

THE DEVELOPMENT OF
INTEGRATED SERVICE NETWORKS (ISNs)
IN MINNESOTA

Institute • for Health • Services Research

School of Public Health
Box 729 UMHC
420 Delaware Street S.E.
Minneapolis, MN 55455-0392

612-624-6151 FAX 612-624-2196

University of Minnesota

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A report prepared for the MinnesotaCare Legislative Oversight Committee

John E. Kralewski, Ph.D. Andrea deVries Bryan Dowd, Ph.D. Sandra Potthoff, Ph.D.

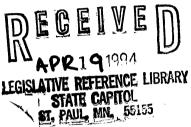
Institute for Health Services Research and Policy School of Public Health University of Minnesota

Twin Cities Campus

Institute for Health Services Research School of Public Health Box 729 420 Delaware Street S.E. Minneapolis, MN 55455-0381

612-624-6151 Fax: 612-624-2196

February 21, 1994



Senator Linda Berglin
Representative Lee Greenfield
Co-Chairs, MinnesotaCare Legislative Oversight Committee

Dear Senator Berglin and Representative Greenfield:

Enclosed is a report, prepared at your request, analyzing the development of ISNs in Minnesota. We identified 18 organizations, business groups, and citizen groups that are considering the development of ISNs. Of these, we conducted eight on-site interviews with key informants from the sponsoring groups to identify the alternate structures being proposed. Those case studies are summarized in this report along with a series of recommendations related to the regulatory environment needed to maximize the effectiveness of these new organizational forms of health care delivery.

We were pleased to have had this opportunity to continue our working relationships with you. We look forward to meeting with you to discuss these findings.

Sincerely,

Prøfessor and Director

INTRODUCTION

This report presents an analysis of the Integrated Service Networks (ISNs) that are developing in Minnesota and provides recommendations for public policies related to the regulation of these new forms of health care delivery. The report is presented in four sections. The first part describes the research methods and the source of data. The second and third summarize the case studies and present an analysis of the findings, and the fourth provides recommendations regarding the regulation of ISNs in Minnesota. Our report is intended as a preliminary analysis of the ISN concept as described by key informants who are developing those organizations and as a baseline document which can be used to evaluate the evolution of this new concept in health care delivery.

An ISN is defined by the MinnesotaCare legislation as "an organization that is accountable for the costs and outcomes associated with delivering a full continuum of health care services to a defined population." Under an ISN arrangement, a network of hospitals, physicians and other health care providers furnish all needed health services for a fixed payment. In the Clinton proposal for national health care reform, they are called regional health alliances. In both of these initiatives, as well as in less well publicized legislative proposals such as the Durenberger-Breaux bill), these structures are a main component of health care reform. It is proposed that they will

¹Laws of Minnesota 1993, chapter 345.

²Clinton Health Security Act 1993.

³ Managed Competition Act (S.1579) 1994, Durenberger, Breaux and Lieberman.

create an integrated network of physicians, hospitals, pharmacists, and other health care professionals and institutions capable of providing high quality, cost-effective health care. Although ISNs are built on the HMO concept, they are intended to be more flexible in terms of the organizational relationships with providers and more sophisticated in the management of patient care. In essence, these structures are based on the concepts pioneered by the most innovative HMOs and, in many ways, represent the next generation of this approach to health care delivery. In fact, some respondents expressed their belief that HMOs would have evolved into ISN type organizations regardless of national or state initiatives for health care reform.

SECTION 1

RESEARCH METHODS

Data for this report were obtained from eight health care organizations that describe themselves as being in the process of developing ISNs. The case study method was used to acquire, classify, and analyze the data. The study was conducted in two phases. First, two potential ISN organizations were interviewed to identify the issues that should be addressed and the components of ISNs that should be explored. A case study protocol was then developed to guide the research. This protocol was altered somewhat as the case studies progressed to accommodate new dimensions of the analysis. Where possible, information relevant to these additional dimensions was then obtained by phone from the case study sites already visited.

Sites were selected from a list of likely ISN sponsors compiled from discussions with health care, health association, and health insurance executives in the Twin Cities. Twenty potential ISNs were identified. Phone calls were then made to the administrators of these sites to confirm their intent to develop a program. Two sites were only considering sponsorship of ISNs and, consequently, they were dropped from the study. Eight were then selected for inclusion in the study. Only one potential case study organization refused to cooperate and it was replaced by a similar organization. The case studies were selected to represent urban and rural ISNs and a broad range of sponsoring organizations. Although several combinations of sponsors are included, they mainly represent three major organizations: medical group practices, hospitals (or hospital systems), and health insurance plans, including HMOs.

The following components of ISNs, identified from the pretest of the case study protocol provided the analytic framework for our study.

- 1. Organizational Structure: This dimension encompasses the overall organizational structure, the organizational relationships between the providers and the ISN, the sponsoring agencies or groups, and the governance and administration of the proposed ISN.
- 2. <u>Insurance Component</u>: This includes the organization of the insurance functions, capital reserve provisions, services covered, deductible and coinsurance provisions, restrictions on choice of provider, and gatekeeper stipulations.
- 5. <u>Financial Risk Sharing Arrangements</u>: This component deals with the financial risk sharing provisions between the ISNs, health care providers, and purchasing groups.
- 4. <u>Information Systems</u>: Good operating information is considered essential in ISNs. This area includes both the type of information collected and the method by which it is collected, analyzed, and displayed.
- Consumer Relations: This component focuses on both "service to the customer" efforts and the involvement of consumers in health care decisions.

SECTION 2

CASE STUDY FINDINGS

A. <u>Organizational Structure</u>

The organizational structures of the evolving ISNs are quite similar even though they have a variety of sponsors. The corporate structure brings physicians, hospitals, and an insurance component together in some type of organizational arrangement. In some cases, all of these components are owned by the ISN or the ISN is cosponsored by organizations with these capabilities. For example, a medical group practice, a hospital system, and a health insurance company join forces to sponsor an ISN. In most of these cases the sponsors have equal ownership and the governing board is made up of representatives from each organization. It is interesting to note, however, that one of the sponsoring organizations usually plays the lead role in the formation of the ISN. This often occurs because of the special administrative capabilities of that organization. Large hospitals or hospital systems, for example, have extensive administrative capabilities and can use those resources to organize an ISN. In these cases, the physician and insurance components are less involved in the developmental phases of the program. If the physicians are not well organized in a large group practice, the developmental phase of an ISN also includes the formation of some type of physician umbrella organization to represent the physician's interest. These organizations are often owned by the participating physicians, although, at times, they may be sponsored and owned by a hospital system or a group practice. In either event, the network organization provides the physician component for the ISN and usually has an ownership position in the firm. The physician component can also

be created by acquiring medical clinics. Both hospital systems and large health insurance plans are acquiring clinics to create medical components for their ISNs. While these clinics will provide the core nucleus for the medical component, additional physicians will also be linked to that core through contracts. The health insurance plans that are pursuing this strategy are taking the lead role in sponsoring ISNs and are bringing hospitals into the program through contracts or by giving them a limited ownership position.

Large multispecialty medical groups with substantial administrative capacity are also taking lead roles in developing ISNs. The structure of these plans vary considerably with some medical groups planning to retain a majority ownership position while others are forming equal partnerships with hospitals or health insurance companies.

In essence, three major stakeholders are emerging: hospitals, physicians, and health insurance companies. Each, in some cases, is playing the lead role in the development of an ISN. The other components are being brought into the program through contracts for services, acquisitions, or as cosponsors. In the case of physicians, a network or umbrella organization is often formed to bring small group practices together to contract with the ISN or to help form the ISN. These umbrella organizations are not always owned by the physicians. In some cases, they are formed and owned by hospitals.

The majority of the respondents interviewed in this study noted that consumer or community representation on the governing board of an ISN would be a positive factor and that they planned to have such representation. It doesn't appear that the

long-term contracts. While large hospitals (or hospital systems) and large medical group practices have some in-house insurance capabilities or could develop that capacity, it appears that most are planning to obtain those services from an outside agency either through contracts or by bringing that agency into an equal or minority ownership position. The exceptions are the HMOs or hospital systems that now sponsor HMOs.

B. Insurance Component

Most of those planning to develop ISNs note that it probably will be less expensive to buy the insurance component from an existing health insurance company than to develop that capacity in house. However, as noted previously, some of the potential ISNs already have this capacity since they now function as HMOs or have an ownership position in an HMO. It, therefore, appears that some organizations that now have health insurance capabilities will both sponsor ISNs and sell their insurance services to other ISNs. Depending on the final structure of MinnesotaCare, the insurance component may be less important in the future than it is currently. For example, there will be no need for extensive actuarial services or rate setting capabilities under a community rating system. Moreover, some of the current health insurance functions such as claims and utilization reviews will likely be shifted to the information/quality improvement/clinical guidelines departments envisioned by most of the ISNs. The major function that remains is the benefit structure, assuming that MinnesotaCare will enable the ISNs to offer competing benefit plans.

There is widespread agreement among the respondents that ISNs should offer some choices in benefit plans but that both the interests of the enrollees and the ISN

are best served by a benefit packages that include coverage of a wide range of services. The case for a very inclusive benefits plan is twofold. First, it is argued that physicians are better able to provide cost-effective health care if they are not constrained by the types of services covered. In other words, they need access to a full range of choices in order to mix resources in a cost-effective manner. Secondly, enrollees will not maximize preventive services or use services in a cost effective way if they are disincented to do so. Consequently, they need coverage of a full range of services so that they will use the system appropriately and will partner with their doctor in maintaining their health.

Some ISNs plan to offer more than one benefit plan, but this largely is a hedge against an uncertain market. They simply want to be prepared if consumers (or purchasing groups) demand a low cost, low benefit plan, or a plan with point of service coverage. Most of the respondents expect state or national mandated health care benefit packages, and most believe that they will cover a broad range of services. A typical benefit plan that has broad support among the ISNs is shown in Table 1.

While there is considerable agreement that ISN benefit packages should cover a wide range of services, there is less agreement on enrollee cost sharing for those services. Some of the respondents argue that cost sharing should be kept to a minimum and should be used only as a means of keeping enrollees in touch with health care costs. Others argue that it is an important mechanism to provide alternate, less costly benefit packages while maintaining the range of services covered. They propose that cost sharing provisions, choice of provider (including the location of

technologies), and coverage of services are all part of a series of options that should be offered to enrollees at various premium prices.

Probably the most widely agreed upon argument for selected cost sharing relates to the use of high cost elective services. Some cosmetic surgeries, mammoplasty, and infertility studies are examples of those services. The underlying philosophy is to include the services in the benefits package but have cost sharing provisions or caps on expenditures. For example, the first cycle of infertility services might be fully covered but, if unsuccessful, the cost of further services would be shared on a 70/30 basis or capped at \$10,000. This approach has a great deal of support among the ISNs because it maintains the integrity of the broad range benefit philosophy, yet discourages overuse of these discretionary services and keeps premium costs down. It also maintains a basic level of access to health care while enabling those with more resources to purchase discretionary services.

While the benefit plan shown in Table 1 appears to have the support of many of those interviewed, it is important to note that some of the respondents believe that a less generous package should be offered as the principal package or as an option. One respondent noted the need for more copay provisions for physician services and x-ray and laboratory procedures to keep enrollees abreast of costs and to gain their commitment to cost-effective practice styles. Another respondent indicated concern over prescription drug costs and recommended less coverage or more controls on the source of drugs possibly using mail order pharmacy services for maintenance drug products.

Table 1 Model Health Benefits Plan

HEALTH SERVICES	COVERAGE PROVIDED			
PREVENTIVE CARE AND PHYSICIAN SERVICES	Plan pays 100% for these services ■ Routine preventive exams ■ Newborn baby care ■ Well-child care	 Routine vision exams Routine hearing exams Immunizations 	Allergy injectionsDiagnostic laboratory testsDiagnostic x-rays	Routine hospital servicesOutpatient surgery
	Member pays \$10 per visit for thes ● Office visits	se services: ● Physical therapy	Speech therapy	Occupational therapy
MATERNITY CARE*	Plan pays 100% for these services: ■ Physician and hospital services for prenatal care, delivery and postnatal care		* Immediate coverage for infant if enrolled in the Plan	
INPATIENT HOSPITAL SERVICES	Plan pays 100% for these services: Semi-private room and board General nursing care Surgery and surgical assistance Anesthesia and pathology		 Diagnostic and therapeutic x-rays Medications, blood and blood plasma Physical therapy Physician services 	
EMERGENCY SERVICES*	 Local emergencies: Member pays \$15 per visit for Urgent Care Center services Member pays \$40 per visit for emergency room services (Copayment waived if visit results in admission) Plan pays 80% for emergency ambulance service 		* Emergency room use must be pre-authorized by a Plan physician, except when a medical condition is life-threatening	
	Worldwide Emergencies: ■ Member pays \$40 per visit, then 20% of first \$2,500 of covered charges (Copayment waived if visit results in admission)		 Plan pays 80% of emergency ambulance service * Refer to Certificate of Coverage for notification requirements 	
HOME HEALTH CARE	Member pays \$10 per visit for non-custodial care, with proper approval			
PRESCRIPTION DRUGS*	 Member pays \$9 for up to a 30-day supply of prescription drugs, a 3-month supply of birth control pills, or one vial of insulin 		* Prescription drugs must be dispensed through a Plan pharmacy	
PREVENTIVE DENTAL SERVICES	 Plan pays 100% for dental exams, cleaning and scaling, x-rays and fluoride treatments for dependent children ages 2-19 			

HEALTH SERVICES	COVERAGE PROVIDED		
MENTAL HEALTH AND CHEMICAL DEPENDENCY SERVICES*	Outpatient services: Individual, family or biofeedback therapyMember pays \$20 per session, \$25 per session after 10th session Group therapyMember pays \$10 per session, \$12 per session after 10th session	* Outpatient services limited to a combined total of 40 sessions per benefit year, but no fewer than 40 mental health sessions if determined medically necessary; Pre-authorized required after 10th session	
	Inpatient services: • Plan pays 80% for semi-private room, board, general nursing care and other eligible expenses	* Inpatient care limited to 50 days for mental health; 75 days for chemical dependency	
MISCELLANEOUS BENEFITS	 Plan pays 80% of the following expenses when prescribed by a Plan phy Prosthetic devices, \$5,000 maximum per prosthesis, per benefit year Durable medical equipment used strictly for medical purposes, \$2,000 maximum per piece, \$5,000 maximum per benefit year Reconstructive surgery, physician, dentist and hospital services 		
SPECIAL BENEFITS	 Eyeglasses or contact lensesSpecial credit toward purchase through selected vendors Hearing aids15% discount available through selected vendors 		
WHAT IS NOT COVERED	 In general, any service not provided by or under the direction of a Plan p Procedures or treatments with are investigative, experimental or are not generally accepted by the medical profession Procedures or services which are not medically necessary and / or are primarily for vocation, comfort, convenience, appearance or educational in nature Dental care and oral surgery, except in limited circumstances Experimental organ transplants (see Certificate of Coverage for clarification) Prescription eyewear and the measurement, fitting or adjustment of contact lenses or hearing aides Cosmetic surgery except under certain limited circumstances Physical and mental examinations done for third parties 	 Custodial care, private duty nursing and home care for chronic conditions Reversal or voluntary sterilization or artificial conception process such as in vitro fertilization (except artificial insemination as provided in the Certificate of Coverage), sperm acquisition and sperm storage Over-the-counter drugs and equivalents, including enteral feedings and other electrolyte supplements except as required to treat PKU Religious counseling, marital/relationship counseling or sex therapy rendered in the absence of a mental disorder 	

Out-of-pocket cost cannot exceed \$3,000 per member, per benefit year.

C. <u>Financial Risk Sharing Arrangements</u>

The respondents described a wide variety of financial risk sharing agreements with physicians and hospitals. These agreements include various capitation arrangements, reinsurance options, and negotiated or discounted fee for service payments. In general, physicians and hospitals are provided the option to assume more financial risk or comply with extensive patient care management guidelines and policies administered by the ISN. For example, a primary care medical group practice could accept capitation payment for all primary care and referral services including hospital care and, because they assume that level of risk, they would have a great deal of freedom to practice in accordance with their desired style. At the other end of the spectrum, physicians who want to be paid on a fee-for-service basis would be required to adhere to strict guidelines and policies established by the ISN. Those physicians would be required to request permission from the ISN before hospitalizing a patient, initiating a high cost treatment regimen or ordering a high cost diagnostic procedure such as MRI.

The following is a list of alternate financial risk sharing arrangements being proposed for physician payment by the ISNs. The list begins with the most extensive risk sharing and progresses to the least risk on the physician's part.

- Primary care medical group practices capitated for all health care services
 (primary and referral services and hospital care) for a defined population.
- Primary care medical group practices capitated for all physician services, but hospital care paid directly by the ISN on a discounted billed charges or per diem basis.

- 3. Primary care medical group practices capitated for their services only, and all physician specialty care and hospital care paid directly by the ISN. Specialists may be capitated or paid on a negotiated fee for service basis. Hospitals may be paid on a discounted billed charges or a per diem basis.
- 4. Same as one, two, or three above but the ISN offers a reinsurance program for the primary and/or specialty physician groups covering all patients requiring care that exceeds a stated dollar amount (i.e., \$10,000 per year).
- 5. Primary care medical group practices paid on a negotiated fee-for-services basis and must comply with practice guidelines established by the ISN. May include a 20% holdback which is paid at the end of the year if costs are controlled. Specialist physicians capitated or paid a negotiated fee for service (with or without holdback) and hospitals paid on a discounted billed charges or per diem basis.
- 6. All physicians paid on a negotiated fee-for-service basis and must comply with ISN patient care policies and guidelines. May include a 20 percent holdback as in number five above. Hospitals are paid on a discounted billed charges or a per diem basis.

Patient care guidelines and policies that are being proposed by the ISNs include:

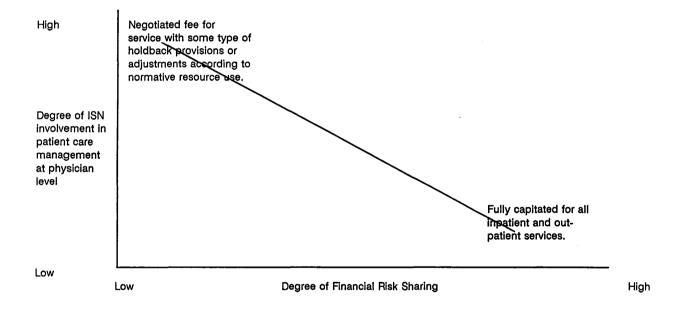
- 1. Guidelines for hospitalization of patients (permission required from ISN).
- Practice guidelines for illnesses that account for a substantial amount of resources. The most frequent illnesses noted include the following:

Simple cystitis
Active management of labor
VBAC
Low back pain

Breast cancer detection Fetal distress during labor Pre-term birth prevention Common cold in adults Pediatric asthma
Depression
Hypertension in adults
Cigarette smoking

Common cold in children Pediatric immunization Cervical cancer screening Chronic stable angina

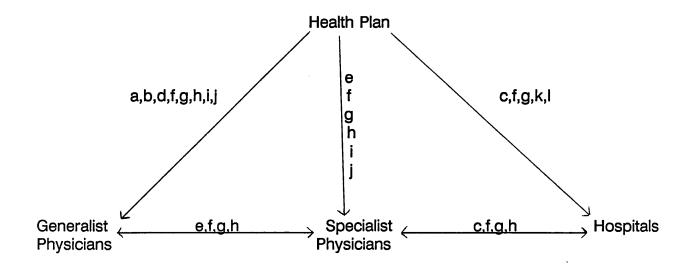
- 3. Pharmacy drug formulary
- 4. Calculation of a physician's resource use for patients with a certain diagnosis compared to all physicians' resource use for those patients and then an adjustment of fee if outside some boundaries.
- 5. Limiting the use of high cost technologies to centers of excellence.The risk sharing arrangements described above can be displayed as follows:



This spectrum of financial arrangements provides a great deal of flexibility for both the ISNs and physicians. Physicians have less ISN control over their practice styles as long as they are willing to assume the financial risks associated with capitation payment.

While all the ISNs are planning to develop or adopt practice guidelines, they will be provided as a resource to help physicians who are capitated to manage their patients in a cost effective way rather than being mandatory. Conversely, physicians who elect to be paid on a fee-for-service basis will be required to comply with these guidelines as well as additional policies such as when and where patients can be hospitalized, what drug brands can be used, and where patients must go to obtain high cost technologies. Therefore, physicians in small group practices or in rural areas will be able to participate in ISNs without assuming undue financial risk as long as they are willing to comply with what probably will be rather extensive management of the physician's practice decisions by the ISN. In almost all cases, this likely will be accompanied by some type of fee holdback provisions (probably as high as 20 percent) with end of the year payout in accordance with resource use compared to other similar physicians treating similar patients. The following diagram illustrates these alternate arrangements:

ALTERNATE FINANCIAL RISK SHARING ARRANGEMENTS BETWEEN HEALTH PLANS AND HEALTH CARE PROVIDERS



Options

- a. Full capitation for all hospital and physician services.
- b. Full capitation for all generalist and specialist physician.
- c. Full capitation for all hospital services only.
- d. Full capitation for all generalist physicians only.
- e. Full capitation for all specialist physicians only.
- f. Target rate and corridor for risk sharing for each of the provider groups described in a through e.*
- g. Stop loss provisions (usually 10,000 per case) added to any of the above options.
- h. Salary.
- i. Fee for service with holdback (various formulas for distribution at year end).
- j. Fee for service with target per capita rate and corridor for risk sharing.
- k. Discounted billed charges.

^{*} For example, a medical group may have a target rate of \$50 per member per month for the enrollees selecting their practice and a corridor of \$40 to \$60 per member per month. If costs are above the \$50 target but lower than \$60, they are shared according to an agreed upon formula (50/50, etc.). Savings accrued if costs are lower than the \$50 target but higher than \$40 are similarly shared.

D. <u>Information Systems</u>

An information technology infrastructure that links hospitals, clinics and other health care providers is a fundamental component of ISNs. This linkage is needed to ensure patient access and continuity of care across the ISN, monitor and improve quality of care, control costs, and assess community needs. Since most of the ISNs have not yet addressed this issue, we interviewed four of the sponsoring medical groups and three hospitals to determine: 1) the extent of their current and planned computer linkages; 2) their current use of information technology; 3) their plans for information technology investment in the future.

1) Computer Linkage: The extent of computer linkage among the interviewees varied. Typically, the group practices interviewed own more than one clinic site. In general, all the sites of a group practice are connected via computer linkages. In most cases, however, the group practices are not computer linked to hospitals. Only one site interviewed has linked the hospital and the clinic, and this is a case in which the hospital owned the clinic. Two other sites interviewed are planning to develop these linkages in order to facilitate information flow across the continuum of care but they have not yet done so.

The need to transfer and share administrative and clinical information raises a number of issues relevant to ISN development. First, there are many small physician groups that have minimal computer capabilities. Consequently, there will be significant start-up costs to link them electronically to other producers and the ISN. These medical group practices may find it very difficult to bring themselves up to a level consistent with that required to participate in an ISN. Conversely, if the ISNs cover

these costs, they may be reluctant to link with practices that lack these basic support systems. Moreover, if a provider organization becomes part of several ISNs that have different computer systems and standards for data transfer these costs will escalate.

A second issue relates to data systems that might be shared by ISNs. The Institute for Clinical Systems Integration, a local group of providers and insurers (including HealthPartners, the Mayo Clinic, and Park Nicollet Clinic), has been meeting to discuss options for developing a network to transfer data electronically among themselves. While they believe that an information system of the sophistication needed by ISNs will only be feasible if it is developed as a joint venture by all the stakeholders, they note that there is currently no mechanism to facilitate such collaborative efforts.

2) Use of Information Technology: Considerable variation was found in how information technology is currently being used. Not surprisingly, all those interviewed used computers for billing. In addition, most had the capability for computerized appointment scheduling, accounts receivable, tracking charges and checking benefit eligibility. Some are in the testing phases with insurers to submit claims electronically. It was also common for computers to be used to order prescriptions, issue re-fill orders, and check lab results. Some, but fewer, also reported using computers to generate cost reports and to track efficiency measures, such as cost and staffing ratios, and lab and x-ray utilization by diagnosis.

The widest variation in information capabilities was found to be in the area of clinical data. For many groups, the level of clinical detail available on the computer system is limited to diagnosis (ICD-9) and procedure (CPT) codes. Few of the

medical groups have merged their clinical and financial data, and even fewer are collecting any outcomes data to determine the impact of resource use on the patients' health status. Only one medical group practice reported that they have merged clinical and financial data and are collecting outcomes information on four conditions. They are using these data to determine the most cost effective methods to provide care and to develop clinical guidelines reflecting those methods. One hospital/clinic group is planning to pilot the SF36 monitoring system (REF). Using this system, they plan to evaluate patient outcomes during the year following selected surgeries. They then plan to compare their effectiveness with providers in other communities.

Clinical guidelines were noted by both hospitals and medical groups as a very important mechanism to improve quality and efficiency. However, only one of those interviewed have incorporated guidelines into their information system for easy clinician access. The most advanced medical groups are developing the capability to use their clinical data to analyze episodes of care, but this technology is still in the developmental stage. While some of the larger medical group practices are able to develop practice guidelines and episodes of care measures, most of the respondents believe that the costs are far too high for the average practice to do so.

Consequently, there is growing agreement that practice guideline development and patient care outcome assessment should at least be a collaborative effort among all providers in the community, and perhaps between them and the public sector as a public/private initiative.

Another important issue related to computerized clinical data is the computer based medical record. None of those interviewed has completely computerized

patient records, although some parts of the record are now on-line, including computerized physician progress notes. One group indicated that they are 30 to 40 percent complete in computerizing their medical records. However, because of the lack of computer linkages and standardized data transfer protocols, the record is only accessible at their clinics. Consequently, the data cannot be accessed by the hospital if a patient is admitted. All the respondents agreed that a computer- based medical records system that links all the providers in an ISN will be essential to the continuity of patient care.

The respondents noted that ISNs will need to be able to measure and track health status, access and utilize public health data bases, track clinical outcomes, and maintain patient records that are readily accessible to providers in various locations. This will require a substantial investment of time and money. One respondent expressed a vision of having clinical computer workstations that include practice parameter information, as well as video conferencing for physicians and nurses. However, he was unable to provide estimates of the costs associated with this approach.

3) Investment in Information Technology: The respondents felt the need to increase investment in information technology, although many of them had not specifically set aside funds in their budgets to do so. They are currently spending approximately 3 percent of their budgets on information systems, and anticipate that they will be increasing that amount over the next several years. One respondent noted that this area is typically underfunded by health care providers and, consequently, they have not kept up with the technology.

In our interviews, we found one information system that stood out as the leader in the field. Consequently, we requested and received permission to identify the organization by name and briefly describe their system. Park Nicollet Medical Center has a very advanced ambulatory information system. They have an information system that links their 18 clinics to a centralized patient data base and accounting system. This enables staff at any clinic to access patient records from other sites, schedule appointments with other physicians, and schedule lab and x-ray procedures at the central facility. Consequently, from the patient's perspective, there is a unified clinic system delivering their care.

Access to care is also tracked using this information and communications network. The system enables staff to record such things as how many times the phone rings before being answered when a patient calls to make an appointment, and how long the patient is on hold during the call. The scheduling system provides management information such as the time lapse between a patient's call for an appointment and available openings. Patient to staff ratios, patient encounters by clinic site and key quality indicators, are also monitored by the system. They now are able to evaluate the cost effectiveness of alternate treatment modalities for some illnesses and then create practice guidelines specifying the preferred approach.

Treatment for urinary tract infections (UTI) was cited as an example. The clinical and financial data were integrated to determine the cost per UTI case. The usual treatment modality was then broken into components and the cost and benefit of each component was assessed. As a result, treatment protocols were modified to improve

the cost effectiveness of the services and guidelines were established to help identify patients who could best be treated by the less intensive approach.

Probably the most sophisticated part of this information system is that it enables the medical directors to monitor population-based data regarding health status, illness patterns, preventive practices, and utilization rates. These data are being used to assess the performance of the clinics and for program planning and budgeting.

In the future, the clinic plans to increase the speed of the system by providing more hardware with processing capabilities at the clinic sites. This will allow staff throughout the organization to generate reports at each site. In the future, they are envisioning notebook-based data entry by physicians, and computer terminals at the nursing stations for input of clinical data. They note that this will involve changing the information infrastructure and retraining some clinical personnel.

There are several issues related to information technology which the ISN leadership feel need to be addressed:

- The specific data that the state will require regarding quality, cost, outcomes, and access need to be identified as soon as possible. It will be extremely difficult for the ISNs to plan an information system until they know what type of operating data will be required by the regulatory agencies.
- Providers will need to have a basic information technology infrastructure in
 order to participate in an ISN's information system. ISNs may not be willing to
 work with those who do not have this capability because their management and
 quality improvement programs are information based. Small group practices
 may have a difficult time developing this capacity given the investment that will

be needed. It was estimated by one respondent that it may cost between \$250,000 and \$300,000 to provide independent group practices with computer workstations, etc. needed to access and report information in an ISN. Some mechanism may need to be developed to assist practices in the development of their information technology in order to assure access to ISN programs.

The use of information technology in the health care field has not kept pace with other fields. Consequently, it is important to note that a great deal of catching up needs to be done in order to develop the information systems envisioned by the ISN leadership. One respondent estimated that it will take their site at least five years to develop an information technology infrastructure that will truly support an integrated approach to health care delivery. Consequently, those monitoring ISN development and requesting information from them must be attentive to the state of the information technology in this field.

E. Customer Relations

All those interviewed for this study noted that a customer service orientation is extremely important for the success of an ISN in a managed competition environment. There are three dimensions to this issue. First, in order to control costs, ISNs need to reduce the utilization of some services that are not cost effective but may seem essential to patients. The inappropriate use of some technologies such as CT scans is an example. Consequently, the ISN needs to have a close working relationship with enrollees to maintain their support for these judgements. Programs being planned to build these relationships include newsletters, interactive videos at the clinics and more time scheduled for nurses to explain treatment plans with patients.

The second dimension focuses on improving patient involvement in the maintenance of their health and in treatment decisions. Working with enrollees to prevent illnesses is a high level priority. This includes both educational programs and the development of self treatment protocols for conditions such as hypertension. Our interviews indicate that disease prevention and health maintenance will be major areas of emphasis for ISNs. The data also indicate, however, that preventive measures will be subjected to the same cost effectiveness analysis as curative services. Although some of these services may be provided based on their contribution to the quality of life, the costs and benefits will be carefully evaluated.

The third part of the customer relations component of ISNs relates to marketing and the competition for enrollees under managed competition. The primary focus of this component is to gain a better understanding of consumer views regarding health and health care, and their decision-making process related to selection of health plans. This largely follows a marketing paradigm but focuses more attention on individual values than do the commercial marketing efforts. This dimension of ISNs also includes consumer satisfaction surveys conducted to gain insights into how the services are perceived from the patients viewpoint. Most of the ISNs are planning to use these surveys to keep their customer service commitment at the forefront and to make sure that their services are user friendly.

Two of the HMOs that are planning to offer ISNs propose to develop extensive capabilities for patients to interact with computer based information systems designed to involve them in treatment decisions. The most frequently cited example of such a program is the Trans Urethael Resection (TURP) procedure for benign prostatic

hypertrophy. According to the respondents, the involvement of consumers in decisions regarding their health and health care will receive a great deal more attention under the ISN approach.

SECTION 3

SOME DISTINGUISHING CHARACTERISTICS OF ISNS

Although it is far too early in the development of these new organizational forms of health care delivery to explicate a model, several features appear to be common to virtually all of the initiatives. In many ways, these features reflect those of the most advanced HMOs and, indeed, some respondents in this study consider ISNs to be the next generation of the HMO concept. These features include both structural and philosophic considerations. First, the ISNs appear to be developing a much closer working relationship between providers and the insurance component than has been traditional in most HMOs. The provider systems being planned differ from those of the past in that they are highly integrated vertically as well as horizontally to assure reasonable geographic access to primary care and a close working relationship between those physicians and specialists. The insurance component is also highly integrated into the organization and is linked to providers through a complex system of financial risk sharing agreements. The goal is to achieve a tightly coupled organization where physicians take the initiative to provide cost effective services, the facilities are structured in a manner that enables them to do so, and the insurance component rewards good patient care outcomes.

Some of the respondents believe that the success of these structures will largely depend on the degree to which the physicians share a tight common practice culture and take a leadership role in developing cost effective practice styles.

Consequently, the development of mechanisms to achieve higher levels of physician integration and commitment to cost effective practices are high level priorities. Others

note the importance of structuring facilities so that they fully support cost effective practices. The traditional models of clinics and hospitals with few bridging organizations do not provide the mix of services needed to support ISN goals. HMOs have made progress in developing or stimulating the development of alternate structures, such as surgi-centers, but the ISN leadership views this as just the beginning. They believe that inpatient hospital days per 1,000 enrollees will drop below 200 (now about 240 in the Twin Cities HMOs) and that several new organizations will be developed to provide services that fall between hospital and clinic care. Whether or not this restructuring can be accomplished through incentives provided by the ISNs is still a question. One of the respondents indicated that while some gains can be made through incentives and contracts, the major gains in restructuring provider organizations will only be achieved if the ISN owns all the production components and has salaried physicians. If this is true, the small ISN may be seriously disadvantaged and small provider groups may not be able to survive.

The second major feature that appears to differentiate ISNs from other health care delivery systems is that they operate from a population perspective and focus a great deal of attention on patient outcomes. In the more well developed ISNs this philosophy seems to permeate the entire organization. Extensive plans are being developed for preventive services. Patient care outcomes measures are being developed and patient satisfaction surveys are being planned. This philosophy also influences the business operations. While business plans for new facilities or technologies were largely based on projections of revenues and expenses, they are now being based on population needs and the potential contribution to the

improvement of cost effective practices. While some of these programs and parts of the philosophy are direct descendants of HMOs, it appears that ISNs are taking a much more aggressive role in shifting to a population based health care philosophy and developing innovative programs to achieve those goals.

The third important feature is the involvement of enrollees in decisions related to their health and health care. At one level, this involves an expanded health education program, but the total program goes far beyond this effort. Some of the developing ISNs are planning extensive programs to acquaint patients with the probabilities of various adverse as well as positive outcomes of a procedure and are encouraging the patients to take an active role in the decision making process with their doctors. The goal as expressed by one respondent is to create an environment that encourages patients to take an active role in their health and health care and to provide the support services they need to do so. This, he noted, is a significant change in philosophy and often requires extensive retraining of clinicians.

A fourth characteristic that seems to be evidenced in the more well developed ISNs relates to the changes in the way health care is provided. Medical directors of the highly integrated ISNs describe a vision of a health care system with multiple points of entrance facilitated by an extensive communication network that enables enrollees to interact with clinicians by videophone, transmit clinical information to the clinics, and access information about their illnesses without leaving home. At least one medical director expects clinic visits to be cut in half as these improved communication systems are put in place. These programs are also restructuring the clinical staff. Nurse practitioners are going to play prominent roles in the provision of

primary care backed up by generalist physicians. In the specialty areas, the role of technicians is also being expanded. Some of the respondents believe that the restructuring of clinical services will reduce the current specialty physician staff by about 40 percent. However, they project a need for three to four times the number of nurse practitioners now being employed. Since these practitioners are in relatively short supply, some of the larger ISNs are considering the development of programs to retrain their current nursing staff.

As noted, previously it appears that the preventive side of health care is receiving much more attention by the ISNs than in any previous health care delivery system. Plans are in place for data systems that will track the provision of preventive services on a population basis and incentive systems are being developed to reward clinicians with good performances in the prevention of as well as in resolving health problems. One medical director stated that he plans to base part of the physicians income on how well he or she solves patients problems using the resources available through the ISN in a cost-effective manner.

Another unique characteristic, which we identified in the ISNs, is the high degree of flexibility of the organizations. Those developing ISNs acknowledge that their success in achieving high levels of cost effective care largely depends on the degree to which the clinical staff takes an ownership role in creating cost effective practice styles and a practice culture that supports that approach. A single multispecialty group practice with a tight practice culture was often noted as the ideal way of achieving this goal. Continuous physician-directed improvements in the effectiveness and efficiency of services was noted by many of the respondents as the

key to ISN success in a highly competitive market. The success in reducing the costs and improving the quality of treating urinary infections and benign prostatic hypertrophy were given as examples of the effectiveness of this approach. Gain the commitment of clinicians to continued improvement in the cost effectiveness of care and provide them with the information and support services needed to do so was noted as the basic philosophy of the most innovative ISNs.

Although this approach may prove to be guite successful, the ISN leadership recognizes that it tends to limit geographic access to care, especially in rural areas. The respondents offered two potential solutions to this problem. The first is that since several relatively large medical group practices exist in rural Minnesota those organizations can and should develop ISNs covering small communities through their satellites. They may be in competition with urban-based ISNs in some cases and in other cases may be part of an urban ISNs through contracts. In either event, it is argued that those rural group practices along with their satellite clinics should be able to develop very effective health care programs for rural areas. The second solution offered by the ISN leadership is that the payment of physicians in small rural practices can be tailored to reflect the degree to which he or she wants to become part of an ISN's culture. Physicians who are unwilling or unable to adopt the ISN practice culture can be paid on a negotiated fee for service basis (or a fee with hold-back provisions) while those who want to become part of the culture can be paid on a risk sharing or salary basis. Fee-for-service physicians will be subjected to more intense micromanagement of their patient care practices while risk-sharing physicians will have greater freedom to determine how to bring their practice styles into line with the ISN

standards. Micromanagement in this context includes both the utilization of services (through practice guidelines) and the specification of the location of high cost technologies and specialty physicians. The respondents with the most experience in HMO development believe that these alternate structural models will enable ISNs to serve all of rural Minnesota effectively. They add, however that the incentives to do so will depend on the development of effective purchasing groups that adequately represent the needs of rural residents.

SECTION 4

THE REGULATION OF ISNS IN MINNESOTA

The regulatory environment will be an important factor in the development of managed competition among health care ISNs in Minnesota. While the public must be protected from deceptive advertising or the financial insolvency of ISNs, the regulatory environment must at the same time support easy entrance into the health plan and health care provider markets in order to assure the development of competition. Of equal importance, regulations must encourage innovative structures during the formative years of these new organizational forms. Far too little is known about the contributions of various structural or functional characteristics of these new delivery systems to specify a preferred model or dictate ownership criteria.

Our study identified 18 different groups in Minnesota that are planning to develop ISNs. These groups include health insurance plans, HMOs, hospitals, medical group practices, and self-insured business groups. In most cases, the ISNs are being planned by a combination of two or three of these stakeholders. The most prominent form is the vertical integration of hospitals, medical group practices, and an existing health insurance plan. The hospitals may be represented by a hospital system but single institutions are also exploring ISN sponsorship. Medical group practices are similarly acting as sole participants in some cases and in others are forming network organizations to bring together several independent groups of physicians to cosponsor an ISN.

While our data indicate that a wide variety of organizational models are being planned, there is no evidence to suggest that one organizational structure should be

favored over another or that sponsorship should be limited to certain types of groups or agencies. A business coalition working with local doctors and hospitals probably will develop a different type of ISN than will a large highly integrated multispecialty medical group practice, but the differences are not such that they should be a public policy concern. Indeed, the differences should be encouraged during these formative years of ISNs so that innovations will be initiated and new models will be tried. It is through this process that more efficient and effective structures will emerge.

Even more importantly, these alternate approaches will provide the ingredients essential to the managed competition strategy. The competitive health care system will be best served by multiple ISNs that are free to create efficient systems by maximizing their unique organizational advantages. A key factor in ISN success relates to the integration of services and the providers responsible for those services. The development of a highly-integrated physician network with a common mission and culture is especially important. Control over the main components of health care delivery by an organization with an effective decision making structure is also essential. These two characteristics will enable ISNs to develop the structures needed to facilitate high quality, cost effective services and gain the commitment of clinicians to those goals. Consequently, ISNs must be allowed broad license to structure their components in a manner that maximizes their unique capabilities and advantages.

While ISNs will have the capacity to control health care costs, there is little reason to believe that they will do so unless the regulatory environment encourages the further development of the competitive markets now emerging in Minnesota. Evidence from the state employees health plan and the Business Health Care Action

Group, two well developed health care purchasing alliances, indicates that annual health care cost increases can be kept to between 6 and 8 percent through competitive purchasing practices. Multiple purchasing alliances contracting for health services for defined populations from competing ISNs can clearly reduce health care costs. However, ISN operating as public utilities might achieve similar results.

Consequently, the fundamental policy issue which must be addressed at this stage of ISN development is whether these organizations should be competitive and function within an environment structured to encourage competition or whether they should be treated as public utilities and, therefore, removed from competitive market forces. Health care policies must be very clear on this issue. ISNs can make important contributions to the improvement of health care for Minnesotans under either set of policies but they will surely fail if the state fails to delineate clearly and rationally the domains of competitive versus regulated behavior.

Much of the current national and state health policy reflects an ambivalence about the legitimate role of state government. There are two legitimate roles: prevention and correction of market failure and redistribution of income.

In markets for health plans and health care services, there are three principal sources of market failure: poor information, restricted entry and distorted prices.

Some of these problems are addressed well by the original MinnesotaCare legislation.

It is important that they also be addressed by the ISN legislation.

There are three main type of poor information. The first is poor consumer information about health plans. Consumers may have trouble understanding their health insurance policies. One approach to resolving poor consumer information

about health plan coverage is to standardize benefits. However, forcing all individuals to consume the same health insurance coverage can impose enormous welfare losses on consumers who may have vastly different preferences for coverage offered at different prices. A better plan is to follow the example of Medigap insurance in Minnesota and rate policies for consumers. That way, a consumer knows that if they buy a "number 5" policy they are guaranteed certain coverage, but all consumers are not forced to buy the same product.

Consumers also need good information about the fiscal solvency and quality of care of alternate health plans. The state uses capital reserve requirements or other financial guarantees to ensure fiscal solvency, rather than simply giving consumers information about the fiscal health of health plans. This approach has merit, but it is crucial that guarantees of fiscal solvency not be used to create excessive restrictions on entry to the health plans market.

The original MinnesotaCare legislation dealt with the problem of information on quality of care by setting up a data collection function within the MinnesotaCare Commission. Whether that data committee will actually produce useful data for consumers on the quality of care in health plans offered in the state remains to be seen, but at least a commendable effort is underway. It will be extremely important to provide consumers with the information they need to make judgments about what constitutes good care. Lacking this information, they will continue to equate more services with better quality and, consequently, will object to some cost effectiveness measures.

Another information problem concerns the information that health plans have about the health risk of consumers applying for enrollment. This information difficulty is partly to blame for the problems experienced by consumers in the individual and small group health insurance market. The solution to the information problem is to allow those consumers to purchase health insurance through pools, rather than individually or in small groups. The creation of the MinnesotaCare (subsidized) insurance pool and the Minnesota Employees Insurance Program (MEIP) are two great triumphs of the original MinnesotaCare legislation. These pools reorganize the demand side of the health care market, and exemplify sound government policy in the sense that the state identified a source of market failure that the private sector had not been able to resolve, and offered consumers an *opportunity* to improve their health care buying power that they did not have before.

The second major source of market failure is restricted entry into markets. It is crucial that new firms be able to enter the market if the profit of firms currently in the market gets too high. In fact, it is not necessary that new firms *actually* enter the market, as long as a credible threat of new entry is maintained. There are many potential barriers to new entry in the market for health plans and health care services. Excessively restrictive professional licensure laws or reimbursement rules are examples. Another example, noted earlier, is capital reserve requirements, which must be stringent enough to protect consumers, but not so stringent that new plans are prevented from entering the market.

The restricted entry issue is one of the reasons why the ISN legislation is so important. The stated purpose of the ISN legislation is to organize the *supply* side of

the health care market. It will be very difficult for the state to design this side of the market. The state cannot anticipate the demands of consumers, or the innovative organizational forms that might arise to meet those demands. If players in the health plans' market are limited to ISNs and the state creates a long list of requirements for licensure, it will be more difficult for new and especially innovative firms to enter the market.

The third major source of market failure is price distortions. Price distortions occur when the prices of goods and services paid by consumers do not reflect the cost of producing the goods and services in the most efficient way possible. The most important price distortions in the market for health insurance are the exemption of health insurance premiums from state, federal, and FICA taxes and the subsidy of Medicare premiums. The state should tax employer-paid health insurance premiums and not permit employees to pay their out-of-pocket premiums, coinsurance and deductibles and other uncovered health expenses with pre-tax dollars. Elimination of the state tax subsidy of health insurance purchases by the non-poor would represent sound public policy and would provide the state with revenue to subsidize the premiums of the truly needy.

The state also could encourage employers who offer multiple health plans to base their contribution to premiums on the lowest cost plan. Where appropriate, ISNs should be encouraged to design policies, like preferred provider organizations or point of service plans, that pass the variance in provider prices on to consumers.

Recommendations

Given these conditions, we recommend the following policies related to ISN development in Minnesota. These policies are based on the assumption that managed competition is the preferred strategy for health care reform in Minnesota and that competition among health care providers should be encouraged.

Enrollees must be assured that ISNs have the financial capacity to assume the 1. risks attendant to a capitated health insurance plan and deliver the services promised under their contracts. Small ISNs and especially small community or business based programs that are unable to obtain risk sharing agreements with a majority of the providers are especially vulnerable to the financial exigencies created by one or two serious illnesses. Moreover, these plans may find it very expensive or, in fact, very difficult to obtain reinsurance and, therefore, may be tempted to assume more financial risk than would be prudent given the circumstances. Consequently, provisions must be made to allow a variety of competing plans to enter the field while assuring the public that each is fiscally sound. This can be achieved through a two-step process. First, all ISNs should be held to the reserve standards now in effect in Minnesota for HMOs. (The revisions of these solvency requirements now being proposed by the Minnesota Department of Health appear to be somewhat more flexible and should be an improvement.) Secondly, applicants for ISN licenses should be provided the opportunity to apply for a temporary waiver from these reserve requirements by submitting a formal application to do so along with a business plan that outlines how financial exigencies will be met until the reserves are

- established. This business plan should include the financial commitments of the sponsoring agencies, risk sharing agreements with providers, plans for reinsurance and cash flow projections. Waivers should be limited to no more than five years.
- 2. ISNs should be free to offer alternate health insurance plans but those plans should comply with a grading system devised by the state and those grades should be published to consumers through the purchasing coalitions. The corridor of benefit plans now offered by the state employees purchasing coalition and the grading system used by the state for Medigap plans provide good models for this initiative.
- 3. Under the community rating mandate, some ISNs may be disadvantaged because they attract enrollees with serious and prolonged illnesses. Those with the best reputations for high quality physicians may be the most vulnerable in this regard. We propose the following solution to this problem.
 - A) All ISNs should contribute between 1 and 2 percent of revenues to a central pool to be used to level the adverse selection playing field. These funds should be used to:
 - make annual premium adjustments to the ISNs based on the pre-existing conditions of enrollees.
 - 2) create a reinsurance fund to be used to provide care for patients exceeding \$20,000 in services for any single episode of illness,

- 3) pay for selected high technology services which will be offered at no charge to ISNs by centers designated by the state. Some examples of the services are as follows:
 - a) bone marrow, heart, pancreas transplantation.
 - b) sterieotactic radiosurgery.
 - c) genetic therapy.
 - d) treatment of cancer with new chemotherapeutic agents.
- B) To offset this tax on ISNs, the funds required to subsidize health insurance premiums for low income Minnesotans should be obtained by taxing a portion of both the employer and employee contributions to health insurance, rather than through ISN taxes.
- 4. ISNs should be encouraged to mainstream all special populations into a high quality health care program. For some populations, this will entail significant extra costs. Consequently, grants will need to be made to ISNs to encourage them to allocate additional resources to these populations as they bring them into their health care programs.
- 5. All ISNs should be required to furnish specific report card data on their operations, such as immunization rates, etc., and these data should be displayed in a user friendly way to consumers. The effort now underway in this area by the BHCAG provides a good model for ISN data.

- 6. To be licensed in the state, ISNs should be required to demonstrate that they have the capacity to provide high-quality services to enrollees. Consequently, licensure applications should at least include information about the following:
 - A) Evidence that the ISN has binding agreements with a sufficient number and mix of hospitals, physicians, dentists, and other clinicians to provide the services outlined in the benefit package.
 - B) Evidence that the ISN has sufficient management capacity to administer the program in a responsible manner.
 - C) Evidence of a sound financial plan including provisions for financial exigencies.
 - D) Evidence that high cost complex technologies are sufficiently concentrated in settings that assure high quality cost-effective services.
 - E) Evidence that the ISN has a sound quality assurance program including patient outcomes measures.

All of these factors should be included in the application submitted to the appropriate state agency for approval to operate as an ISN in Minnesota. The RFP developed by the Business Health Care Action Group to select a provider organization for their self-insured program provides a good outline of the elements which should be included in an application for ISN status.

We find no immediate reason to regulate ISNs beyond that suggested above. A regulatory environment that enables ISNs to pursue a wide variety of alternate strategies and structures will best serve the people of Minnesota under a managed care approach to health care delivery. However, this assumes continued improvement

in the organization of the demand side of the market through MinnesotaCare and through buying coalitions sponsored by the private sector. It will be important to encourage the development of multiple health care purchasing alliances or to facilitate, easy direct enrollment of individuals and families into ISNs in order to maintain a competitive market. The concentration of buying power into fewer purchasing groups could erode competition since ISNs will not be able to maximize their unique capabilities to respond to local or niche markets under those conditions. This ultimately could result in few competing plans and little price or quality competition.