, responding physicians in internal medicine, surgery, neurology, and pathology were more likely to be joint-ventured than non-joint-ventured.

Specialties that were substantially more likely to be non-joint-ventured than joint-ventured included psychiatry and anesthesiology. In the case of anesthesiologists, a substantial proportion of services rendered are ordered by other physicians. Thus, these physicians, as well as pathologists and radiologists, are more likely to perform nondirect, or ancillary, care. However, pathologists are more frequently joint-ventured than not joint-ventured in this sample, indicating that nonreferring physicians also have incentives to joint venture to some extent.

Across 158 physicians reporting joint-ventured status, 263 joint ventures are represented, with 67 physicians being involved in more than one joint venture. The average number of joint ventures per joint-ventured physician is 1.6. Table 3 summarizes information regarding physician specialties with more than one joint venture. Specialties in the sample most frequently having multiple joint ventures include internal medicine, surgery, and general practice.

Table 4 summarizes reported joint ventures by type and physician specialty. A total of 227 joint ventures were identified by type. The most common joint ventures reported in the sample are diagnostic imaging centers, representing 45 percent of total joint ventures identified. Other common categories include clinical laboratories (12 percent), physical therapy and rehabilitation (8 percent) and ambulatory surgical centers (8 percent).

### **Comparing Joint-Ventured and Non-Joint-Ventured Physicians using Tests of Statistical Significance**

Characteristics of joint-ventured and non-joint-ventured physicians were compared using chi-square tests and t-tests using a significance level of .05. For purposes of this part of the analysis, physicians who were known to be joint-ventured in 1989 but who reported as non-joint-ventured physicians are deleted from the sample, since the nature of this discrepancy is unclear. Several statistically significant findings were obtained.

First, the relationship between joint-venture of any type and specialty was statistically significant. In particular, internal medicine, surgery, and neurology were disproportionately likely to be joint-ventured.

Second, the relationship between joint-venture types and specialty was statistically significant. For example, obstetrician/gynecologists and neurologists

Table 2: Responding Physicians by Specialty and Joint-Ventured Status  
(n=300 physicians)

Specialty	Joint-Ventured			Non-Joint Ventured		
	<u>Number</u>	<u>%JV</u>	<u>% Spec</u>	<u>Number</u>	<u>%NJV</u>	<u>%Spec</u>
General Practice	18	11.5	42.9	24	16.7	57.1
Ob/Gyn	9	5.8	47.4	10	6.9	52.6
Internal Medicine	63	40.4	70.8	26	18.1	29.2
Surgery	28	17.9	57.1	21	14.6	42.9
Pediatrics	5	3.2	35.7	9	6.3	64.3
Psychiatry	1	.6	8.3	11	7.6	91.7
Neurology	6	3.8	66.7	3	2.1	33.3
Oncology	3	1.9	50.0	3	2.1	50.0
Radiology*	7	4.5	58.3	5	3.5	41.7
Pathology*	6	3.8	75.0	2	1.4	25.0
Anesthesiology*	2	1.3	15.4	11	7.6	84.6
Ophthalmology	6	3.8	37.5	10	6.9	62.5
Podiatry	1	.6	100.0	0	9.9	0.0
Other	1	.6	10.0	9	6.3	90.0
Total	156	100%	100%	144	100%	100%

Table 3: Number of Joint-Ventures Across Physician Specialties\*

<u>Specialty</u>	<u>Number of Joint-Ventures per Physician</u>				<u>Total</u>	<u>(% with 2 or more joint ventures)</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4-6</u>		
Internal Medicine	35	14**	11	3	63	(42%)
Surgery	16	6	4	2	28	(18%)
General Practice	8	8	1	1	18	(15%)
Neurology	3	1	0	3	7	(6%)
Pediatrics	1	4	0	0	5	(6%)
Radiology	6	1	1	0	8	(3%)
Pathology	3	1	2	0	6	(4%)
Ob/Gyn	8	1	0	0	9	(1.5%)
Psychiatry	0	1	0	0	1	(1.5%)
Oncology	3	1	0	0	4	(1.5%)
Ophthalmology	5	0	0	1	6	(1.5%)
Anesthesiology	2	0	0	0	2	(0.0%)
Podiatry	1	0	0	0	1	(0.0%)
Other	1	0	0	0	1	(0.0%)
<b>Total</b>	<b>92</b>	<b>38</b>	<b>19</b>	<b>10</b>	<b>159</b>	<b>100%</b>

\*Some responses indicated number of joint ventures but not specialty. These could not be included in this table.

\*\*For example, 14 physicians practicing in internal medicine reported being involved in two joint-ventures.

**Table 4: Joint-Ventures by Type and Physicians Specialty  
(n=228 joint-ventures)\***

<u>Joint Venture Type</u>	<u>Number and % of Joint Ventures</u>	<u>Top Three Specialties (%)</u>
Diagnostic Imaging/ Diagnostic Lab	102 (45%)	Internal Medicine (38.2%) Surgery (18.6%) General Practice (7.8%) Neurology (7.8%)
Clinical Laboratory/Lab	28 (12%)	General Practice (22.2%) Internal Medicine (51.9%) Neurology (11.1%)
Ambulatory Surgical Center	18 (8%)	Surgery (27.8%) Ophthalmology (27.8%) Ob/Gyn (16.7%)
Physical Therapy	19 (8%)	Surgery (42.1%) Internal Medicine (26.3%) Neurology (21.2%)
Durable Medical Equipment	9 (4%)	Internal Medicine (33.3%) Surgery (33.3%) General Practice (22.2%)
Home Health Care	12 (5%)	Internal Medicine (41.7%) Surgery (33.3%) Neurology (16.7%)
Radiology Center	8 (3.5%)	Internal Medicine (62.5%) General Practice (12.5%) Neurology (12.5%) Oncology (12.5%)
Hospital	9 (4%)	Internal Medicine (33.3%) Radiologist (11.1%) Pathologist (11.1%) Anesthesiologist (11.1%) General Practice (11.1%) Ob/Gyn (11.1%) Surgery (11.1%)
Stone Center	8 (3.5%)	Internal Medicine (87.5%) General Practice (12.5%)

\*15 additional joint ventures fell into an "other" category.

were disproportionately likely to invest in diagnostic laboratories. Internists were disproportionately likely to invest in clinical laboratories. Surgeons were disproportionately likely to invest in ambulatory surgical centers, physical therapy and rehabilitation centers, durable medical equipment, and home health care centers.

Third, the relationship between joint-venture status and referring status was also statistically significant. Specifically, physicians who are likely to refer patients to outpatient ancillary services are significantly more likely to be involved in joint ventures than other physicians. Physician specialties classified as nonreferring include pathologists, radiologists, anesthesiologists, and psychiatrists. The first three specialties often provide indirect care -- care ordered by other physicians. Psychiatrists are unlikely to use ancillary services represented in this sample.

Fourth, non-joint venture physicians were significantly more likely to report serving higher proportions of Medicaid patients than joint-venture physicians.

Fifth, the relationship between joint-venture status and urbanization is also statistically significant. In particular, joint-ventured physicians are disproportionately likely to reside in the most heavily populated areas (Districts 5, 7, 10, and 11).

Finally, joint-ventured physicians were more likely to report working full-time than non-joint-ventured physicians. In addition, joint venture physicians were more likely to report working in group practices than in solo practices.

### **Specific Business Arrangements between Joint-Ventured Physicians and their Joint-Ventures**

The last part of the survey was designed to be specific as to each joint venture rather than each joint-ventured physician. This allowed for physicians who were joint-ventured with more than one entity to report information for each entity. Therefore, observations in this section are reported on the basis of joint ventures rather than physicians.

For 190 responding joint ventures, 112 (59 percent) joint ventures had received goods, services, or compensation from the joint-ventured entity. Out of 110 responses, 76 (70 percent) indicated that the business agreed to share profits with the joint-ventured physician or his or her medical group practice.

Finally, physicians were asked whether notice was given to patients regarding the joint-ventured status of the business to which patients were referred. Out of 168 responses across joint ventures, 93 (55 percent) answered affirmatively. Eighty (80) respondees answered other questions about how notice was given. Fifteen percent of respondees indicated that notice was given through a written letter. Seventy-one percent indicated that notice was given verbally.

Table six shows that the results in this Chapter represent responses from all geographic areas of the state.

Now attention is turned to results of the regulator surveys.

**Table 5: Differences in Reported Proportions of Patients across Payers,  
Non-joint ventured vs. Joint-ventured Physicians**

<b>Payer</b>	<b>NJV Avg %</b>	<b>JV Avg %</b>	<b>T-Value</b>	<b>(Significance)*</b>
Medicare	41.5	46.0	-1.39	(.16)
Medicaid	14.1	8.4	2.07	(.04)
HMO/PPO	17.1	18.7	-.54	(.59)
Traditional	24.2	23.4	.26	(.79)
Self-Pay	21.6	15.7	1.91	(.06)
Other, including Contract Work	11.7	9.7	.64	(.52)
Bad Debt/Charity	15.7	14.6	.37	(.71)

\* This test calculates the sample means for non-joint-ventured and joint-ventured physicians and tests the significance of the difference between the means.

Table 6: Responses across Areas of Florida\*

Area**	Joint Venture	Non-Joint Venture	Total (%)
Area 1 - North Florida	8	38	46 (16.9%)
Area 2 - Western Peninsula	59	36	95 (34.9%)
Area 3 - Central and Eastern	29	27	56 (20.6%)
Area 4 - Southeast	39	36	75 (27.6%)

\*Physicians who were known to have a joint venture but who responded otherwise were not included in these calculations.

\*\*Area 1 consists of HRS Districts 1, 2, 3, and 4.

Area 2 consists of HRS Districts 5, 6, and 8.

Area 3 consists of HRS Districts 7 and 9.

Area 4 consists of HRS Districts 10 and 11.

## CHAPTER III

### Results of the Survey of Regulators

#### States' Regulators

Regulators across various states were surveyed regarding the characteristics and effectiveness of current state laws related to financial arrangements between physicians and health care businesses, perceptions regarding the current level and effects of joint ventures, and recommendations regarding changes in their state's law. The survey was conducted by telephone in May 1991 prior to the release of the Joint Ventures Volume II report. However, surveyees who indicated a preference for filling out the survey themselves were accommodated.

#### **Description of the Survey Instrument**

The survey was designed to obtain information from state regulators regarding three primary topics: the nature and effect of current law; the nature and effects of joint ventures on health care costs, access, and quality, and recommendations regarding change or no change.

The first set of questions in the survey focus on characteristics of those being surveyed. Characteristics include type of expertise (legal or administrative), length of time in current regulatory position, and self-ranking of one's own understanding related state law. The next set of questions focus on the nature, enforcement, and effectiveness of current law. The final set of questions are opinion questions relating to the perceived effects of joint ventures and how joint ventures should be regulated, if at all.

For opinion questions, regulators could select one of five categories: definitely, probably, no opinion, probably not, and definitely not. Regulators were asked to answer all questions on the basis of their experiences and perceptions formed while regulating joint ventures.

#### **Regulators Who Were Surveyed**

Fifty-one regulators were surveyed across states. Two types of regulators were surveyed: representatives of states' medical licensing boards and representatives of states' Medicaid Fraud Control Units. For states' licensure boards, the executive director was appraised of the nature of the survey and then asked who would be the most knowledgeable person in that organization to answer the survey questions. Occasionally, these entities would defer to another individual in a different entity who had more expertise in the area. Thirty of those interviewed were attorneys, twenty were administrators, and one was a physician. (Altogether, eleven regulators were interviewed in Florida. However, for purposes of the analysis across states, only the Florida Medicaid Fraud Control Unit and the state Department of Professional Regulation were included to ensure equal representation of Florida.) Altogether, 36 states are represented in the survey. States not included declined to participate or failed to respond.

The majority (59 percent) of regulators surveyed have been in their current positions for more than five years. Thirty-three percent have been in their current positions for between one and five years. Forty-nine (96 percent) of those surveyed rated their understanding of state law as excellent or moderate.

## **Characteristics of States Surveyed**

Characteristics of states are also included in the analysis to measure the effect of urbanization and patient vulnerability on the likelihood that states have regulation of joint ventures in place and the likelihood that regulators recommend increased stringency of regulation and the likelihood that regulators see the effects of joint ventures as positive or negative. Two measures of urbanization were obtained: persons per square mile and the percent of the population residing in metropolitan areas (defined as contiguous urban areas with 50,000 or more people). Two measures of patient vulnerability were obtained: percent of the population age 65 and over and the state's mortality rate (number of deaths per thousand). The number of persons per square mile range in the sample from 1 to 1027. The percent of metropolitan population ranges in the sample from 19 to 100 percent. The percent of older persons ranges from four percent to 18 percent. The mortality rate ranges from 4.1 to 10.7 deaths per thousand population.

## **Current State Law**

Regulators were asked to describe state law relative to four types of regulation: 1) laws not allowing providers to have ownership interests in any types of entities; 2) laws not allowing providers to refer patients to partially owned entities; 3) laws requiring disclosure to patients of ownership interests; and 4) laws regarding split fees and kickbacks.

**Ownership.** Only two states reported ownership constraints on certain providers. These states, Utah and Massachusetts, do not allow providers to be part owners of pharmacies. Both states felt that this provision is very effective in preventing the situations it is designed to prevent. One state had a proactive monitoring mechanism, while the other state had a passive monitoring mechanism.

**Referral to Owned Entities.** Only two states reported having a constraint on referrals to owned entities: Virginia and Michigan. In Michigan, the conclusion of a recent court case was that physicians may send patients if they disclose ownership. Thus, the effect of current law is unclear in Michigan. The Michigan regulator saw this law as somewhat effective, while the Virginia regulator saw this law as ineffective. Both states enforce the law passively through complaints rather than proactively.

**Disclosure for Referrals to Owned Entities.** Twelve states reported laws requiring disclosure to owned entities. In addition, Massachusetts reported that disclosure is required for physicians who are part owners in physical therapy entities. Eight regulators reported that this law is at least somewhat effective, while five regulators reported the law to be somewhat ineffective.

**Financial Remuneration for Referrals.** Twenty-one states reported having laws prohibiting any financial remuneration for referrals, including split-fees and kickbacks. Most states monitor the law passively through complaints. Only nine regulators felt that this law is at least somewhat effective. Many regulators complained that this law is difficult if not impossible to enforce.

## **Relationships between Current Regulation, Urbanization, and Patient Vulnerability**

Statistical chi-square tests were used to measure any relationship between states' configuration of current regulation and the level of urbanization in a state. States with higher levels of urbanization are significantly more likely to have more types of regulation.(1) In addition, states with more persons per square mile are significantly more likely to regulate joint ventures in some way. Tests were also conducted to see if the type of current regulation is related to percent of persons age 65 and over or the state mortality rate. These tests showed an insignificant relationship between these variables.

## **Regulators Perceptions Regarding the Effects of Joint Ventures on Health Care Costs, Utilization, Access, and Quality**

Twenty-seven regulators (53 percent) felt that joint ventures either definitely or probably increase health care costs in their state. Seven (14 percent) felt that joint ventures probably or definitely do not cause costs to increase. The remaining regulators expressed no opinion.

Thirty-three regulators (69 percent) said that joint ventures either definitely or probably increase unnecessary utilization of health care services. Seven regulators (14 percent) said that joint ventures probably or definitely do not cause costs to increase. The remaining regulators expressed no opinion.

Twenty-two regulators (43 percent) said that joint ventures probably do not affect access to care. Nine regulators (18 percent) said that joint ventures probably do affect access to care. The remaining regulators expressed no opinion.

Finally, 28 regulators (55 percent) said that joint ventures probably or definitely do not affect the quality of care. Ten regulators said that joint ventures probably do affect the quality of care. The remaining regulators expressed no opinion.

## **Relationship between Perceptions of the Effects of Joint Ventures, Urbanization, and Patient Vulnerability**

Chi-square tests show that regulators in states with higher mortality rates are significantly more likely to believe joint ventures between physicians and health care businesses cause costs to increase. Regulators in states with more urbanization (measured by percent of the population in metropolitan areas) are significantly more likely to believe that joint ventures increase unnecessary utilization of healthcare. Finally, regulators in more urbanized states are significantly more likely to believe that joint ventures do not affect the quality of care.

## **Regulators Recommendations regarding Regulation**

The majority of regulators (73 percent) said it is important for their state to have laws regulating joint ventures. The preferred (62 percent)

method of regulation was collecting charges and utilization data for joint-ventured vs. non-joint-ventured entities and using the data to determine appropriate regulation. The same number of regulators recommended collecting similar data related to physicians who entirely own their own diagnostic imaging equipment.

The second most preferred (57 percent) method of regulation was disclosure of ownership to patients. However, 53 percent of regulators said that patients are probably too vulnerable either physically or psychologically to make effective use of such information.

### **Relationship between Regulatory Recommendations, Urbanization, and Patient Vulnerability**

Results of chi-square tests show that regulators in urban states were significantly more likely than regulators in relatively rural states to recommend regulating joint ventures in some way. In addition, regulators in states with higher proportions of older persons were significantly more likely to recommend regulation. Also, regulators in states with higher mortality rates were significantly more likely to recommend regulation of joint ventures. In addition, regulators in states with higher mortality rates were significantly more likely to perceive patients as too vulnerable to make effective use of disclosed ownership information.

### **Florida Regulators**

#### **Florida Regulators Who Were Surveyed**

Eleven Florida regulators were surveyed. Surveyees include representatives of the Medical Prosecution and Medical Investigation sections of the Department of Professional Regulation, the HRS Office of Licensure and Certification (including the Clinical Laboratory Section, the Nursing Home Section, and the Hospital Section), the Medicaid Fraud Control Unit in the Auditor General's Office, and the criminal investigation unit for Medicare.

#### **Current Florida Law**

The selection of regulators surveyed reflects the nature of Florida law, which encompasses a diversity of provisions and enforcing agents. Under Florida's anti-kickback statutes, no person may pay or receive any commission, bonus, kickback, or rebate or engage in any split-fee arrangements with any physician, organization, agency, or person, for patients referred to providers of healthcare goods and services, including hospitals, nursing homes, clinical laboratories, ambulatory surgical centers and pharmacies. Florida's anti-kickback statutes apply to private, state, and federal providers

Florida law also requires that physicians having an equity interest in excess of 10 percent disclose that ownership to patients (Section 458.327, Florida Statutes). The physician must also notify the patient of his or her right to obtain services at the location of the patient's choice. Exceptions to the law include ownership of registered securities traded on a national

exchange, a physician's own practice when the service is provided solely for the physician's own patients and is provided by or under the supervision of the physician, and ownership in real property resulting in a landlord-tenant relationship between the physician and the entity in which the equity interest is held. However, in the latter situation, rent cannot be determined by business volume. This disclosure law is enforced by the Department of Professional Regulation and the appropriate licensing boards, either of which can take disciplinary action as prescribed by rule.

Florida law also requires practitioners licensed under Chapters 458 (Medical Practice), 459 (Osteopathy), 460 (Chiropractic), 461 (Podiatry), or 466 (Dentistry), Florida Statutes, to disclose any financial interest in writing to patients referred to joint ventures involving physical therapy or the provision of medicinal drugs (Section 455.25, Florida Statutes). Violation of this law is a misdemeanor of the first degree. This law is enforced by the Florida Department of Professional Regulation and the appropriate professional licensing boards.

### **Characteristics of Those Surveyed**

Seven administrators and four attorneys were surveyed. Seven regulators have been in their current regulatory position for more than 5 years; four regulators have been in their positions between one and five years. Nine regulators ranked their own knowledge and understanding of Florida state law related to joint ventures as moderate. Two regulators ranked their knowledge as poor. No regulators ranked their knowledge of Florida law as excellent.

### **Results of the Survey**

**Effects of Joint Ventures.** The majority of regulators felt that joint ventures probably or definitely contribute to increases in health care costs in the state and to overutilization. The majority also felt that joint ventures on balance probably do not increase overall access to health care; rather, most regulators felt that joint ventures are primarily constituted for profit motives rather than access motive. Regulators also agreed that, on balance, joint ventures probably do not contribute to quality of care and probably do not increase the level of market competition (defined as price competition). A few regulators stated that while they were willing to state opinions in terms of probabilities, **additional data need to be collected to further analyze costs, utilization, and access.**

**Adequacy of current regulation.** Most regulators described Florida disclosure law as not very effective or ineffective. Several regulators stated that they were uncertain as to the effect of this law because it has not been in force long enough. Nine of eleven regulators stated that the major problem with the disclosure law is that patients are generally too vulnerable to make effective use of disclosed information, especially patients in Florida. Patient Vulnerability was defined by regulators as being sick, being elderly, having little time, or having little information about the purpose of disclosure.

Some regulators also said a major problem with disclosure is that of psychological vulnerability in that the inherent relationship between patients and physicians means that patients probably would not choose to do something other than what their physician recommends. This problem is exacerbated by the degree to which patients are physically vulnerable.

Two regulators stated that the disclosure law is both poorly enforced and not easily enforceable. Only one regulator reported known violations (but no prosecutions) of this law.

Regarding Florida's anti-kickback law, eight of 11 regulators felt that this law is not very enforceable, for two reasons. First, many types of sophisticated arrangements are difficult to detect even through a proactive (vs. reactive) enforcement technique, which Florida does not have. Second, the terms used in the law are difficult to define in a legal sense.

**Some regulators stated that the effectiveness of the kickback law could not be adequately assessed until additional data have been collected and analyzed.** Some regulators indicated that an entity such as the Health Care Cost Containment Board could collect charge and utilization information across joint-ventured vs. non-joint-ventured providers. After data were collected and analyzed, the board could disseminate such information to consumers and/or recommend additional regulation based on the results of the data analyses. The major feeling among regulators was that the benefits of such data collection would probably outweigh the costs, given the perceptions of the number and effects of joint-ventures in Florida. Seven regulators reported that there have been known violations and some prosecutions associated with this law.

#### **Recommendations regarding changes in regulation.**

All of the regulators surveyed felt that it is important to regulate joint ventures in some way in Florida. **The most preferred method of regulation was data collection and analysis.** Regulators said that this method could provide the data needed to analyze related cost, utilization, and access issues and thereby further refine regulation. The majority of regulators also felt that Florida should probably require disclosure of joint venture ownership to a panel of financial experts, which could then determine the effects and/or legitimacy of the joint venture. Most regulators also stated that disclosure to experts should also be required of physicians that entirely own their own ancillary services. Some of these regulators cited recent published empirical research as the basis for this observation.

Regarding disclosure to patients, six regulators approved of such disclosure, but nevertheless stated that patients may be too vulnerable to make effective use of information. The majority of regulators disapproved of forbidding physicians from having ownership interests in health care related businesses. No consensus emerged regarding other methods of regulation.

The majority of regulators indicated that Florida is probably one of the states with high levels of abuse related to joint ventures. However, several regulators felt that this problem is much more dominant in urban areas and in south Florida. Several regulators stated that from their vantage point, the number of joint ventures is growing.

### **Other Comments of Regulators**

One regulator in the HRS Office of Licensure and Certification stated that current information regarding who owns facilities has been collected but not computerized. This regulator recommended putting this information on a computer. In addition, this regulator felt that the public should be educated, perhaps through entities such as the HCCB, regarding the significance of disclosure laws in their decision making. Finally, this regulator recommended collecting charge information for joint-ventured and non-joint-ventured physicians and disseminating it in brochure form to the public, similar to the process currently in place for hospital charges.

Another regulator stated that disclosure to patients could be more effective if it were two-pronged. First, patients should be told about ownership interests. Second, patients should be told that there are other alternatives in the community and that they may go anywhere they want. Patients could also be offered assistance in choosing an alternative site if the patient so desires.

One regulator felt that the two types of joint ventures that are most problematic are diagnostic imaging centers and physical therapy centers.

### **Footnotes**

<sup>1</sup> Persons per square mile by state was obtained from the Population Reference Bureau's United States Population Data Sheet, Washington D.C., August 1988. Percent of population residing in metropolitan areas was obtained from 1988 U.S. Statistical Abstract.

<sup>2</sup> The mortality rate and the proportion of the population age 65 and over were obtained from the Population Reference Bureau's United States Population Data Sheet, August 1988.

## CHAPTER IV

### Study Options/Recommendations

#### Assessment of Florida Anti-kickback and Disclosure Laws

Most Florida regulators surveyed believe that the existing anti-kickback authority in Section 395.0158, Florida Statutes, and other Florida health care professional regulation statutes is difficult to enforce or poorly enforced. It is perceived that the existing law is not effective in regulating joint ventures for two reasons. First, Florida's enforcement approach is reactive (as opposed to proactive). Second, many types of joint venture arrangements are difficult to identify even with proactive enforcement. Third, the anti-kickback law uses broad terms which are difficult to define in a legal sense. Further, regulatory agencies do not have a clear idea of their territory or rights with respect to the enforcement of the anti-kickback authority. There have been few known violations or prosecutions associated with this law.

The current Florida disclosure requirement contained in Section 455.25, Florida Statutes, is also considered inadequate. The law is both poorly enforced and is difficult to enforce. Most of the Florida regulators surveyed believe that the major problem with the disclosure law is that the patients are generally too vulnerable to make effective use of disclosed information. Further, the Florida law does not specify what form the disclosure must take. As a result, the nature of disclosure provided may bias patients in favor of the physician's joint venture. Also, the Florida law lacks the requirement that the disclosure statement must indicate that the patient is free to choose a different provider and must identify a specific convenient alternative in the community. Disclosure requirements of such specific nature will be necessary to assure effectiveness of disclosure. Finally, Florida's general disclosure requirement applies only when the referring physician has an equity interest of 10 percent or more and, therefore, some significant financial interests of many practitioners are unaffected by the existing law.

The results of the regulator survey and physician survey tend to reinforce the findings of the facility surveys in Volume II. The regulators indicate that Florida has a high level of abuse related to joint ventures. The physician survey found that physicians invest in facilities to which they refer patients.

Regulators tend to favor disclosure as a mechanism for curbing abuse in joint ventures. However, they feel that patients may be too vulnerable to make effective use of the information. The physicians who responded to the survey indicate that disclosure of financial interest is not consistent. Fifty-five percent of the physicians involved in joint ventures disclose financial interest; however, only 15 percent of them disclose in writing. The majority of regulators felt disclosure should be to a panel of experts who could evaluate the joint venture arrangement.

There is a general consensus that joint ventures should be regulated in some way. The preferred method of regulation by Florida regulators is data collection and analysis. Once the data are collected on cost, utilization, and quality, this information can be used to refine regulations and statutes.

## Proposals for Regulation

This study has found that a need for further regulation of joint ventures exists. (A ban on ownership is not considered an option in this report.) Three basic types of options are apparent. One option is to restrict referrals. A second option is to strengthen anti-kickback requirements; the model that is selected for this option is the Federal regulations regarding "Safe Harbors". A third option is to strengthen disclosure requirements as has been recommended by the American Medical Association (AMA). These options, or combinations of options, are presented in four proposals. Either of the four proposals would help protect consumers. However, the Board is of the opinion that proposal 2 would be the most effective. The proposals are presented from the most restrictive to the least restrictive:

Proposal 1. **Prohibit physicians from referring patients to ANY entity providing health care goods or services in which they have a financial interest.** This option has precedent in the recently enacted New Jersey law which prohibits referral of patients to a health care service in which the practitioner has a financial interest. This option may not be justified for facility types where study results indicate that joint venture arrangements had little or no effect. It may also not be justified for facility types where study results are inconclusive.

This option may have some unintended consequences such as redirecting provision of services back into physicians' offices. Issues similar to joint ventures are associated with office based provision of services. A practitioner who provides office based ancillary services has the potential for overutilizing these services through "self-referral" the same as a physician who participates in an outside joint venture facility. The provision of office based services raise questions of quality control. In the case of an outside facility, there is at least the expectation that the quality is assured through state licensing requirements.

Such a blanket restriction may have a deleterious effect on competition and the provision of certain types of services. This option may also have a negative influence on the availability of services in certain instances. However, these issues could be resolved by providing exceptions to meet a legitimate community need. For example, New Jersey law contains exceptions for radiation therapy pursuant to an oncological protocol, lithotripsy and dialysis; and the Federal "Stark" legislation provides exception for a sole rural provider.

Problems of cross-referrals may also be encountered with this option. This restriction may be difficult to enforce since information on ownership of health entities is not currently reported to the state. In case of entities with complex indirect ownership arrangements, potential for avoiding the restriction is evident.

**Proposal 2. Combination of selected prohibition on referrals, strengthened anti-kickback requirements and strengthened disclosure requirements.**

- a. **Prohibit physician owners from referring patients to those facility types that have been identified as problematic, i.e., clinical laboratories, diagnostic imaging centers, physical therapy/rehabilitation centers and radiation therapy centers.** This restriction is justified by results of the impact analyses presented in Volume II report and the public testimony regarding the effects of joint ventures in Florida. It has precedent in the (Federal) Stark prohibition for referral of services for clinical laboratories for Medicare beneficiaries. Most of the issues mentioned in proposal one and exceptions to restrictions that may have a deleterious effect on competition also apply to this option. In addition to the problems of cross-referrals that may be encountered with this option, this restriction may also have the unintended effect of redirecting physician investments into unrestricted facility areas.

The exceptions to referral prohibitions contained in the Federal "Stark" legislation (Appendix V) should be incorporated as they may be applicable to the provision of services in Florida. These include:

1. MD services provided by, or under supervision of, another MD in the same medical group practice (S1861(q)services).
2. In-office services, but only if:
  - a. the services are furnished by the referring MD, another MD in the group, or a supervised employee of the MD or group;
  - b. the services are performed in the same building in which either the referring or another MD or another MD in the group provides physician services unrelated to services, or for group's only, another building of the group used for centralized provision of the group's services;
  - c. the services are billed by the MD performing or supervising the service, by a group of which the MD is a member, or by an entity which is wholly owned by the MD or group; and
  - d. the ownership interest meets any other requirements which the Secretary may impose by regulation.

3. Prepaid plans including Section 1876 risk contractors, S1833(a)(1)(A) entities, and prepayment demonstration projects.
  4. Publicly traded corporate securities on NYSE, ASE or NASDAQ with assets over \$100 million, which were purchased on terms generally available to the public.
  5. Services provided in a rural area, as defined by S1886(d)(2)(D).
  6. Services provided by a hospital if the referring MD is on staff, and the ownership is in the hospital itself.
- b. **Improve effectiveness of disclosure requirements contained in Section 455.25, Florida Statutes, by repealing Section 458.327(2)(c), Florida Statutes, and requiring specific and full disclosure of any financial interest in any entity providing health care goods and services; the disclosure statement to clarify that the patient is free to choose a different provider and to require identification of a specific convenient alternative in the community.**

Any disclosure requirement will be difficult to enforce without a meaningful public education program. Such a program will require collecting financial and patient encounter data from all health care providers for public dissemination and use in provider selection.

- c. **Strengthen enforcement of anti-kickback authority (contained in Section 395.0185, Florida Statutes and other health care professional regulation statutes) through legislation that incorporates AMA's requirements for ethical practice using operational standards as set in the Federal safe harbor on "investment interest".**

The AMA's "Statement of the Council on Ethical and Judicial Affairs", makes the following points regarding investments in facilities (Appendix III):

"Physicians need to know that although investment in facilities to which they refer patients has not been viewed to date as unethical, several important requirements must be met. Among these are: (a) disclosure and an opportunity for the patient to go elsewhere, with a specific, alternative facility identified; (b) financial return that is commensurate with the capital risk taken; (c) no tying of investment return to volume of referrals; (d) objective utilization review, and (e) as with any service provided by physicians, the measure of appropriate utilization and price is not what the market will bear but what is reasonable and necessary given the physician's position of special trust."

The Federal anti-kickback "safe harbor" regulations (Appendix IV) should be adopted to operationalize the AMA objectives. As the OIG's response to the conflict of interest issues concerning referral by physicians to entities in which they have a financial stake, the regulations provide a "safe harbor" pertaining to investment interests in both large, publicly traded companies and smaller entities such as limited partnerships, subject to the satisfaction of certain requirements as follows:

**For Publicly Traded Companies:**

- o The company has assets of at least \$50 million.
- o The entity's equity securities are registered with the Securities and Exchange Commission.
- o The investor receives his interest on terms equally available to the public through trading on a registered national securities exchange.
- o The company may not market its products or services to persons who are in a position to use the company's services or refer patients or other business to the company differently than it does to persons who are not in a position to refer business.
- o The company must not loan funds to or guarantee a loan for an investor who is in a position to use the company's services or refer patients or other business to the company.
- o The return on the investor's investment in the company must be directly proportional to the amount of his capital investment.

**For smaller entities, among other things:**

- o No more than 40% of the entity is controlled by physicians or others in a position to refer business.
- o No more than 40% of the gross revenue of the entity may come from referrals or business generated from investors.
- o There is no requirement for the investors to make referrals.
- o The terms offered bear no relation to the volume of expected referrals from investors.

**Proposal 3. Combination approach to strengthen disclosure and anti-kickback laws.**

- a. **Improve effectiveness of disclosure requirements contained in Section 455.25, Florida Statutes, by repealing Section 458.327(2)(c), Florida Statutes, and requiring specific and full disclosure of any financial interest in any entity providing health care goods and services; the disclosure statement to clarify that the patient is free to choose a different provider and to require identification of a specific convenient alternative in the community.**
- b. **Strengthen enforcement of anti-kickback authority (contained in Section 395.0185, Florida Statutes and other health care professional regulation statutes) through legislation that incorporates AMA's requirements for ethical practice using operational standards as set in the Federal safe harbor on "investment interest".**

- Proposal 4. **Improve effectiveness of disclosure requirements contained in Section 455.25, Florida Statutes, by repealing Section 458.327(2)(c), Florida Statutes, and requiring specific and full disclosure of any financial interest in any entity providing health care goods and services; the disclosure statement to clarify that the patient is free to choose a different provider and to identify a specific convenient alternative in the community.**

**BOARD RECOMMENDS PROPOSAL 2 BASED ON FINDINGS IN VOLUME I, II and III as well as the public testimony regarding the effects of joint ventures in Florida. While other combinations are possible, the recommendations in proposal II derive from the findings in this report.**

In addition, the Board recommends that the following provisions be implemented concurrently. These conditions are necessary for any of the proposals to be successful:

1. **Institute licensing requirements for all ancillary services with licensing requirements to include a quality assessment component. Of the facility types surveyed and analyzed, diagnostic equipment centers, physical therapy centers and durable medical equipment suppliers are not currently required to be licensed by the state. These facilities are operating without minimum levels of regulation that is exercised through licensing procedures. These ancillary services provided in physicians' offices are not subject to the state licensing requirements.**
2. **Require information on direct and indirect ownership of health businesses as part of the state licensing requirements with specific identification of health practitioner owners. This information will be necessary for enforcing any restrictions on referrals for services to joint venture facilities.**
3. **Specifically authorize HCCB under Chapter 407, Florida Statutes, to collect financial and patient encounter data from all health care facilities for public dissemination and use in provider selection. Health care providers should be assessed to support this effort specifically. This data collection effort will facilitate effective use and enforcement of disclosure requirements, and will allow further evaluations of impacts of joint ventures especially in facility areas where the study results are inclusive.**

## Other Issues

Finally, during the course of this study, several areas of concern were identified that are relative to the provision of health care services in joint venture arrangements. These are outlined below:

1. The study identified two areas of concern relating to Florida law regulating clinical laboratories. First, Section 483.245 Florida Statutes, prohibits substantial mark-ups by physicians to bills for services provided by an independent laboratory. The HRS rule interpreting this statute, 10D 41.092(2) Florida Administrative Rule, provides that physicians may not add to the price charged a third party for services by an independent laboratory other than the direct cost of handling. Nonetheless, this restriction on mark-ups has not been strictly enforced. It is claimed that the extent to which the mark-up is permissible has not been clearly defined and as a result there has been little enforcement of the statute. Second, there is anecdotal evidence of a widespread practice among Florida physicians of receiving discounts of 45% to 50% on laboratory charges from independent laboratories and then charging the patients the full list price. Many states have eliminated this practice by enacting direct billing laws which require laboratories to directly bill patients of referring physicians.
2. The provision of physical therapy services presents a special dilemma with respect to the effects of joint ventures in Florida. Under Florida law, in order to obtain physical therapy services a patient must be referred by a physician. Thus, physicians in joint ventures with physical therapy facilities not only have a financial interest in facilities to which they can refer patients but they are also in a position to control access to those facilities. Consequently, critics maintain that joint ventures in physical therapy services create a "captive referral system" which inhibits competition by non-joint venture providers. A majority of the states (26) have enacted direct access laws which allow physical therapists to treat patients without a physician's referral.
3. In this study, except for physical therapy services, meaningful results regarding the effects of joint ventures on the quality of services could not be reached. This was due to the limited information available on measures of quality that the facilities agreed to provide at their cost. The facilities maintained that cost to them of providing data on most other measures pertaining to quality was prohibitive. A follow-up study may be required in order to develop meaningful quality indicators. It may be necessary that participation in such a study is made specifically mandatory with absolute penalties associated with non-participation.

APPENDIX I

Study Enabling Legislation  
Chapter 89-354, Section 6, Laws of Florida

Section 6. (1) Definitions.—As used in this section:

(a) “Joint venture” means any ownership or compensation arrangement between persons providing health care.

(b) “Person” means any individual, firm, partnership, corporation, company, association, institution, or joint stock association, and any legal successor thereof.

(c) “Board” means the Health Care Cost Containment Board created by s. 407.01, Florida Statutes.

(2) The board shall conduct a special study, as authorized in s. 407.07, Florida Statutes, of ownership or compensation arrangements between persons providing health care. This study shall include, but not be limited to, the following:

(a) Identification of relationships between persons who provide health care and make referrals for which payment may be made.

(b) Identification of the scope of such arrangements and the means by which persons who provide health care refer patients under such arrangements.

(c) Analysis of the potential of such ownership or compensation to influence referrals by persons who provide health care where inappropriate utilization of health care services may occur.

(d) Evaluation of the impact of such arrangements on access of health care, quality of health care, and costs to the health care system.

(e) Recommendations as may be appropriate on the effectiveness of disclosure requirements contained in s. 455.25, Florida Statutes.

(f) Recommendations to strengthen the enforcement of the antikickback authority in ss. 395.0185, 400.17, 400.176, 458.331(1)(i), 459.015(1)(j) and (k), 461.013(1)(j), 462.14(1)(j), 468.365(1)(q), 468.518(1)(l), 474.214(1)(k), 483.245, and 486.125(1)(f), Florida Statutes, including, but not limited to, the need for an interagency system of coordination, consumer education, and regulation of persons providing health care.

(g) Recommendations for regulation by the state on an interagency system of coordination to regulate the impact of joint ventures on costs of health care, access to health care, and quality of health care, including, but not limited to, the procedural mechanisms for patient referrals between persons providing health care. The recommendations for regulation shall be applicable to both governmental and non-governmental reimbursement of health care services as appropriate.

(3) The study of joint ventures shall be conducted by the board through the use of a special technical assistance panel convened for the purposes of this study. The board shall appoint the panel, and specify the roles and responsibilities of the technical assistance panel in satisfying the provisions of this section. The panel shall have representation from the following groups:

(a) Physicians.

(b) The hospital industry.

(c) Health care purchasers, including the insurance industry.

(d) State agencies responsible for the enforcement of antikickback authority in ss. 395.0185, 400.17, 400.176, 458.331(1)(i), 459.015(1)(j) and (k), 461.013(1)(j), 462.14(1)(j), 468.365(1)(q), 468.518(1)(l), 474.214(1)(k), 483.245, and 486.125(1)(f), Florida Statutes.

(e) Other parties as deemed appropriate by the board.

(4) The board shall complete, by March 15, 1990, an interim report detailing the progress of the study; shall complete, on or before February 1, 1991, the final version of the study, along with specific data-based conclusions on the type of joint ventures and recommendations on the regulations dealing with the enforcement of antikickback authority; and shall provide copies of the interim and final reports to the Legislature and Governor.

(5) There is hereby appropriated from the Health Care Cost Containment Trust Fund \$150,000 to the Board for the purposes of carrying out the provisions of this section.

## APPENDIX II

### STUDY OVERVIEW

Although the literature provides extensive discussions of the pros and cons of joint ventures arrangements, nearly all of the evidence regarding the effects of these ownership arrangements is anecdotal or limited by the scope of the sample used to reach the conclusions. The only available data-based study of this issue was conducted by the U.S. Department of Health and Human Services, Office of the Inspector General (OIG) in 1989. Of the eight states examined, Florida had the highest percentage of physicians involved in joint ventures. The study also reported that Medicare patients of physician owners in Florida received 40 percent more lab tests, 12 percent more diagnostic imaging test, and utilized 16 percent more durable medical equipment than the general population of Medicare beneficiaries.

While the OIG study reveals that joint ventures result in higher utilization of services, the study only examined the utilization of services by Medicare beneficiaries, and therefore offers little insight as to the effects of joint ventures on the general population. The Florida study examined comprehensive data for all payer groups on an extensive range of services and thus presents a more complete picture as to the impact of joint ventures on access, costs, and utilization of health care services in Florida.

#### A. Facility Surveys

Surveys were developed to obtain ownership, financial and utilization data from Florida health care providers. Surveys were mailed to over 3,000 freestanding entities; the types of entities were ambulatory surgical facilities, clinical laboratories, diagnostic imaging centers, durable medical equipment suppliers, home health agencies, hospitals, mental health treatment centers, nursing homes, physical therapy and rehabilitation centers, psychiatric hospitals, and radiation therapy centers. In January of 1991 the Board published Volume I of this study; this volume provided preliminary results on the prevalence and scope and nature of joint venture arrangements among Florida health care providers. Subsequently, follow-up surveys of nonrespondents, surveys of parent corporation owners, and surveys of professional association owners were conducted. Based on results of this additional work the results reported in Volume I were revised; these revisions were reported in Volume II and are summarized below.

The final overall response rate is 82.4 percent representing 2,200 completed survey responses. More than 90 percent of the ambulatory surgical facilities, hospitals, nursing homes, and psychiatric hospitals filed completed surveys. The response rates for clinical laboratories, mental health treatment centers, physical therapy and/or rehabilitation centers, home health agencies, diagnostic imaging centers and radiation therapy centers range between 72 and 85 percent. Only durable medical equipment suppliers had a response rate under 70 percent. The majority of the nonrespondents are concentrated in the southeast peninsula region; about 26 percent (190) of the 713 facilities in this geographic region failed to file a completed survey.

The results on scope and nature of joint ventures show that physician ownership of health care businesses providing diagnostic testing or other ancillary services is quite common in Florida. More than three-fourths of the responding ambulatory surgical facilities and about 93 percent of the diagnostic imaging centers are owned either wholly or in part by physicians. Almost 80 percent of the responding radiation therapy centers, more than 60 percent of the responding clinical laboratories and nearly 40 percent of the responding physical therapy and/or rehabilitation facilities also report physician owners. Furthermore, about 20 percent of the responding durable equipment businesses, as well as close to 13 percent of the home health agencies are owned by physicians.

In contrast, physician ownership of hospitals and nursing homes is less common. Only 5.3 percent (12 of 227) of the acute care hospitals and 12 percent (54 of 450) of the nursing homes have physician owners. Psychiatric hospitals and mental health treatment centers reported no joint ventures arrangements so that impact analyses were not conducted for these two types of entities.

Results indicate that there are at least 10,000 owners of Florida health care entities that are health care professionals or health care entities; over 80 percent of these owners are physicians. The most common types of entities owned by these physicians are diagnostic imaging centers (415), clinical laboratories (16%) and home health agencies (13%).

The impact of joint ventures is evaluated based on survey data of 2,116 health care providers in nine different entity types. The analyses distinguishes between joint venture and non-joint venture facilities and draw conclusions from observed differences between joint venture and non-joint venture facilities. For some types of entities the results indicated that joint venture ownership had little or no impact on access, costs, charges, or utilization of health care for Florida consumers. For other types of entities, the results clearly indicated that joint venture ownership had negative impacts on either access, costs, charges, or utilization. In the remaining types of entities the nature of results was inconclusive; additional data and analysis are required for definitive conclusions.

The results indicated that joint venture ownership arrangements had little or no impact on access, costs, charges, or utilization of health care services for:

- o acute care hospitals;
- o nursing homes.

Results clearly indicated problems in either access, costs, charges, or utilization (or in more than one of these areas) of health care services for:

- o clinical laboratories;
- o diagnostic imaging;
- o physical therapy - rehabilitation centers.

Results indicated that there could be problems or the results did not allow clear conclusions on access, costs, charges, or utilization of health care services for:

- o ambulatory surgical centers;
- o durable medical equipment suppliers;
- o home health agencies;
- o radiation therapy centers.

Other conclusions from this study are that:

- o joint ventures do not increase access to rural or underserved indigent patients;
- o at least 40 percent of physicians involved in direct patient care in Florida are owners of joint venture health care facilities to which they may refer their patients for services. A total of 9,682 physician owners of health care entities were identified.

The term "significant" here means that differences in averages were statistically significant (beyond the 10% level).

**Ambulatory Surgical Centers** were subdivided into multispecialty surgical centers and ophthalmic specialty surgical centers. Multispecialty ambulatory surgical facilities are relatively homogenous with respect to costs, charges, quality and profitability. Some significant differences occurred in access measures; in particular, joint venture multispecialty surgical facilities treat no Medicaid patients. Furthermore, nonjoint venture multispecialty ambulatory surgery centers have significantly higher discounts and contractual adjustment rates than physician owned multispecialty surgery centers. Ambulatory surgery centers specializing in eye surgery are relatively homogenous with respect to access, costs, charges, utilization and profitability. Thus, joint ventures ownership does not appear to significantly influence costs, charges, or profitability of either types of ambulatory surgical facilities. These results, however, represent small sample sizes; further study is needed for definitive conclusions.

**Clinical Laboratories** were subdivided into four groups; effects of joint venture ownership were evaluated in detail for the two basic types of clinical laboratories: 1) labs with courier services, and 2) labs without courier services. Furthermore, some limited comparisons were also made between these labs and labs owned by pathologists. (Specialty labs were not included in the analyses). Nonjoint venture courier service labs generate significantly more revenue from Medicare, Medicaid and self-pay patients than their joint venture counterparts. Nonjoint venture labs without courier services generate a significantly larger share of their revenues from Medicaid, and significantly more revenue from contract work than otherwise similar labs owned by physicians.

Physician owned labs with courier services have significantly higher utilization rates and generate significantly higher revenue per patient than courier service labs without physician owners. Joint venture labs without courier services perform significantly more procedures per patient than otherwise similar nonjoint venture labs.

In sum, the findings indicate that joint venture clinical labs perform more tests per patient and, have higher charges per patient than nonjoint venture labs.

**Diagnostic Imaging Centers** reported that physicians had ownership interests in all but eleven of the responding freestanding imaging centers. Ten of the eleven nonjoint venture imaging centers provide only x-ray services. These results preclude meaningful comparisons of results for joint venture and nonjoint venture Florida imaging centers. Descriptive statistics are reported for specialized and for comprehensive imaging centers. The results show all types of imaging centers (except x-ray services centers) have higher average percent operating income (relative to the risk of that income) than the other facilities examined in this study. This higher percent operating income indicates either disproportionately high net charges or low expenses as a percent of net charges and shows that joint venture imaging centers in Florida are far more profitable than most other types of nonjoint venture Florida health care businesses.

Utilization rates are summarized for joint venture imaging centers MRI scans and CAT scans in Florida counties with joint ventures but utilization comparisons were a problem for imaging centers due to a lack of nonjoint venture facilities in Florida. To overcome this problem, comparisons were made between utilization rates for the Baltimore MSA and utilization rates for three Florida MSA's with similar socioeconomic status characteristics. MRI scans and CAT scans for the three Florida MSAs were found to be higher than utilization rates for the Baltimore MSA. The extent of higher utilization ranged from negligible amounts than utilization rates for Baltimore.

Thus, the limited comparisons for the Florida joint venture imaging centers indicates that the utilization of diagnostic imaging services is higher as a result of joint venture ownership.

**Durable Medical Equipment Suppliers** are diverse in the services provided: this diversity precludes an indepth analysis of the impact of joint ventures on this industry. Meaningful per unit comparisons of utilization, expense, and charge measures cannot be computed. Results reported are limited to the issues of access, profitability and net charges (after discounts). Nonjoint venture equipment dealers generate a significantly larger share of their revenues from Medicare, and self-pay patients than their joint venture counterparts. This suggests that the nonjoint venture equipment dealers provide greater access to patients with limited ability to pay. Also, nonjoint venture businesses average significantly higher discounts and writeoffs than physician owned firms. If gross charges are similar, this finding suggests that nonjoint venture providers are less expensive than joint businesses. Finally, equipment businesses owned by physicians are more profitable. More comprehensive data is needed to evaluate impacts of joint venture ownership on the utilization and expenses for durable medical equipment services.

**Home Health Agencies** were subdivided into agencies that are Medicare certified and those that are not Medicare certified. The joint venture agencies, while demonstrating some differences, provide no clear pattern of greater profitability for physician owners of home health agencies. In Medicare agencies the utilization rates (in terms of visits per patients) are significantly higher for the physician owned agencies.

The average measures of profitability were modest for both groups with negligible differences after adjustment for contract expenses. These results are based on relatively large home health agencies and do not include smaller agencies or agencies that generate a substantial part of the revenues from sources other than home health services. Joint ventures account for a small percentage of these larger dedicated home health agencies.

**Acute Care Hospitals** are not usually owned by physicians; only twelve of the acute care hospitals reported physician owners. Most joint venture hospitals were smaller than the typical nonjoint venture facilities (only two joint venture hospitals had more than 225 beds). Further, while there are regional variations in the characteristics of hospitals, these variations do not appear to be related to joint venture ownership arrangements. With regard to access joint venture hospitals generally provide less bad debt and charity care, but they provide greater access to Medicaid patients. Other differences were not significant.

**Nursing Homes** Joint venture ownership of nursing homes has little impact on the measures of access, costs, charges, and utilization reported here. While there are regional variations, these regional influences do not significantly affect costs, charges, and utilization of services with respect to the influence of joint venture ownership. With respect to access, smaller joint venture nursing homes generate more revenues from Medicaid patients than their nonjoint venture counterparts. Further, measures of profitability show that all nursing homes, regardless of size and ownership status, have modest rates of profits.

**Physical Therapy-Rehabilitation Centers** were classified by two types of services: 1) physical therapy services only, and 2) comprehensive rehabilitation facilities providing physical therapy, occupational therapy, speech pathology, and in some cases work hardening. Referrals from physician owners, account for over 60 percent of the patients, on average, for both types of facilities. Significant differences were found for access measures for both groups with nonjoint venture facilities serving more Medicare and Medicaid patients.

The findings for facilities specializing in physical therapy show that patients treated at physician owned facilities averaged significantly more visits per patient than patients treated at nonjoint venture physical therapy centers. Joint venture physical therapy facilities have significantly lower charges per visit but significantly more revenue per patient due to the higher utilization of services. Joint venture physical therapy facilities are also significantly more profitable than their nonjoint venture counterparts.

Joint venture physical therapy facilities averaged 62 percent more visits per full time equivalent (FTE) licensed physical therapist; this difference is statistically significant. These, and other findings indicate that joint venture facilities provide a lower quality of care or provide simpler services because both licensed therapy workers and nonlicensed workers spend less time with each patient. These results also explain why the average total cost of a physical therapy visit is less in joint venture facilities than in nonjoint venture facilities.

Patients treated at physician owned comprehensive rehabilitation facilities averaged significantly more (32 percent) physical therapy visits than patients treated at nonjoint venture facilities. Physician owned rehabilitation facilities are more profitable and have a lower average cost per visit than nonjoint venture providers. Costs are lower, in part, because joint venture rehabilitation facilities average significantly more visits per licensed physical therapist than nonjoint venture facilities. These findings imply that joint venture facilities provide lower quality services, or that visits are of shorter duration than the average visit in nonjoint venture facilities. Finally, physician owned rehabilitation facilities have higher average list charges than their nonjoint venture counterparts.

In sum, for both joint venture physical therapy and rehabilitation centers, average utilization rates (visits per patient) are significantly higher and average revenue per patient is significantly higher for facilities specializing in physical therapy services only. Finally, both joint venture physical therapy and rehabilitation facilities render significantly more visits per licensed physical therapist. This is also the case when visits are expressed relative to the sum of FTE licensed physical therapists and licensed therapist assistants. This suggests that joint venture facilities provide lower quality services than their nonjoint venture counterparts because their visits are of shorter duration. This could imply that services are being delivered by nonlicensed persons.

Radiation Therapy Centers are predominately owned by physicians. Nonjoint venture radiation therapy facilities and joint venture facilities generate comparable shares of their revenue from all payer classes.

Nonjoint venture radiation therapy centers render more procedures per patient than physician owned facilities. On the other hand, joint venture radiation therapy centers charge more per procedure; which on net, results in higher total charges per patient.

#### B. Physician Survey

In addition to the health facility surveys, a survey of a random sample of Florida physicians was conducted to obtain and analyze information on the practice patterns of physicians involved in joint ventures and those not in joint ventures. Surveys were mailed to 500 physicians who had been identified in the facility surveys as owners and to 500 physicians not identified as owners of health facilities. The survey responses were kept anonymous to encourage participation. The survey letter clearly stated the mandatory nature of the study and the Board's authority to collect the survey information. In addition, the survey request was accompanied by a letter from the Florida Medical Association President supporting the survey and encouraging physician participation. However, the survey did not yield sufficient response to render statistically valid analysis regarding physician practice patterns. The response rate was very low, 35 percent; a response rate of 60 percent is normally expected from a survey of this nature. Nonetheless, this survey does provide statistically sound conclusions regarding characteristics of physicians involved in joint ventures, as summarized below:

- o Specialties of internal medicine, surgery, and neurology were disproportionately likely to be in joint ventures.

- o Specialties of neurologists and obstetrician/gynecologist were disproportionately likely to invest in diagnostic imaging centers. Internists were disproportionately likely to invest in clinical laboratories. Surgeons were disproportionately likely to invest in ambulatory surgical centers, physical therapy and rehabilitation centers, durable medical equipment business, and home health agencies.
- o Physicians who are likely to refer patients to outpatient ancillary services are significantly more likely to be in joint ventures than other physicians.
- o Non-joint venture physicians reported significantly higher proportions of both Medicaid and self-pay (uninsured) patients.

#### C. Industry Leaders Survey

As part of the study, interviews were conducted with a select panel of industry leaders and experts to obtain a broad perspective on the effects of joint ventures and to discuss alternative strategies for regulation of joint ventures. Open ended interviews were conducted with a panel of selected Florida physician and hospital representatives, industry representatives, and policy and research experts. Selected Florida physician and hospital representatives included Guy Selander (M.D., President of the Florida Medical Association), Charles Kahn (M.D., Internist, Chair of the Florida Medical Association Special Committee on Ethics), Maurice Laszlo (M.D., Chair of Florida Medical Association Council on Ethical and Judicial Affairs), and Charles Pierce (President of the Florida Hospital Association). Selected Florida industry leaders included Kylanne Green (Associate Director of Managed Care for the Health Insurance Association of America), Greg Short (President of Short Medical, a medical supply and equipment company), Lois Adams (President of Home Health Care Services, Inc., Chair of the Regulatory Affairs Committee for the Florida Pharmacy Association), Tim Sanders (durable medical equipment dealer), and Drexey Smith (owner of Drexey Smith Rehabilitation Center, Inc.). Providing a broader perspective were selected health policy and research experts, including Arnold Relman (M.D., Editor-in-Chief of the New England Journal of Medicine), David Abernathy (staff member of the Committee on Ways and Means of U.S. House of Representatives), Uwe Reinhardt (Ph.D., James Madison Professor of Political Economy at Princeton, member of Physician Payment Review Commission for the U.S. Congress), and Alain Enthoven (Ph.D., Professor of Management at the Stanford Graduate School of Business). Results of the interviews were reported in Volume I report.

#### D. Regulators Survey

Regulators from Florida and across states were surveyed regarding the characteristics and enforcement of existing state anti-kickback laws, disclosure laws, and other laws relating to the regulation of joint ventures. The survey was conducted by telephone. Eleven Florida regulators were surveyed and 51 regulators were surveyed across states. The officials surveyed across states included representatives of state's medical licensing boards and representatives of states' Medicaid Fraud Control Units. Florida officials surveyed included

representatives of the Medical Prosecution and Medical Investigation sections of the Department of Regulation, the HRS Office of Licensure and Certification, the Medicaid Fraud Control Unit and the criminal investigation unit for Medicare.

**E. Public Hearing**

A public hearing was held on September 13, 1991, to receive comments on the effects of joint ventures in Florida. The public had the options both to provide oral testimony or to submit written comments. Transcripts of the oral testimony and written comments received in conjunction with the public hearing can be obtained from the Board offices.

# American Medical Association

Physicians dedicated to the health of America



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## News Release

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FOR IMMEDIATE RELEASE

For further information, contact: Carla Brock  
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### AMA URGES ETHICAL GUIDELINES FOR OWNERSHIP AND SELF-REFERRAL

CHICAGO, Sept. 4--The American Medical Association's Council on Ethical and Judicial Affairs today announced its program to assure physician compliance with guidelines for facility ownership and self-referral.

"While physician investment in health care facilities has a long tradition and has indisputably benefitted patients, evidence is growing that many physicians are unaware of appropriate measures to deal with the conflict presented by self-referral," according to a Council statement.

"The medical profession must accept the burden of altering ownership practices if they present an unethical conflict of interest," AMA Council on Ethical and Judicial Affairs chairman Oscar Clarke, MD, said. "If patients' interests can be represented more fairly, we must find a way to represent them."

The Council has established a special advisory panel to analyze the need for additional physician guidelines. The panel will study physician self-referral and make recommendations for any necessary corrective actions.

-more-

(SELF-REFERRAL)

Panel members will be Russel Patterson, MD, Chief of Neurosurgery, Cornell University; Newton M. Minow, senior partner, Sidley & Austin, and former chairman of the Federal Communications Commission; and Robert Veatch, director, Kennedy Institute of Ethics. The panel will report to the AMA Council on Ethical and Judicial Affairs in November.

The Council will also promote application of existing guidelines. A communication effort to educate physicians about the ethics of self-referral will include articles in AMA publications. The Council has called on state, county and medical specialty societies to actively require compliance with the AMA code of ethics. Societies were encouraged to investigate reports of abuse or non-compliance through grievance or discipline committees.

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## Statement of the Council on Ethical and Judicial Affairs

The Council continues to be concerned about reports that its opinion regarding conflicts of interest, specifically, referral by physicians to facilities in which they have an ownership interest, is being violated by many physicians. While physician investment in health care facilities has a long tradition and has indisputably benefitted patients, evidence is growing that many physicians are unaware of appropriate measures to deal with the conflict presented by self referral. Although no study to date conclusively shows, or even attempts to study, whether any particular services of this nature have been unnecessary or overvalued, the Council believes that the burden is on the profession to either alter the practice or to effectively explain any disparities with independent facilities in utilization and price.

The Council also believes that organized medicine can begin correcting the situation by more effectively communicating the profession's ethical guidelines regarding self-referral. Unless required to do so by physicians, lawyers, in general, will not construct these arrangements with standards any more stringent than the minimum required by federal and state law. The profession has to be sure all relevant standards — in particular its own ethical code — is known to physicians and their lawyers.

To address this problem, the Council is today announcing three actions:

1. A communication campaign to educate physicians about the ethics of self-referral. The primary elements of the Council's opinion will be communicated to physicians in the coming months through: 1) an individual mailing to all members through AMA's Member Matters newsletter, 2) a special bulletin in American Medical News, 3) a description of the opinion in the Journal of the American Medical Association, and 4) a special segment on American Medical Television.

Physicians need to know that although investment in facilities to which they refer patients has not been viewed to date as unethical, several important requirements must be met. Among these are: (a) disclosure and an opportunity for the patient to go elsewhere, with a specific, alternative facility identified; (b) financial return that is commensurate with the capital risk taken; (c) no tying of investment return to volume of referrals; (d) objective utilization review, and (e) as with any service provided by physicians, the measure of appropriate utilization and price is not what the market will bear but what is reasonable and necessary given the physician's position of special trust.

2. An enforcement program to require compliance with the code of ethics. The Council is asking all state, county and specialty societies, through their grievance and discipline committees, to actively investigate reports of abuse or non-compliance with the Council's opinion, and the Council will itself solicit, review and or refer to the appropriate professional association any complaint involving self referral. The Council is asking physicians and the public to refer any questionable arrangements to it or to their local medical society.

3. The appointment of a special advisory panel to assist the Council in analyzing the need for additional guidelines for physicians. The panel members will consist of Russel Patterson, MD, Chief of Neurosurgery at Cornell University, New York and a former Chairman of the Council, Newton M. Minow, senior partner in the law firm of Sidley & Austin, former FCC Chairman, Trustee Emeritus of the Mayo Clinic, Director of the Rand Corporation and Director of the Annenberg Washington Program of Northwestern University and Robert Veatch, PhD, Director of the Kennedy Institute of Ethics. The panel will study the data and other evidence with regard to physician self referral, consider the Council's prior reports and opinions and make recommendations to the Council as to the need for additional action. Dr. Oscar Clarke, the Chairman of the Council will provide the panel with its charge in detail within the next two weeks. It is estimated that the panel's work will be completed by early November in order to permit the Council to consider the panel's views in making a report to the AMA House of Delegates at its meeting in December.

Sec.  
1001.953 OIG report on compliance with  
investment interest safe harbor.

**Subpart E—Permissive Exclusions**

**§ 1001.951 Fraud, kickbacks and other  
prohibited activities.**

The OIG may exclude any individual or entity that it determines has committed an act described in section 1128B of the Social Security Act, subject to the exceptions set forth in § 1001.952.

**§ 1001.952 Exceptions.**

The following payment practices shall not be treated as a criminal offense under section 1128B of the Act and shall not serve as the basis for an exclusion:

(a) *Investment Interests.* As used in section 1128B of the Act, "remuneration" does not include any payment that is a return on an investment interest, such as a dividend or interest income, made to an investor as long as all of the applicable standards are met within one of the following two categories of entities:

(1) If, within the previous fiscal year or previous 12 month period, the entity possesses more than \$50,000,000 in undepreciated net tangible assets (based on the net acquisition cost of purchasing such assets from an unrelated entity) related to the furnishing of items and services, all of the following five applicable standards must be met—

(i) With respect to an investment interest that is an equity security, the equity security must be registered with the Securities and Exchange Commission under 15 U.S.C. 78(b) or (g).

(ii) The investment interest of an investor in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity must be obtained on terms equally available to the public through trading on a registered national securities exchange, such as the New York Stock Exchange or the American Stock Exchange, or on the National Association of Securities Dealers Automated Quotation System.

(iii) The entity or any investor must not market or furnish the entity's items or services (or those of another entity as part of a cross referral agreement) to passive investors differently than to non-investors.

(iv) The entity must not loan funds to or guarantee a loan for an investor who is in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity if the investor uses any part of such loan to obtain the investment interest.

(v) The amount of payment to an investor in return for the investment interest must be directly proportional to the amount of the capital investment of that investor.

(2) If the entity possesses investment interests that are held by either active or passive investors, all of the following eight applicable standards must be met—

(i) No more than 40 percent of the value of the investment interests of each class of investments may be held in the previous fiscal year or previous 12 month period by investors who are in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity.

(ii) The terms on which an investment interest is offered to a passive investor, if any, who is in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity must be no different from the terms offered to other passive investors.

(iii) The terms on which an investment interest is offered to an investor who is in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity must not be related to the previous or expected volume of referrals, items or services furnished, or the amount of business otherwise generated from that investor to the entity.

(iv) There is no requirement that a passive investor, if any, make referrals to, be in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity as a condition for remaining as an investor.

(v) The entity or any investor must not market or furnish the entity's items or services (or those of another entity as part of a cross referral agreement) to passive investors differently than to non-investors.

(vi) No more than 40 percent of the gross revenue of the entity in the previous fiscal year or previous 12 month period may come from referrals, items or services furnished, or business otherwise generated from investors.

(vii) The entity must not loan funds to or guarantee a loan for an investor who is in a position to make or influence referrals to, furnish items or services to, or otherwise generate business for the entity if the investor uses any part of such loan to obtain the investment interest.

(viii) The amount of payment to an investor in return for the investment interest must be directly proportional to

the amount of the capital investment (including the fair market value of any pre-operational services rendered) of that investor.

For purposes of paragraph (a) of this section, the following terms apply. *Active investor* means an investor either who is responsible for the day-to-day management of the entity and is a bona fide general partner in a partnership under the Uniform Partnership Act or who agrees in writing to undertake liability for the actions of the entity's agents acting within the scope of their agency. *Investment interest* means a security issued by an entity, and may include the following classes of investments: Shares in a corporation, interests or units of a partnership, bonds, debentures, notes, or other debt instruments. *Investor* means an individual or entity either who directly holds an investment interest in an entity, or who holds such investment interest indirectly by, including but not limited to, such means as having a family member hold such investment interest or holding a legal or beneficial interest in another entity (such as a trust or holding company) that holds such investment interest. *Passive investor* means an investor who is not an active investor, such as a limited partner in a partnership under the Uniform Partnership Act, a shareholder in a corporation, or a holder of a debt security.

(b) *Space Rental*. As used in section 1128B of the Act, "remuneration" does not include any payment made by a lessee to a lessor for the use of premises, as long as all of the following five standards are met—

- (1) The lease agreement is set out in writing and signed by the parties.
- (2) The lease specifies the premises covered by the lease.
- (3) If the lease is intended to provide the lessee with access to the premises for periodic intervals of time, rather than on a full-time basis for the term of the lease, the lease specifies exactly the schedule of such intervals, their precise length, and the exact rent for such intervals.
- (4) The term of the lease is for not less than one year.
- (5) The aggregate rental charge is set in advance, is consistent with fair market value in arms-length transactions and is not determined in a manner that takes into account the volume or value of any referrals or business otherwise generated between the parties for which payment may be made in whole or in part under Medicare or a State health care program.

For purposes of paragraph (b) of this section, the term *fair market value* means the value of the rental property for general commercial purposes, but shall not be adjusted to reflect the additional value that one party (either the prospective lessee or lessor) would attribute to the property as a result of its proximity or convenience to sources of referrals or business otherwise generated for which payment may be made in whole or in part under Medicare or a State health care program.

(c) *Equipment rental*. As used in section 1128B of the Act, "remuneration" does not include any payment made by a lessee of equipment to the lessor of the equipment for the use of the equipment, as long as all of the following five standards are met—

- (1) The lease agreement is set out in writing and signed by the parties.
- (2) The lease specifies the equipment covered by the lease.
- (3) If the lease is intended to provide the lessee with use of the equipment for periodic intervals of time, rather than on a full-time basis for the term of the lease, the lease specifies exactly the schedule of such intervals, their precise length, and the exact rent for such interval.
- (4) The term of the lease is for not less than one year.
- (5) The aggregate rental charge is set in advance, is consistent with fair market value in arms-length transactions and is not determined in a manner that takes into account the volume or value of any referrals or business otherwise generated between the parties for which payment may be made in whole or in part under Medicare or a State health care program.

For purposes of paragraph (c) of this section, the term *fair market value* means the value of the equipment when obtained from a manufacturer or professional distributor, but shall not be adjusted to reflect the additional value one party (either the prospective lessee or lessor) would attribute to the equipment as a result of its proximity or convenience to sources of referrals or business otherwise generated for which payment may be made in whole or in part under Medicare or a State health care program.

(d) *Personal services and management contracts*. As used in section 1128B of the Act, "remuneration" does not include any payment made by a principal to an agent as compensation for the services of the agent, as long as all of the following six standards are met—

(1) The agency agreement is set out in writing and signed by the parties.

(2) The agency agreement specifies the services to be provided by the agent.

(3) If the agency agreement is intended to provide for the services of the agent on a periodic, sporadic or part-time basis, rather than on a full-time basis for the term of the agreement, the agreement specifies exactly the schedule of such intervals, their precise length, and the exact charge for such intervals.

(4) The term of the agreement is for not less than one year.

(5) The aggregate compensation paid to the agent over the term of the agreement is set in advance, is consistent with fair market value in arms-length transactions and is not determined in a manner that takes into account the volume or value of any referrals or business otherwise generated between the parties for which payment may be made in whole or in part under Medicare or a State health care program.

(6) The services performed under the agreement do not involve the counseling or promotion of a business arrangement or other activity that violates any State or Federal law.

For purposes of paragraph (d) of this section, an agent of a principal is any person, other than a bona fide employee of the principal, who has an agreement to perform services for, or on behalf of, the principal.

(e) *Sale of practice*. As used in section 1128B of the Act, "remuneration" does not include any payment made to a practitioner by another practitioner where the former practitioner is selling his or her practice to the latter practitioner, as long as both of the following two standards are met—

(1) The period from the date of the first agreement pertaining to the sale to the completion of the sale is not more than one year.

(2) The practitioner who is selling his or her practice will not be in a professional position to make referrals to, or otherwise generate business for, the purchasing practitioner for which payment may be made in whole or in part under Medicare or a State health care program after one year from the date of the first agreement pertaining to the sale.

(f) *Referral services*. As used in section 1128B of the Act, "remuneration" does not include any payment or exchange of anything of value between an individual or entity ("participant") and another entity serving as a referral service ("referral service"), as long as all

of the following four standards are met—

(1) The referral service does not exclude as a participant in the referral service any individual or entity who meets the qualifications for participation.

(2) Any payment the participant makes to the referral service is assessed equally against and collected equally from all participants, and is only based on the cost of operating the referral service, and not on the volume or value of any referrals to or business otherwise generated by the participants for the referral service for which payment may be made in whole or in part under Medicare or a State health care program.

(3) The referral service imposes no requirements on the manner in which the participant provides services to a referred person, except that the referral service may require that the participant charge the person referred at the same rate as it charges other persons not referred by the referral service, or that these services be furnished free of charge or at reduced charge.

(4) The referral service makes the following five disclosures to each person seeking a referral, with each such disclosure maintained by the referral service in a written record certifying such disclosure and signed by either such person seeking a referral or by the individual making the disclosure on behalf of the referral service—

(i) The manner in which it selects the group of participants in the referral service to which it could make a referral;

(ii) Whether the participant has paid a fee to the referral service;

(iii) The manner in which it selects a particular participant from this group for that person;

(iv) The nature of the relationship between the referral service and the group of participants to whom it could make the referral; and

(v) The nature of any restrictions that would exclude such an individual or entity from continuing as a participant.

(g) *Warranties.* As used in section 1128B of the Act, "remuneration" does not include any payment or exchange of anything of value under a warranty provided by a manufacturer or supplier of an item to the buyer (such as a health care provider or beneficiary) of the item, as long as the buyer complies with all of the following standards in paragraphs (g)(1) and (g)(2) of this section and the manufacturer or supplier complies with all of the following standards in paragraphs (g)(3) and (g)(4) of this section—

(1) The buyer must fully and accurately report any price reduction of the item (including a free item), which was obtained as part of the warranty, in the applicable cost reporting mechanism or claim for payment filed with the Department or a State agency.

(2) The buyer must provide, upon request by the Secretary or a State agency, information provided by the manufacturer or supplier as specified in paragraph (g)(3) of this section.

(3) The manufacturer or supplier must comply with either of the following two standards—

(i) The manufacturer or supplier must fully and accurately report the price reduction of the item (including a free item), which was obtained as part of the warranty, on the invoice or statement submitted to the buyer, and inform the buyer of its obligations under paragraphs (a)(1) and (a)(2) of this section.

(ii) Where the amount of the price reduction is not known at the time of sale, the manufacturer or supplier must fully and accurately report the existence of a warranty on the invoice or statement, inform the buyer of its obligations under paragraphs (g)(1) and (g)(2) of this section, and, when the price reduction becomes known, provide the buyer with documentation of the calculation of the price reduction resulting from the warranty.

(4) The manufacturer or supplier must not pay any remuneration to any individual (other than a beneficiary) or entity for any medical, surgical, or hospital expense incurred by a beneficiary other than for the cost of the item itself.

For purposes of paragraph (g) of this section, the term *warranty* means either an agreement made in accordance with the provisions of 15 U.S.C. 2301(6), or a manufacturer's or supplier's agreement to replace another manufacturer's or supplier's defective item (which is covered by an agreement made in accordance with this statutory provision), on terms equal to the agreement that it replaces.

(h) *Discounts.* As used in section 1128B of the Act, "remuneration" does not include a discount, as defined in paragraph (h)(3) of this section, on a good or service received by a buyer, which submits a claim or request for payment for the good or service for which payment may be made in whole or in part under Medicare or a State health care program, from a seller as long as the buyer complies with the applicable standards of paragraph (h)(1) of this section and the seller complies with the applicable standards of paragraph (h)(2) of this section:

(1) With respect to the following three categories of buyers, the buyer must comply with all of the applicable standards within each category—

(i) If the buyer is an entity which reports its costs on a cost report required by the Department or a State agency, it must comply with all of the following four standards—

(A) the discount must be earned based on purchases of that same good or service bought within a single fiscal year of the buyer;

(B) the buyer must claim the benefit of the discount in the fiscal year in which the discount is earned or the following year;

(C) the buyer must fully and accurately report the discount in the applicable cost report; and

(D) the buyer must provide, upon request by the Secretary or a State agency, information provided by the seller as specified in paragraph (h)(2)(ii) of this section.

(ii) If the buyer is an entity which is a health maintenance organization or competitive medical plan acting in accordance with a risk contract under section 1876(g) or 1903(m) of the Act, or under another State health care program, it need not report the discount except as otherwise may be required under the risk contract.

(iii) If the buyer is not an entity described in paragraphs (h)(1)(i) or (h)(1)(ii) of this section, it must comply with all of the following three standards—

(A) the discount must be made at the time of the original sale of the good or service;

(B) where an item or service is separately claimed for payment with the Department or a State agency, the buyer must fully and accurately report the discount on that item or service; and

(C) the buyer must provide, upon request by the Secretary or a State agency, information provided by the seller as specified in paragraph (h)(2)(ii)(A) of this section.

(2) With respect to either of the following two categories of buyers, the seller must comply with all of the applicable standards within each category—

(i) If the buyer is an entity described in paragraph (h)(1)(ii) of this section, the seller need not report the discount to the buyer for purposes of this provision.

(ii) If the buyer is any other individual or entity, the seller must comply with either of the following two standards—

(A) where a discount is required to be reported to the Department or a State agency under paragraph (h)(1) of this section, the seller must fully and

accurately report such discount on the invoice or statement submitted to the buyer, and inform the buyer of its obligations to report such discount; or

(B) where the value of the discount is not known at the time of sale, the seller must fully and accurately report the existence of a discount program on the invoice or statement submitted to the buyer, inform the buyer of its obligations under paragraph (h)(1) of this section and, when the value of the discount becomes known, provide the buyer with documentation of the calculation of the discount identifying the specific goods or services purchased to which the discount will be applied.

(3) For purposes of this paragraph, the term *discount* means a reduction in the amount a seller charges a buyer (who buys either directly or through a wholesaler or a group purchasing organization) for a good or service based on an arms length transaction. The term *discount* may include a rebate check, credit or coupon directly redeemable from the seller only to the extent that such reductions in price are attributable to the original good or service that was purchased or furnished. The term *discount* does not include—

- (i) Cash payment;
- (ii) Furnishing one good or service without charge or at a reduced charge in exchange for any agreement to buy a different good or service;
- (iii) A reduction in price applicable to one payor but not to Medicare or a State health care program;
- (iv) A reduction in price offered to a beneficiary (such as a routine reduction or waiver of any coinsurance or deductible amount owed by a program beneficiary);
- (v) Warranties;
- (vi) Services provided in accordance with a personal or management services contract; or
- (vii) Other remuneration in cash or in kind not explicitly described in this paragraph.

(i) *Employees*. As used in section 1128B of the Act, "remuneration" does not include any amount paid by an employer to an employee, who has a bona fide employment relationship with the employer, for employment in the furnishing of any item or service for which payment may be made in whole or in part under Medicare or a State health care program. For purposes of paragraph (i) of this section, the term

*employee* has the same meaning as it does for purposes of 26 U.S.C. 3121(d)(2):

(j) *Group purchasing organizations*. As used in section 1128B of the Act, "remuneration" does not include any payment by a vendor of goods or services to a group purchasing organization (GPO), as part of an agreement to furnish such goods or services to an individual or entity as long as both of the following two standards are met—

(1) The GPO must have a written agreement with each individual or entity, for which items or services are furnished, that provides for either of the following—

(i) The agreement states that participating vendors from which the individual or entity will purchase goods or services will pay a fee to the GPO of 3 percent or less of the purchase price of the goods or services provided by that vendor.

(ii) In the event the fee paid to the GPO is not fixed at 3 percent or less of the purchase price of the goods or services, the agreement specifies the amount (or if not known, the maximum amount) the GPO will be paid by each vendor (where such amount may be a fixed sum or a fixed percentage of the value of purchases made from the vendor by the members of the group under the contract between the vendor and the GPO).

(2) Where the entity which receives the good or service from the vendor is a health care provider of services, the GPO must disclose in writing to the entity at least annually, and to the Secretary upon request, the amount received from each vendor with respect to purchases made by or on behalf of the entity.

For purposes of paragraph (j) of this section, the term *group purchasing organization* (GPO) means an entity authorized to act as a purchasing agent for a group of individuals or entities who are furnishing services for which payment may be made in whole or in part under Medicare or a State health care program, and who are neither wholly-owned by the GPO nor subsidiaries of a parent corporation that wholly owns the GPO (either directly or through another wholly-owned entity).

(k) *Waiver of beneficiary coinsurance and deductible amounts*. As used in section 1128B of the Act, "remuneration" does not include any reduction or waiver of a Medicare or a State health

care program beneficiary's obligation to pay coinsurance or deductible amounts as long as all of the standards are met within either of the following two categories of health care providers:

(1) If the coinsurance or deductible amounts are owed to a hospital for inpatient hospital services for which Medicare pays under the prospective payment system, the hospital must comply with all of the following three standards—

(i) The hospital must not later claim the amount reduced or waived as a bad debt for payment purposes under Medicare or otherwise shift the burden of the reduction or waiver onto Medicare, a State health care program, other payers, or individuals.

(ii) The hospital must offer to reduce or waive the coinsurance or deductible amounts without regard to the reason for admission, the length of stay of the beneficiary, or the diagnostic related group for which the claim for Medicare reimbursement is filed.

(iii) The hospital's offer to reduce or waive the coinsurance or deductible amounts must not be made as part of a price reduction agreement between a hospital and a third-party payor.

(2) If the coinsurance or deductible amounts are owed by an individual who qualifies for subsidized services under a provision of the Public Health Services Act or under titles V or XIX of the Act to a federally qualified health care center or other health care facility under any Public Health Services Act grant program or under title V of the Act, the health care center or facility may reduce or waive the coinsurance or deductible amounts for items or services for which payment may be made in whole or in part under part B of Medicare or a State health care program.

§ 1001.953 **OIG report on compliance with investment interest safe harbor.**

Within 180 days of the effective date of this subpart, the OIG will report to the Secretary on the compliance with §§ 1001.952(a)(2)(i) and 1001.952(a)(2)(vi).

Dated: July 19, 1991.

R.P. Kusserow,  
Inspector General, Department of Health and Human Services.

Approved: July 22, 1991.

Louis W. Sullivan,  
Secretary.

[FR Doc. 91-17691 Filed 7-26-91; 8:45 am]  
BILLING CODE 4150-04-M

Federal "Stark" Legislation

42 U.S.C. 1395nn

§ 1395nn. Limitation on certain physician referrals

(a) Prohibition of certain referrals

(1) In general

Except as provided in subsection (b) of this section, if a physician (or immediate family member of such physician) has a financial relationship with an entity specified in paragraph (2), then—

(A) the physician may not make a referral to the entity for the furnishing of clinical laboratory services for which payment otherwise may be made under this subchapter, and

(B) the entity may not present or cause to be presented a claim under this subchapter or bill to any individual, third party payor, or other entity for clinical laboratory services furnished pursuant to a referral prohibited under subparagraph (A).

(2) Financial relationship specified

For purposes of this section, a financial relationship of a physician (or immediate family member) with an entity specified in this paragraph is—

(A) except as provided in subsections (c) and (d) of this section, an ownership or investment interest in the entity; or

(B) except as provided in subsection (e) of this section, a compensation arrangement (as defined in subsection (h)(1)(A) of this section), between the physician (or immediate family member) and the entity.

An ownership or investment interest described in subparagraph (A) may be through equity, debt, or other means.

(b) General exceptions to both ownership and compensation arrangement prohibitions

Subsection (a)(1) of this section shall not apply in the following cases:

(1) Physicians' services

In the case of physicians' services (as defined in section 1395x(q) of this title) provided personally by (or under the personal supervision of) another physician in the same group practice (as defined in subsection (h)(4) of this section) as the referring physician.

(2) In-office ancillary services

In the case of services—

(A) that are furnished—

(i) personally by the referring physician, personally by a physician who is a member of the same group practice as the referring physician, or personally by individuals who are employed by such physician or group practice and who are personally supervised by the physician or by another physician in the group practice, and

(ii) (I) in a building in which the referring physician (or another physician who is a member of the same group practice) furnishes physicians' services unrelated to the furnishing of clinical laboratory services, or

(II) in the case of a referring physician who is a member of a group practice, in another building which is used by the group practice for the centralized provision of the group's clinical laboratory services, and

(B) that are billed by the physician performing or supervising the services, by a group practice of which such physician is a member, or by an entity that is wholly owned by such physician or such group practice,

if the ownership or investment interest in such services meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

(3) Prepaid plans

In the case of services furnished—

(A) by an organization with a contract under section 1395mm of this title to an individual enrolled with the organization,

(B) by an organization described in section 1395l(a)(1)(A) of this title to an individual enrolled with the organization, or

(C) by an organization receiving payments on a prepaid basis, under a demonstration project under section 402(a) of the Social Security Amendments of 1967 or under section 222(a) of the Social Security Amendments of 1972, to an individual enrolled with the organization.

(4) Hospital financial relationship unrelated to the provision of clinical laboratory services

In the case of a financial relationship with a hospital if the financial relationship does not relate to the provision of clinical laboratory services.

(5) Other permissible exceptions

In the case of any other financial relationship which the Secretary determines, and specifies in regulations, does not pose a risk of program or patient abuse.

(c) General exception related only to ownership or investment prohibition for ownership in publicly-traded securities

Ownership of investment securities (including shares or bonds, debentures, notes, or other debt instruments) which were purchased on terms generally available to the public and which are in a corporation that--

(1) is listed for trading on the New York Stock Exchange or on the American Stock Exchange, or is a national market system security traded under an automated interdealer quotation system operated by the National Association of Securities Dealers, and

(2) had, at the end of the corporation's most recent fiscal year, total assets exceeding \$100,000,000,

shall not be considered to be an ownership or investment interest described in subsection (a)(2)(A) of this section:

**(d) Additional exceptions related only to ownership or investment prohibition**

The following, if not otherwise excepted under subsection (b) of this section, shall not be considered to be an ownership or investment interest described in subsection (a)(2)(A) of this section:

**(1) Hospitals in Puerto Rico**

In the case of clinical laboratory services provided by a hospital located in Puerto Rico.

**(2) Rural provider**

In the case of clinical laboratory services if the laboratory furnishing the services is in a rural area (as defined in section 1395ww(d)(2)(D) of this title).

**(3) Hospital ownership**

In the case of clinical laboratory services provided by a hospital (other than a hospital described in paragraph (1)) if—

(A) the referring physician is authorized to perform services at the hospital, and

(B) the ownership or investment interest is in the hospital itself (and not merely in a subdivision thereof).

**(e) Exceptions relating to other compensation arrangements**

The following shall not be considered to be a compensation arrangement described in subsection (a)(2)(B) of this section:

**(1) Rental of office space**

Payments made for the rental or lease of office space if—

(A) there is a written agreement, signed by the parties, for the rental or lease of the space, which agreement—

(i) specifies the space covered by the agreement and dedicated for the use of the lessee,

(ii) provides for a term of rental or lease of at least one year,

(iii) provides for payment on a periodic basis of an amount that is consistent with fair market value;

(iv) provides for an amount of aggregate payments that does not vary (directly or indirectly) based on the volume or value of any referrals of business between the parties; and

(v) would be considered to be commercially reasonable even if no referrals were made between the parties;

(B) in the case of rental or lease of office space in which a physician who is an interested investor (or an interested investor who is an immediate family member of the physician) has an ownership or investment interest, the office space is in the same building as the building in which the physician (or group practice of which the physician is a member) has a practice; and

(C) the arrangement meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

**(2) Employment and service arrangements with hospitals**

An arrangement between a hospital and a physician (or immediate family member) for the employment of the physician (or family member) or for the provision of administrative services, if—

(A) the arrangement is for identifiable services;

(B) the amount of the remuneration under the arrangement—

(i) is consistent with the fair market value of the services, and

(ii) is not determined in a manner that takes into account (directly or indirectly) the volume or value of any referrals by the referring physician;

(C) the remuneration is provided pursuant to an agreement which would be commercially reasonable even if no referrals were made to the hospital; and

(D) the arrangement meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

**3) Other service arrangements**

Remuneration from an entity (other than a hospital) under an arrangement if—

(A) the arrangement is—

(i) for specific identifiable services as the medical director or as a member of a medical advisory board at the entity pursuant to a requirement of this subchapter,

(ii) for specific identifiable physicians' services to be furnished to an individual receiving hospice care if payment for such services may only be made under this subchapter as hospice care,

(iii) for specific physicians' services furnished to a nonprofit blood center, or

(iv) for specific identifiable administrative services (other than direct patient care services), but only under exceptional circumstances specified by the Secretary in regulations;

(B) the requirements described in subparagraphs (B) and (C) of paragraph (2) are met with respect to the entity in the same manner as they apply to a hospital; and

(C) the arrangement meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

**(4) Physician recruitment**

In the case of remuneration which is provided by a hospital to a physician to induce the physician to relocate to the geographic area served by the hospital in order to be a member of the medical staff of the hospital, if—

(A) the physician is not required to refer patients to the hospital,

(B) the amount of the remuneration under the arrangement is not determined in a manner that takes into account (directly or indirectly) the volume or value of any referrals by the referring physician; and

(C) the arrangement meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

**(5) Isolated transactions**

In the case of an isolated financial transaction, such as a one-time sale of property, if—

(A) the requirements described in subparagraphs (B) and (C) of paragraph (2) are met with respect to the entity in the same manner as they apply to a hospital, and

(B) the transaction meets such other requirements as the Secretary may impose by regulation as needed to protect against program or patient abuse.

**(6) Salaried physicians in a group practice**

A compensation arrangement involving payment by a group practice of the salary of a physician member of the group practice.

**(f) Reporting requirements**

Each entity providing covered items or services for which payment may be made under this subchapter shall provide the Secretary with the information concerning the entity's ownership arrangements, including—

- (1) the covered items and services provided by the entity, and
- (2) the names and unique physician identification numbers of all physicians with an ownership or investment interest (as described in subsection (a)(2)(A) of this section) in the entity, or whose immediate relatives have such an ownership or investment.

Such information shall be provided in such form, manner, and at such times as the Secretary shall specify. Such information shall first be provided not later than October 1, 1991. The requirement of this subsection shall not apply to covered items and services provided outside the United States or to entities which the Secretary determines provides services for which payment may be made under this subchapter very infrequently. The Secretary may waive the requirements of this subsection (and the requirements of chapter 35 of Title 44, with respect to information provided under this subsection) with respect to reporting by entities in a State (except for entities providing clinical laboratory services) so long as such reporting occurs in at least 10 States, and the Secretary may waive such requirements with respect to the providers in a State required to report so long as such requirements are not waived with respect to parenteral and enteral suppliers, end stage renal disease facilities, suppliers of ambulance services, hospitals, entities providing physical therapy services, and entities providing diagnostic imaging services of any type.

**(g) Sanctions**

**(1) Denial of payment**

No payment may be made under this subchapter for a clinical laboratory service which is provided in violation of subsection (a)(1) of this section.

**(2) Requiring refunds for certain claims**

If a person collects any amounts that were billed in violation of subsection (a)(1) of this section, the person shall be liable to the individual for, and shall refund on a timely basis to the individual, any amounts so collected.

**(3) Civil money penalty and exclusion for improper claims**

Any person that presents or causes to be presented a bill or a claim for a service that such person knows or should know is for a service for which payment may not be made under paragraph (1) or for which a refund has not been made under paragraph (2) shall be subject to a civil money penalty of not more than \$15,000 for each such service. The provisions of section 1320a-7a of this title (other than the first sentence of subsection (a) and other than subsection (b)) shall apply to a civil money penalty under the previous sentence in the same manner as such provisions apply to a penalty or proceeding under section 1320a-7a of this title.

**(4) Civil money penalty and exclusion for circumvention schemes**

Any physician or other entity that enters into an arrangement or scheme (such as a cross-referral arrangement) which the physician or entity knows or should know has a principal purpose of assuring referrals by the physician to a particular entity which, if the physician directly made referrals to such entity, would be in violation of this section, shall be subject to a civil money penalty of not more than \$100,000 for each such arrangement or scheme. The provisions of section 1320a-7a of this title (other than the first sentence of subsection (a) and other than subsection (b)) shall apply to a civil money penalty under the previous sentence in the same manner as such provisions apply to a penalty or proceeding under section 1320a-7a of this title.

**(5) Failure to report information**

Any person who is required, but fails, to meet a reporting requirement of subsection (f) of this section is subject to a civil money penalty of not more than \$10,000 for each day for which reporting is required to have been made. The provisions of section 1320a-7a of this title (other than the first sentence of

subsection (a) and other than subsection (b)) shall apply to a civil money penalty under the previous sentence in the same manner as such provisions apply to a penalty or proceeding under section 1320a-7a(a) of this title.

(b) Definitions.

For purposes of this section:

(1) Compensation arrangement; remuneration

(A) The term "compensation arrangement" means any arrangement involving any remuneration between a physician (or immediate family member) and an entity.

(B) The term "remuneration" includes any remuneration directly or indirectly, overtly or covertly, in cash or in kind.

(2) Employee

An individual is considered to be "employed by" or an "employee" of an entity if the individual would be considered to be an employee of the entity under the usual common law rules applicable in determining the employer-employee relationship (as applied for purposes of section 3121(d)(2) of Title 26.

(3) Fair market value

The term "fair market value" means the value in arms length transactions, consistent with the general market value, and, with respect to rentals or leases, the value of rental property for general commercial purposes (not taking into account its intended use) and, in the case of a lease of space, not adjusted to reflect the additional value the prospective lessee or lessor would attribute to the proximity or convenience to the lessor where the lessor is a potential source of patient referrals to the lessee.

(4) Group practice

The term "group practice" means a group of two or more physicians legally organized as a partnership, professional corporation, foundation, not-for-profit corporation, faculty practice plan, or similar association—

(A) in which each physician who is a member of the group provides substantially the full range of services which the physician routinely provides (including medical care, consultation, diagnosis, or treatment) through the joint use of shared office space, facilities, equipment, and personnel;

(B) for which substantially all of the services of the physicians who are members of the group are provided through the group and are billed in the name of the group and amounts so received are treated as receipts of the group;

(C) in which the overhead expenses of and the income from the practice are distributed in accordance with methods previously determined by members of the group; and

(D) which meets such other standards as the Secretary may impose by regulation.

In the case of a faculty practice plan associated with a hospital with an approved medical residency training program in which physician members may provide a variety of different specialty services and provide professional services both within and outside the group (as well as perform other tasks such as research), the previous sentence shall be applied only with respect to the services provided within the faculty practice plan.

(5) Interested investor; disinterested investor

The term "interested investor" means, with respect to an entity, an investor who is a physician in a position to make or to influence referrals or business to the entity (or who is an immediate family member of such an investor), and the term "disinterested investor" means an investor other than an interested investor.

(6) Investor

The term "investor" means, with respect to an entity, a person with a financial relationship specified in subsection (a)(2) of this section with the entity.

(7) Referral, referring physician

(A) Physicians' services

Except as provided in subparagraph (C), in the case of an item or service for which payment may be made under part B, the request by a physician for the item or service, including the request by a physician for a consultation with another physician (and any test or procedure ordered by, or to be performed by (or under the supervision of) that other physician), constitutes a "referral" by a "referring physician".

(B) Other items

Except as provided in subparagraph (C), the request or establishment of a plan of care by a physician which includes the provision of the clinical laboratory service constitutes a "referral" by a "referring physician".

(C) Clarification respecting certain services integral to a consultation by certain specialists

A request by a pathologist for clinical diagnostic laboratory tests and pathological examination services, if such services are furnished by (or under the supervision of) such pathologist pursuant to a consultation requested by another physician, does not constitute a "referral" by a "referring physician".

(Pub.L. 101-239, Title VI, § 6204(a), Dec. 19, 1989, 103 Stat. 2236, amended Pub.L. 101-508, Title IV, § 4207(e)(1)-(3), (k)(2), Nov. 5, 1990, 104 Stat. 1388-121, 1388-122, 1388-124.)

Effective Date

*Section, other than subsec. (f), effective with respect to referrals made on or after Jan. 1, 1992, and subsec. (f) reporting requirement effective Oct. 1, 1990, see section 6204(c) of Pub. L. 101-239, set out as a note under this section.*

Historical and Statutory Notes

**References in Text.** Section 402(a) of the Social Security Amendments of 1967, referred to in subsec. (b)(3)(C), is set out as section 1395b-1(a) of this title.

Section 222(a) of the Social Security Amendments of 1972, referred to in subsec. (b)(3)(C), is set out as Experiments and Demonstration Projects ... note under section 1395b-1 of this title.

**Prior Provisions.** A prior section 1395nn, Act Aug. 14, 1935, c. 531, Title XVIII, § 1877, as added Oct. 30, 1972, Pub.L. 95-142, § 4(a), 91 Stat. 1179; Dec. 5, 1980, Pub.L. 96-499, Title IX, § 917, 94 Stat. 2625; July 18, 1984, Pub.L. 98-369, Title III, § 2306(f)(2), 98 Stat. 1073; Oct. 21, 1986, Pub.L. 99-509, Title IX, § 9321(a)(1), 100 Stat. 2016; Aug. 18, 1987, Pub.L. 100-93, § 4(c), 101 Stat. 689, which enumerated offenses relating to the Medicare program and the penalties for such offenses, was repealed by Pub.L. 100-93, § 4(e), Aug. 18, 1987, 101 Stat. 689, effective at the end of the fourteen-day period beginning on Aug. 18, 1987, and inapplicable to administrative proceedings commenced before the end of such period, under section 15(a) of Pub.L. 100-93, set out as a note under section 1320a-7 of this title. See section 1320a-7b of this title.

**Effective Date of 1990 Amendment.** Section 4207(c)(5) of Pub.L. 101-508 provided that: "The amendments made by this subsection [enacting

subsec. (b)(4) and redesignating as subsec. (b)(5) former subsec. (b)(4); amending subsec. (f)-(2), subsec. (f) third sentence, and enacting last two subsec. (f) sentences respecting requirements and waiver of requirements; and enacting subsec. (h)(6) and redesignating as subsec. (h)(7) former subsec. (h)(6) and amending such subsec. (h)(7) of this section] shall be effective as if included in the enactment of section 6204 of the Omnibus Budget Reconciliation Act of 1989 [Pub.L. 101-239, § 6204, amending this section and set out as notes hereunder]."

**Effective Date.** Section 6204(c) of Pub.L. 101-239 provided that:

"(1) Except as provided in paragraph (2), the amendments made by this section [enacting this section and section 1395f of this title and note provisions under this section] shall become effective with respect to referrals made on or after January 1, 1992.

"(2) The reporting requirement of section 1877(f) of the Social Security Act [subsec. (f) of this section] shall take effect on October 1, 1990."

**Deadline for Certain Regulations.** Section 6204(d) of Pub. L. 101-239, as amended Pub.L. 101-508, Title IV, § 4207(e)(4)(B), Nov. 5, 1990, 104 Stat. 1388-122, provided that:

"The Secretary of Health and Human Services shall publish final regulations to carry out section 1877 of the Social Security Act [this section] by not later than October 1, 1991."

## APPENDIX VI

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