

**DHS – Coordinated Care Delivery System (CCDS)  
Final Report**

**CCDS Quarters 1, 2 and 3**

**Services provided June 2010 through February 2011**

Minnesota Statutes, § 256D.031

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## Introductory notes

### Background

The Coordinated Care Delivery Systems (CCDS) program was created in 2010 (Laws of 2010, Chapter 200<sup>1</sup>) along with other major changes to the eligibility and care delivery of the state funded General Assistance Medical Care (GAMC) program. The impetus for the overhaul of the GAMC program was the line item veto of all GAMC funding by Governor Tim Pawlenty during the 2009 legislative session. The CCDS program, along with the Prescription Drug Pool, was created to retain much of the eligibility of the GAMC program, but to find a new way to fund and deliver care to this population for approximately one-third of its historical funding.

The major overhaul to the GAMC program, including CCDS as the most significant change, were created by Law effective on March 26, 2010 and implemented June 1, 2010. The Minnesota Department of Human Services (the department) and its CCDS hospital partners had to move rapidly during two month time frame to implement an entirely new funding and care delivery arrangement for GAMC enrollees.

The 2010 Minnesota Legislature also authorized an expansion of Medical Assistance (MA) for certain adults without children who have incomes at or below 75% of the federal poverty guidelines (FPG). The law required the current or subsequent governor to sign an executive order by January 15, 2011, to begin implementation of the MA expansion. The law also repealed GAMC upon implementation of the MA expansion. On January 5, 2011, Governor Mark Dayton signed an executive order instructing the Minnesota Department of Human Services (department) to implement the MA expansion effective March 1, 2011.

As a result of the MA expansion, the department terminated CCDS on February 28, 2011 and enrolled all GAMC enrollees in MA. The CCDS hospitals provided services to 70% of the total GAMC population for nine months -- from June 2010 through February 2011.<sup>2</sup>

Time line:



### What is a CCDS?

The CCDS program was designed as limited block grant-type funding to eligible hospitals to provide services and coordinate care for GAMC enrollees who enrolled in a CCDS. CCDSs were hospital-based

<sup>1</sup> Minnesota Statutes, section 256D.031 allowed GAMC enrollees to enroll in a hospital-based Coordinated Care Delivery System (CCDS) to receive comprehensive health care services. Minnesota Statutes, section 256D. subd.3. provided for outpatient prescription drug coverage for GAMC enrollees regardless of CCDS enrollment.

<sup>2</sup> This percentage is based on the total GAMC population as of May 2010.

service delivery systems for GAMC and GAMC eligible recipients. CCDS hospitals were responsible for providing and coordinating hospital and clinic services for eligible clients enrolled in its CCDS.

CCDSs were required to provide a set of comprehensive and medically necessary health services which included inpatient and outpatient hospital services, physician services, mental health services, and medical transportation (other funding sources covered prescription drug and chemical dependency services). Participating hospitals had significant flexibility in the services they could provide to enrollees and how the funding was used to reimburse providers and pay for services not historically covered by GAMC. This could include services to maintain or improve enrollees' health and prevent more expensive care. These sets of services varied among the different CCDSs.

The CCDSs coordinated care through their network of affiliated clinics, and other contracted services. Each CCDS defined its own set of services available through its CCDS, and used their own resources to define the set of available services. Within these service categories, CCDSs had flexibility in how they could authorize or limit the services they made available to their enrollees. This was a significant change from the historic GAMC program that included a mandated benefit set similar to the Medical Assistance (Medicaid) program.

Becoming a CCDS was voluntary. The four hospitals that agreed to become CCDSs made investments such as clinic infrastructure, staffing, call center/contact center, management and physician oversight, in order to meet state needs to serve the GAMC population.

### **Which hospitals volunteered to become a CCDS?**

During the nine months of the program, the department contracted with four CCDS hospitals to provide services to GAMC enrollees:

- **Hennepin County Medical Center (HCMC)** - Minneapolis
- **North Memorial Medical Center** - Robbinsdale
- **Regions Hospital** – St. Paul
- **University of Minnesota Medical Center, Fairview (UMMC/Fairview)** - Minneapolis

Although the four participating hospitals were located in the metropolitan area, they were open to all GAMC eligible enrollees statewide. No Greater Minnesota hospitals elected to develop a CCDS, which presented challenges to serving the outstate GAMC population.

### **Outpatient Prescription Drug Coverage – available to all GAMC enrollees**

As referenced above, Minnesota legislation established an outpatient prescription drug pool for GAMC enrollees. GAMC enrollees were eligible for outpatient prescription drug coverage whether they were enrolled in a CCDS or not. The CCDSs paid the State a quarterly assessment equal to 20% of the State's payments for outpatient prescription drugs for recipients of services through the CCDS. The State calculated the assessment amount based on the payments made during the previous quarter.

### **CCDS program challenges**

Some of the challenges encountered during implementation included enrollee education about their coverage and the ability for CCDSs to get provider contracts in place. These challenges were primarily due to the extremely short time frame in which the program had to be implemented. Another significant challenge was the change in funding, both in its limit compared to historic spending in the GAMC program, its type (i.e. block grant versus fee-for-service or managed care), and the distribution (i.e. based on historical funding versus services delivered or adjusted for patient illness burden). Although there were

significant challenges in the implementation and operation of this program, most significantly for GAMC enrollees, the CCDS hospitals were able to adopt new models of care and better coordination of care, particularly with social services. The health care system can use these experiences to glean valuable lessons.

### **Report objective and organization**

The report objective is to describe how the CCDS model worked during its 9 months of operation.

This report is organized as follows:

1. Enrollment
2. Demographics
3. Health status – diagnostic categories
4. Health care utilization
5. Service costs

The CCDSs were free to provide additional information to the department on the manner in which they served the CCDS clients. Sometimes, they used innovative solutions that could not be reported on a standard claim or via the CCDS Web reporting system. CCDSs could also report costs and services provided to non-CCDS GAMC recipients -- clients who opted not to enroll in a CCDS but were in need of health care. If a CCDS reported this optional information, it is also summarized in this report (Appendix B).

Additional information provided in appendices:

- [Appendix A](#) – the 9-month comparison report - describes the characteristics of three adult client groups during the nine months beginning June 1, 2009.
  - Group A (GAMC clients who later enrolled in CCDS)
  - Group B (GAMC clients who never enrolled in CCDS), and
  - Group C (a comparison group of MinnesotaCare adults without children)
- [Appendix B](#) contains the CCDSs' reports, if provided, on their experience with the CCDS service delivery model. HCMC, Regions Hospital, and UMMC/Fairview submitted reports on their lessons learned.
- [Appendix C](#) is a University of Minnesota report on the CCDSs' responses to six questions about strategic, operational, and economic lessons learned on the CCDS service delivery model.
- [Appendix D](#) is a presentation from the May 18, 2011 ICSI Colloquium on Coordinated Care Delivery Systems: The why, who, what, when, where and how of CCDS and implications for the future.

### **Conclusions:**

This report concludes that the CCDS health care delivery model was not sustainable over time. The costs significantly exceeded the grant money to fund the program.

As described in the 9-month comparison (Appendix A), the clients who enrolled in CCDS had a much higher burden of health care problems than clients in the other two comparison groups. For example, they were much more likely to have chronic disease diagnoses such as diabetes, asthma, and heart disease, and they were much more likely to have chemical dependency and mental health issues, as well.

Appendix A demonstrates that the clients who later enrolled in CCDS had the highest health care service utilization rates of the three groups. In most instances, the second of the three groups – Group B (GAMC clients who never enrolled in CCDS) – had a disease burden and a health care utilization rate that was between Group A (GAMC clients who later enrolled in CCDS) and Group C69.5% –the MinnesotaCare group.

**Tip:** While the statistics in the 9-month comparison groups provide a context for understanding the CCDS patient population, use caution if comparing these with the report. The statistics for the comparison groups report were compiled using standard health care claims data. Reporting requirements for the CCDSs were less stringent and many of the services they provided cannot be quantified on the basis of the information provided.

### **CCDS reporting process - services and costs**

The department allowed the CCDSs to report services and costs by either sending standard fee-for-service health care claims or submitting files via a Web application. The reporting includes services provided directly by a CCDS, its affiliates, or additional contracted clinics. In general, the contracted clinics provided additional or specialty services beyond the services provided by the CCDSs usual affiliated or primary clinics.

It is important to note that a variety of community partners also provided services to CCDS enrollees as charity care. None of those charity care services and costs, including the CCDSs charity care partners, are reflected in this report.

### **Health care, enrollment, and cost data**

The service utilization and cost data are from the CCDSs, and enrollment and pharmacy claims data are from the DHS data warehouse. This report combines data from both sources in order to report the utilization and cost as completely as possible.

Due in part to the limited funding and timing associated with establishing the CCDS programs, the CCDS hospitals experienced some challenges in collecting and reporting the required data. One had difficulty tracking individual enrollees when they received services from contracted clinics. This report includes services and costs for these unidentified enrollees whenever possible.

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## I. Enrollment

### Enrollment Limits

The contract between the State of Minnesota and the participating hospitals (CCDSs) included a limit on enrollment due to the locations of the CCDS hospitals. Because the CCDSs were located in the core of the Twin City Metro area, this created access to service challenges for enrollees in the greater metro area, and more importantly outside the seven-county metro area of the state. CCDS enrollment capacity was just under 50% of total GAMC average monthly eligibles for the program. The department would close a CCDS to new enrollment once a CCDS reached their limit. During the 9-month program, the department closed – and subsequently reopened – new enrollment for all CCDSs except for HCMC, which had the highest enrollment limit.

#### Enrollment limits

CCDS:	number of people		
	Quarter 1	Quarter 2	Quarter 3
HCMC	9,656	8,249	8,372
North Memorial Medical Center	1,977	1,689	1,714
Regions Hospital	3,465	2,961	3,005
UMMC/Fairview	2,447	2,091	2,122
<b>Total</b>	<b>17,545</b>	<b>14,990</b>	<b>15,213</b>

The CCDS hospitals started enrolling the GAMC population June 1, 2010. Overall, total enrollment increased by 75% from June 2010 to February 2011.

Table 1 shows the number of CCDS enrollees by month, and the total unduplicated count of enrollees for Quarters 1, 2, and 3 (June 2010 – February 2011). There may be duplication between CCDSs; an enrollee may have been enrolled in more than one CCDS during the quarter.

**Table 1: CCDS Enrollment**

CCDS	Total Enrollment by Month and Unduplicated Enrollment by Quarter											
	June	July	Aug	Quarter 1 Total Unduplicated Count of Enrollees	Sept	Oct	Nov	Quarter 2 Total Unduplicated Count of Enrollees	Dec	Jan	Feb	Quarter 3 Total Unduplicated Count of Enrollees
	2010						2011					
HCMC	2,588	3,557	4,519	4,810	6,009	7,143	7,758	8,699	7,912	7,879	7,638	9,109
North Memorial Medical Center	1,568	2,121	2,108	2,307	1,958	1,692	1,693	2,224	1,711	1,757	1,886	2,247
Regions Hospital	2,253	2,910	3,407	3,657	3,295	2,948	2,624	3,296	2,554	2,685	2,897	3,451
UMMC/Fairview	1,683	2,195	2,575	2,751	2,399	2,130	1,874	2,400	1,747	1,714	1,743	2,168
<b>Totals</b>	<b>8,092</b>	<b>10,783</b>	<b>12,609</b>	<b>13,525</b>	<b>13,661</b>	<b>13,913</b>	<b>13,949</b>	<b>16,619</b>	<b>13,924</b>	<b>14,035</b>	<b>14,164</b>	<b>16,975</b>

#### Notes for Table 1:

1. Enrollment numbers are from the DHS data warehouse.
2. Counts include enrollees if enrolled for even one day in a CCDS. Counts can include an enrollee in more than one CCDS during a quarter.
3. The unduplicated count of recipients who enrolled during the 9-month program is 22,531, which is 69.5% of the total GAMC enrollees as of May 2010.

The total number of individual (i.e., 'unduplicated') clients enrolled in the 9-month program was:

HCMC	11,003
North Memorial Medical Center	3,346
Regions Hospital	4,904
UMMC/Fairview	<u>3,278</u>
	22,531

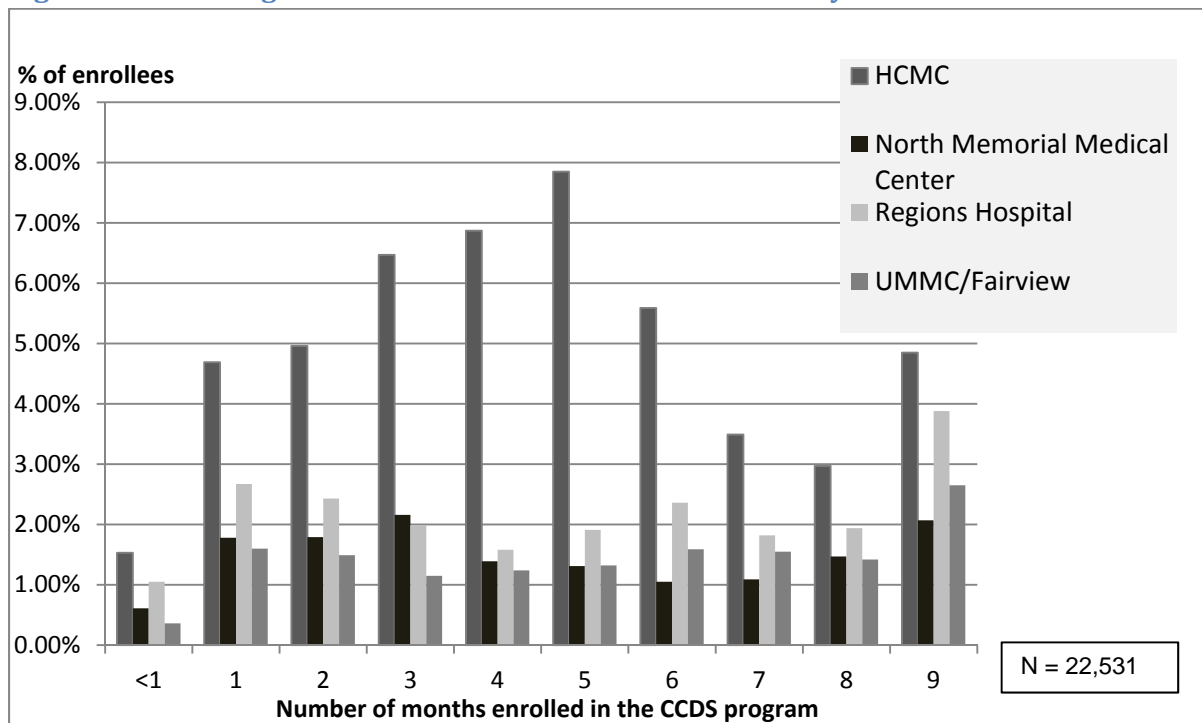
As shown, 22,531 clients were enrolled at some point in the CCDS program. This 22,531 figure includes 7,100 new enrollees who had no previous MHCP enrollment during the 9 month comparison time frame (Group A – GAMC clients who later enrolled in CCDS). The CCDSs served 70% of the total GAMC enrollees (based on the GAMC enrollment as of May 2010) over the 9-month program.

**Enrollment characteristics**

Enrollment data from the DHS data warehouse showed that approximately 97% of the CCDS enrollees stayed with one CCDS. The program allowed CCDS enrollees to enroll and leave, or switch to different CCDSs; this was true for 713, or 3% of enrollees.

Approximately 33% of the population enrolled for an average of 4 to 6 months, and 13% stayed for the entire 9-month span. This is in contrast with 4% who enrolled for less than one month (Figure 1).

**Figure 1: Total Length of Enrollment in Months and Percent by CCDS**



Notes for Figure 1:

1. This figure displays the CCDS in which clients were enrolled and the number of months they were enrolled. For example, the dark gray column in the first (<1) cluster of columns shows that about six-tenths of 1% of the total 22,531 clients had less than one month of enrollment and that enrollment was in the North Memorial Medical Center CCDS. All columns together sum to 100% of the enrollees. [HCMC had the most enrollees (49.3%), followed by Regions Hospital (21.6%), North Memorial (14.7%), and finally UMMC/Fairview (14.4%).]
2. The 'N' represents the total unduplicated count of enrollees over the 9-month program.
3. Enrollment months are calculated by counting the number of enrollment days for each CCDS client and dividing by 30.33 (average number of days in a month for the 9-month program). CCDS enrollment could begin on any day of a given month.

## CCDS Grant Payments

The CCDSs received the following grant payments for quarters 1, 2 and 3:

CCDS:	Quarter 1	Quarter 2	Quarter 3	Total Payments
HCMC	\$9,128,357.86	\$8,002,689.16	\$8,513,476.04	\$25,644,523.06
North Memorial Medical Center	\$1,689,228.12	\$1,842,483.40	\$1,795,395.66	\$5,327,107.18
Regions Hospital	\$3,280,686.46	\$3,348,591.22	\$3,042,838.33	\$9,672,116.01
UMMC/Fairview	\$2,318,394.23	\$2,427,523.21	\$2,079,487.40	\$6,825,404.84
<b>Total</b>	<b>\$16,416,666.67</b>	<b>\$15,621,286.99</b>	<b>\$15,431,197.43</b>	<b>\$47,469,151.09</b>

Table 2 illustrates the relationship between enrollment and grant payments -- the percentage of enrollees for each CCDS by quarter and the percentage of grant payments. The grant payments show the dollars after the outpatient pharmacy benefits are subtracted.

The CCDS funding formula was provided in statute and was based on a participating hospital's historic GAMC payments for inpatient and outpatient services under the fee-for-service program. The statute further provided the department with the authority to adjust the final payments to CCDSs based on their actual enrollment experience. Both the second and third quarter CCDS payments to hospitals were adjusted to reflect enrollment in the previous quarter. Because of the variation in the four participating hospitals' historical GAMC payments and the enrollment experience over the nine months of the program, the actual grant amounts paid to CCDSs differed slightly. This created a slight disparity between the enrollment and the grant dollars. This is particularly evident in quarter 1 for HCMC. Their enrollment continued to increase throughout the program.

**Table 2: CCDS Enrollment Distribution as a Percentage of Grant Payments**

CCDS	Percent of enrollment	Percent of grant payment	Percent of enrollment	Percent of grant payment	Percent of enrollment	Percent of grant payment
	Quarter 1		Quarter 2		Quarter 3	
HCMC	35.6%	55.6%	52.3%	51.2%	53.7%	55.2%
North Memorial Medical Center	17.1%	10.3%	13.4%	11.8%	13.2%	11.7%
Regions Hospital	27.0%	20.0%	19.8%	21.4%	20.3%	19.6%
UMMC/Fairview	20.3%	14.1%	14.4%	15.5%	12.8%	13.6%
<b>Totals</b>	100%	100%	100%	100%	100%	100%

Notes for Table 2:

1. Enrollment numbers are from Table 1 – total unduplicated count of enrollees. is the net grant payments listed in Table 13.

## II. Demographic profile

The following tables describe the CCDS population. This population was comprised of low-income, childless adults aged 21- 64. <sup>3</sup> Slightly more than two-thirds (68%) were males. Fewer than half (42.4%) identified themselves as White. In this way, the CCDS clients were very similar to those in Groups A and B described in Appendix A. This is as expected since the CCDS program served the GAMC population. However, the CCDS clients differed from Group C. Group C was somewhat older, had slightly more females than males, and had a strong majority (80%) of clients who identified as White.

Group A (GAMC clients who later enrolled in CCDS) varies slightly from the CCDS enrollees demographic profile because there were people who enrolled in CCDS who had no previous MHCP experience during the 9-month comparison time frame (7,100 new enrollees). There is a slightly different distribution, but not significant. For example, there were more males who enrolled in CCDS than in Group A (68% compared to 66.4%), and more CCDS enrollees in the 21-24 age group than in Group A (13.7% compared to 9.7%).

**Table 3: Distribution of Age Groups**

Number of CCDS enrollees	Age Groups						Total	Mean age
	21 – 24	25 – 34	35 – 44	45 – 54	55 – 64			
	3,088	5,552	4,861	6,083	2,912	22,496	39.8	
Percent	13.7%	24.7%	21.6%	27.0%	12.9%	100.0%		

Notes for Table 3:

1. This table calculates age at the end of the CCDS quarter 3 (February 28, 2011).
2. Age data are calculated using birthdates from the DHS data warehouse.

**Table 4: Gender Distribution**

CCDS enrollees	Total Number of Enrollees	Percent of Total Enrollment	
	All	Female	Male
	22,496	32.0%	68.0%

Notes for Table 4:

1. Gender data are from the DHS data warehouse.

**Table 5: Distribution of Racial/Ethnic Groups**

Race/Ethnicity	Number	Percent
White	9,537	42.4%
Black	9,790	43.5%
American Indian / Alaskan Native	1,208	5.4%
Asian / Pacific Islander	739	3.3%
Other <sup>2</sup>	486	2.2%
Hispanic <sup>1</sup>	736	3.3%
<b>Total</b>	<b>22,496</b>	<b>100.0%</b>

Notes for Table 5:

1. Includes all races who indicated Hispanic ethnicity
2. Includes those who chose two or more races, those who chose some other race, and those who did not choose a race
3. Race/ethnicity data are from the DHS data warehouse

<sup>3</sup> Thirty-five (35) enrollees were not included in Tables 3, 4 and 5 because their ages were outside the age group parameters. This occurred because age is calculated at the end of the 9-month CCDS program, which was February 28, 2011. People may have enrolled at the age of 64 and by the end of the program were 65.

### III. Health status - diagnostic categories

This section presents the diagnoses prevalent in this population. The CCDSs reported enrollees' diagnosis codes on standard health care claims, or files via a Web application. Table 6 shows six chronic disease categories and three general diagnostic categories and reports the percent of enrollees with at least one diagnosis related to services provided during the 9-month CCDS program.

From 20% to 35% of clients had diagnoses in each of the broad categories of 'chemical dependency', 'mental health', or 'injury and poisoning'. For comparison, the 9-month comparison report (Appendix A) shows that the clients who enrolled in CCDS were from 30% to fully 250% more likely to have such diagnoses than Group C (a comparison group of MinnesotaCare adults without children).

Many CCDS clients (about one in five) also had a hypertension diagnosis. Appendix A shows that Group A (GAMC clients who later enrolled in CCDS) had almost twice as many hypertension diagnoses as Group B (GAMC clients who did not enroll in CCDS).

**Table 6: Percent of Enrollees with Diagnoses in Selected Categories**

CCDS	Chemical Dependency	Mental Health	Injury and Poisoning	Chronic Diseases					
				Asthma	Diabetes / Retinopathy	Heart	Hypertension	Cirrhosis and Chronic Liver Disease	Kidney Disease
HCMC	32.5%	30.1%	26.4%	8.0%	8.5%	9.6%	20.0%	4.7%	3.2%
North Memorial Medical Center	27.6%	27.2%	21.8%	8.0%	7.4%	5.6%	18.1%	3.7%	3.4%
Regions Hospital	29.9%	37.8%	29.3%	7.4%	8.8%	9.3%	19.4%	3.8%	4.6%
UMMC/Fairview	30.3%	34.9%	20.7%	6.1%	8.4%	6.7%	15.7%	5.9%	3.4%

Notes for Table 6:

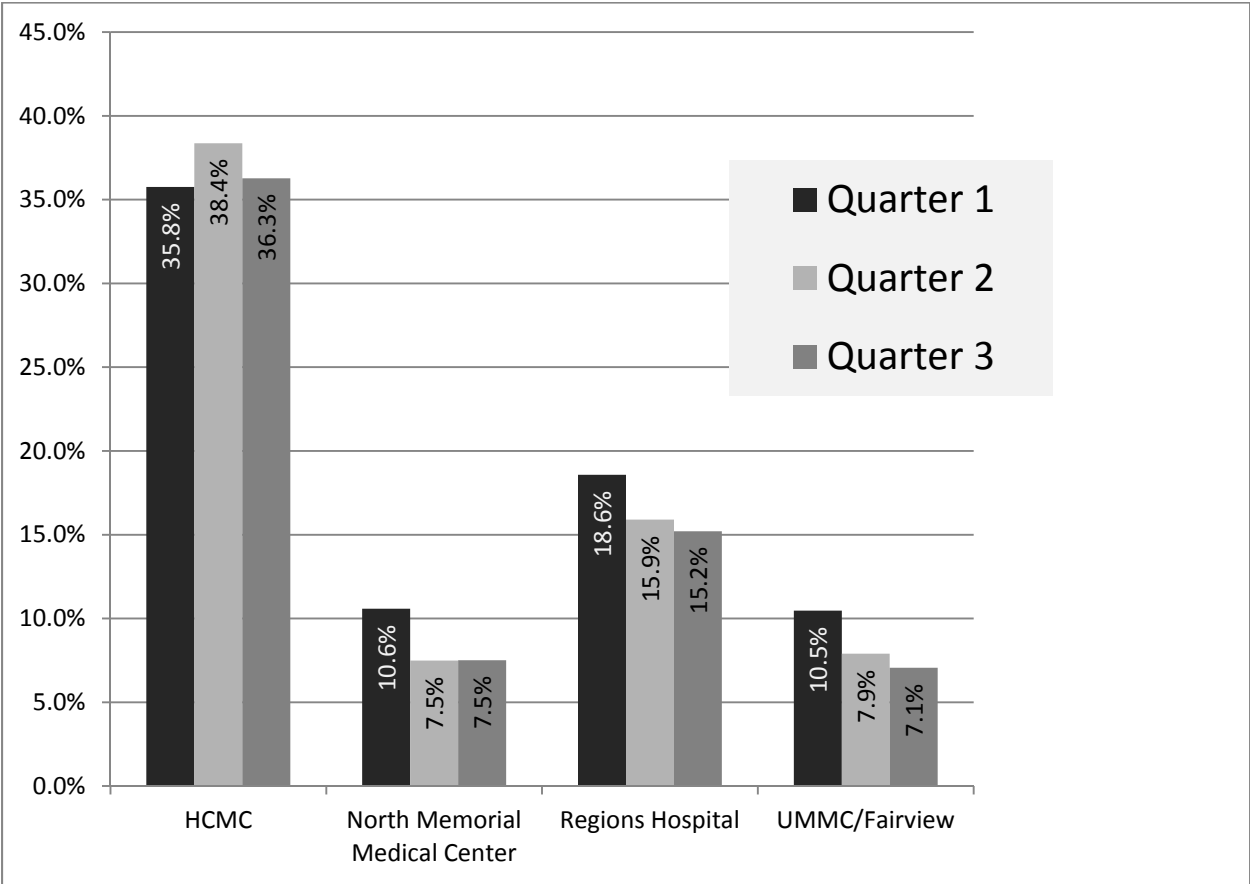
1. This table bases percentages on records where the CCDS reported diagnosis codes and identified unique individuals.
2. There may be duplication between the diagnostic categories; an enrollee can be in more than one category.
3. Refer to [Appendix F](#) for a complete listing of the ICD 9 diagnoses used to identify the diagnostic categories.
4. See [Appendix E](#) Universal Table Notes

### IV. Health care utilization

The CCDSs reported enrollees' health care utilization to the department by either standard health care claims, or files via a Web application. Figure 2 displays the percentage of CCDS enrollees served by CCDS for the 9-month program. Percentages are derived from a comparison of the total number served as reported by the CCDSs to the total number of GAMC enrollees participating in the CCDS program according to DHS enrollment files.

Based on DHS enrollment data compared to the reported number served by the CCDSs, the CCDSs served approximately 75.4% of CCDS enrollees in Quarter 1, 69.7% of CCDS enrollees in Quarter 2, and 66.1% of CCDS enrollees in Quarter 3.

Figure 2: Percentage of CCDS population served by CCDS



Notes for Figure 2:

- 1. This figure bases percentages on records where the CCDSs reported unique individuals.
- 2. This figure may represent an incomplete share of CCDS enrollees because Regions Hospital did not report client specific data for contracted services provided during quarter 1.

## Emergency Department Visits

Table 7 shows the number of CCDS emergency department (ED) visits, and the rate of visits per 100 enrollees. These include ED visits to the CCDSs emergency departments, and ED visits to contracted sites.

The CCDS clients had about one-seventh to one-eighth more ED visits during the 9-month program than Group A (GAMC clients who later enrolled in CCDS). By comparison, Group A had about one-half to two-thirds more ED visits than Group B (GAMC clients who never enrolled in CCDS), and they had fully four times as many such visits as Group C (a comparison group of MinnesotaCare adults without children).

**Table 7: Emergency Department Visits**

CCDS	Total number of ED visits				ED visits per 100 enrollees		
	Quarter 1	Quarter 2	Quarter 3	Total Visits	Quarter 1	Quarter 2	Quarter 3
HCMC	2,440	4,172	3,978	10,590	51	48	44
North Memorial Medical Center	1,329	965	874	3,168	58	43	39
Regions Hospital	3,375	2,886	1,274	7,535	92	88	37
UMMC/Fairview	1,335	1,020	741	3,096	49	43	34

Notes for Table 7:

1. This table includes the emergency department visits provided by the CCDSs, in addition to any emergency department visits provided by a contracted provider network.
2. Enrollment numbers used to calculate visits per 100 enrollees are from Table 1; unduplicated count of enrollees

### Physician and other professional visits

Table 8 shows the number of CCDS professional and physician visits, and the rate of visits per 100 enrollees. These numbers include outpatient visits, and can include visits to contracted clinics in addition to visits to the CCDS hospitals and their affiliated clinics.

The CCDS clients had about 25% fewer physician and other professional visits than Group A (GAMC clients who later enrolled in CCDS). During the comparison period, Group A had about 25% to 60% more physician and other professional visits than the Groups B (GAMC clients who never enrolled in CCDS) and C (a comparison group of MinnesotaCare adults without children).

**Table 8: Physician and Other Professional Visits**

CCDS	Total number of Professional and Physician visits				Professional and Physician visits per 100 enrollees		
	Quarter 1	Quarter 2	Quarter 3	Total Visits	Quarter 1	Quarter 2	Quarter 3
HCMC	13,043	16,205	15,451	44,699	271	186	170
North Memorial Medical Center	4,146	3,910	3,415	11,471	180	176	152
Regions Hospital	10,189	8,740	8,804	27,733	279	265	255
UMMC/Fairview	3,946	4,476	4,439	12,861	143	187	205

**Notes for Table 8:**

- This report uses two different definitions to identify professional and physician services:
  - North Memorial Medical Center and UMMC/Fairview; professional and physician visits are identified by CPT codes reported on professional and outpatient claim types.
  - HCMC and Regions Hospital; professional and physician visits are identified by claim type (i.e. professional) for the CCDS hospital and their affiliated clinic services, and includes the mental health, outpatient, primary, and professional visits for the contracted clinic services as reported in the flat files. These are non-standard claims data.
- Enrollment numbers used to calculate visits per 100 enrollees are from Table 1; unduplicated count of enrollees



## Inpatient Care Services

Tables 9 and 10 show utilization of inpatient care services as reported by the CCDS hospitals. The department did not ask the CCDSs to report diagnosis codes for contracted services. As a result, we cannot distinguish between a general and mental health inpatient stay for the contracted services reported by Regions Hospital and HCMC (see note #4 below). Table 9 shows the number of general medical inpatient stays, the rate of stays per 1,000 enrollees, and the average length of stay days. Table 10 displays the same categories, but for mental health inpatient stays. Chemical health inpatient stays are not included in these tables.

Comparing the CCDS enrollees inpatient care utilization with Group A (GAMC clients who later enrolled in CCDS), the CCDS clients had about 8.5% fewer general medical hospital inpatient care stays and 34% fewer mental health related inpatient care stays than Group A.

During the comparison period, Group A had about 10% to 40% more general medical inpatient stays than Group B (GAMC clients who never enrolled in CCDS) and fully 250% to 300% more general medical inpatient stays as Group C (a comparison group of MinnesotaCare adults without children). The disparity was even sharper in the case of Mental Health inpatient stays. Group A had about 20% to 60% more such stays than Group B and about 700% more than Group C.

**Table 9: General Medical Hospital Inpatient Care Stays**

CCDS	Total number of General Medical Inpatient Stays			General Medical Inpatient Stays per 1,000 enrollees			Total General Medical Inpatient Stays	Average Length of Stay Days		
	Quarter			Quarter				Quarter		
	1	2	3	1	2	3		1	2	3
HCMC	165	257	230	34	30	25	652	3.0	3.4	3.2
North Memorial Medical Center	176	130	104	76	58	46	410	5.1	5.5	5.6
Regions Hospital	411	173	205	112	52	59	789	5.0	4.6	5.3
UMMC/Fairview	131	113	113	48	47	52	357	5.5	6.0	6.2

**Notes for Table 9:**

- General medical inpatient stays include inpatient stays identified by combinations of medical diagnoses codes for inpatient services as reported by the CCDS hospitals for the reporting quarter.
- For Regions Hospital, the table bases the number of recipients who received services on the following two assumptions:
  - The report uses the CCDS Reference ID as the unique identifier for the person if the Recipient ID is zero-filled
  - The report uses the submitted Recipient ID as the unique identifier, even if the submitted Recipient ID's format is inconsistent with the department's Recipient ID.
- The table incorporates the following business logic: we identify a general medical inpatient stay if the majority of diagnosis codes (on the claim or on the file submitted by a CCDS) are not mental health or chemical health. In the event of a tie, we give preference to the mental health related inpatient stay.
- The department did not ask the CCDSs to report diagnosis codes for contracted services. As a result, we cannot distinguish between a general and mental health inpatient stay for the contracted services reported by Regions Hospital and HCMC. HCMC reported 65 contracted inpatient stays with an average length of stay days of 2.0, and Regions Hospital reported 280 contracted inpatient stays with an average length of stay days of 12.1, during the 6 month reporting period. These stays are not included above.
- The number and category of diagnosis codes are used to classified inpatients stays as mental health, chemical health or general medical. We do not use the order of the diagnoses submitted on the claim or the files submitted to the CCDS Web reporting system as an indication of primary or secondary diagnoses.
- Enrollment numbers used to calculate inpatient stays per 1000 enrollees are from Table 1; unduplicated count of enrollees

**Table 10: Mental Health Related Inpatient Care Stays**

CCDS	Total number of Mental Health Related Inpatient Stays			Mental Health Related Inpatient Stays per 1,000 enrollees			Total Mental Health Related Inpatient Stays	Average Length of Stay Days		
	Quarter			Quarter				Quarter		
	1	2	3	1	2	3		1	2	3
HCMC	11	17	16	2	2	2	44	3.2	3.6	3.2
North Memorial Medical Center	13	4	4	6	2	2	21	4.3	8.0	8.3
Regions Hospital	102	48	24	28	15	7	174	11.0	7.0	5.3
UMMC/Fairview	15	14	9	5	6	4	38	8.7	10.8	5.7

## Notes for Table 10:

1. Mental health related inpatient stays include inpatient stays identified by combinations of medical and mental health diagnoses codes for inpatient services as reported by the CCDS hospitals for the reporting quarter.
2. For Regions Hospital, the table bases the number of recipients who received services on the following two assumptions:
  - a. The report uses the CCDS Reference ID as the unique identifier for the person if the Recipient ID is zero-filled
  - b. The report uses the submitted Recipient ID as the unique identifier, even if the submitted Recipient ID's format is inconsistent with the department's Recipient ID.
3. The table incorporates the following business logic: we identify a mental health inpatient stay if the majority of diagnosis codes (on the claim or on the file submitted by a CCDS) are not general medical or chemical health. In the event of a tie, we give preference to the mental health related inpatient stay.
4. The department did not ask the CCDSs to report diagnosis codes for contracted services. As a result, we cannot distinguish between a general and mental health inpatient stay for the contracted services reported by Regions Hospital and HCMC. HCMC reported 65 contracted inpatient stays with an average length of stay days of 2.0, and Regions Hospital reported 280 contracted inpatient stays with an average length of stay days of 12.1, during the 6 month reporting period. These stays are not included above.
5. The number and category of diagnosis codes are used to classify inpatient stays as mental health, chemical health or general medical. We do not use the order of the diagnoses submitted on the claim or the files submitted to the CCDS Web reporting system by CCDS hospitals as an indication of primary or secondary diagnoses.
6. Enrollment numbers used to calculate inpatient stays per 1000 enrollees are from Table 1; unduplicated count of enrollees

## Pharmacy Utilization

DHS provided the outpatient pharmacy benefit. CCDSs were not responsible for outpatient pharmacy benefits. Table 11 shows the outpatient pharmacy utilization by CCDS enrollees for quarter 1, 2 and 3. The claims data include only paid fee-for-service pharmacy claims for CCDS enrollees during their enrollment spans with a CCDS.

The CCDS clients filled about four to six prescriptions, on average, per quarter. For comparison, Appendix A shows that Group A (GAMC clients who later enrolled in CCDS) averaged about six to seven prescriptions per quarter during the 9-month comparison period, versus about four and one-half for Group B (GAMC clients who never enrolled in CCDS), and about six per quarter for Group C (a comparison group of MinnesotaCare adults without children).

**Table 11: Pharmacy Utilization**

CCDS	Percentage of enrollees with no prescriptions			Percentage of enrollees with one or more prescriptions			Average number of prescriptions filled per client		
	Quarter			Quarter			Quarter		
	1	2	3	1	2	3	1	2	3
HCMC	41.4%	43.4%	44.9%	58.6%	56.6%	55.1%	4.4	4.3	4.6
North Memorial Medical Center	37.4%	42.4%	43.6%	62.6%	57.6%	56.4%	5.1	5.2	4.6
Regions Hospital	41.5%	41.2%	46.4%	58.5%	58.8%	53.6%	4.6	5.5	4.8
UMMC/Fairview	40.7%	39.6%	41.7%	59.3%	60.4%	58.3%	4.8	5.7	5.7

Notes for Table 11:

1. Enrollment numbers show distinct counts by quarter. Totaling these numbers across a CCDS would result in artificially inflated counts because the same enrollee could be enrolled with the same CCDS in different quarters.
2. Average number of prescriptions filled per client is calculated by dividing the number of prescriptions by the total number of enrollees.

## V. Estimated service costs

The CCDSs reported their costs of services for each of the three quarters. Table 12 is limited to the CCDSs costs for services and their network clinics, as well as the costs from the contracted clinics. Any costs outside of the reported costs of services – such as building the CCDS service delivery model infrastructure – are not included in this table.

**Table 12: Estimated Aggregate Services Costs**

CCDS			HCMC	North Memorial Medical Center	Regions Hospital	UMMC/Fairview
Inpatient Services Costs	Quarter	1	\$2,775,311.91	\$1,315,225.22	\$2,970,110.15	\$1,588,734.60
		2	\$3,454,333.18	\$1,227,944.22	\$2,206,854.90	\$1,491,355.61
		3	\$3,432,790.34	\$849,303.33	\$3,032,806.47	\$1,326,645.66
Outpatient and Professional Services Costs	Quarter	1	\$5,201,037.38	\$1,285,104.26	\$3,571,931.81	\$2,004,680.12
		2	\$8,006,111.31	\$1,134,636.21	\$2,564,325.31	\$1,926,873.79
		3	\$8,414,400.49	\$935,483.59	\$2,542,190.25	\$2,103,778.55
Total Estimated Costs of Services	Quarter	1	\$7,976,349.29	\$2,600,329.48	\$6,542,041.96	\$3,593,414.72
		2	\$11,460,444.49	\$2,362,580.43	\$4,771,180.21	\$3,418,229.40
		3	\$11,847,190.83	\$1,784,786.92	\$5,574,996.72	\$3,430,424.21
<b>Combined Total – Quarter 1, 2 and 3</b>			<b>\$31,283,984.61</b>	<b>\$6,747,696.83</b>	<b>\$16,888,218.89</b>	<b>\$10,442,068.33</b>
Notes for Table 12:						
<ol style="list-style-type: none"> <li>HCMC and Regions Hospital: Outpatient and Professional Services Costs include Specialty Costs, Primary Clinic Costs, Emergency Costs, Outpatient Costs, and Mental Health Costs as reported by the CCDSs.</li> <li>Community partners' services costs, such as charity care, are not reflected in these services costs.</li> <li>The total estimated aggregate services costs for all four CCDSs are \$65,361,968.66</li> </ol>						

For ease of comparison, Table 13 lists the CCDS quarters 1, 2, and 3 grant payments.

**Table 13: Average Income / Loss in dollars per enrollee by CCDS Quarter**

	Grant Payments	Enrollment	Estimated Aggregate Services Costs	Average Payment per enrollee	Average Cost per enrollee	Average Income / Loss in dollars per enrollee
<b>CCDS Quarter 1</b>						
HCMC	\$9,128,357.86	4,810	\$7,976,349.29	\$1,898	\$1,658	\$240
North Memorial Medical Center	\$1,689,228.12	2,307	\$2,600,329.48	\$732	\$1,127	(\$395)
Regions Hospital	\$3,280,686.46	3,657	\$6,542,041.96	\$897	\$1,789	(\$892)
UMMC/Fairview	\$2,318,394.23	2,751	\$3,593,414.72	\$843	\$1,256	(\$463)
Totals	\$16,416,666.67	13,525	\$20,712,135.45	\$1,214	\$1,521	(\$318)
<b>CCDS Quarter 2</b>						
HCMC	\$8,002,689.16	8,699	\$11,460,444.49	\$920	\$1,317	(\$397)
North Memorial Medical Center	\$1,842,483.40	2,224	\$2,362,580.43	\$828	\$1,062	(\$234)
Regions Hospital	\$3,348,591.22	3,296	\$4,771,180.21	\$1,016	\$1,448	(\$432)
UMMC/Fairview	\$2,427,523.21	2,400	\$3,418,229.40	\$1,011	\$1,384	(\$413)
Totals	\$15,621,286.99	16,619	\$22,012,434.53	\$940	\$1,319	(\$385)
<b>CCDS Quarter 3</b>						
HCMC	\$8,513,476.04	9,109	\$11,847,190.83	\$935	\$1,301	(\$366)
North Memorial Medical Center	\$1,795,395.66	2,247	\$1,784,786.92	\$799	\$794	\$5
Regions Hospital	\$3,042,838.33	3,451	\$5,574,996.72	\$882	\$1,615	(\$734)
UMMC/Fairview	\$2,079,487.40	2,168	\$3,430,424.21	\$959	\$1,582	(\$623)
Totals	\$15,431,197.43	16,975	\$22,637,398.68	\$909	\$1,334	(\$425)
<b>All Quarters</b>						
HCMC	\$25,644,523.06	11,003	\$31,283,984.61	\$2,331	\$2,843	(\$513)
North Memorial Medical Center	\$5,327,107.18	3,346	\$6,747,696.83	\$1,592	\$2,017	(\$425)
Regions Hospital	\$9,672,116.01	4,904	\$16,888,218.89	\$1,972	\$3,444	(\$1,471)
UMMC/Fairview	\$6,825,404.84	3,278	\$10,442,068.33	\$2,082	\$3,185	(\$1,103)
Totals	\$47,469,151.09	22,531	\$65,361,968.66	\$2,107	\$2,901	(\$794)

## Notes for Table 13:

1. Payment per enrollee = Grant payment divided by enrollment
2. Cost per enrollee = Service costs from Table 12 divided by enrollment.
3. Income / Loss per enrollee = Payment per enrollee minus Cost per enrollee
4. Enrollment numbers are distinct counts of enrollees by quarter

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## VI. Services and costs for non-CCDS GAMC recipients – optional reporting

Although CCDSs were not contractually obligated to serve the non-CCDS GAMC recipients, the CCDSs often provided services for these people in order to benefit the patient. The department gave the CCDSs an opportunity to report services and costs for unassigned GAMC recipients not enrolled in a CCDS. This reporting was optional.

**Table 14: Services and Costs for non-GAMC Recipients**

CCDS	Services/Costs	Quarter 1	Quarter 2	Quarter 3	Total
UMMC/Fairview	Number of patients	588	423	303	1,146 <sup>4</sup>
	Costs	\$1,296,699	\$767,508	\$818,839	\$2,883,046
	Costs – facilities other than UMMC	\$2,065,035	\$1,158,578	\$971,421	\$4,195,034
	Number of ED visits	384	288	204	876
	Number of inpatient visits	96	58	56	210
	Average length of stay	3.75	4.60	5.06	4.32 <sup>5</sup>
	Number of Outpatient/Clinic/Professional Services	304	255	131	690
HCMC	Number of patients	2,320	1,579	1,115	5,014
	Costs	\$3,762,392	\$2,575,650	\$1,953,515	\$8,291,557
	Number of ED visits	1,872	1,142	695	3,709
	Number of inpatient visits	180	125	82	387
	Average length of stay	3.6	4.2	5.1	
	Number of Outpatient/Clinic/Professional Services	1,440	862	760	3,062
Notes for Table 14:					
1. UMMC/Fairview is also reporting costs associated with non-CCDS GAMC recipients serviced at facilities other than UMMC (e.g. Southdale Ridges, Lakes, and Northland).					
2. HCMC's reported costs: cost to charge ratio at 50%					

<sup>4</sup> UMMC/Fairview is reporting the total as the unduplicated patient count

<sup>5</sup> UMMC/Fairview: average inpatient length of stay days

## VII. Non Standard services and costs – optional reporting

As part of the coordinated care delivery systems, the CCDSs created unique working prototypes in order to serve this population. These included non-standard services -- services that cannot be reported on a standard health care claim. This section of the report presents the non-standard services and costs as reported by HCMC. This reporting was optional and is displayed as reported.

**Table 15: Non Standard Services and Costs**

CCDS	HCMC
Quarter 1	Certain Non Standard Costs and/or other direct costs for CCDS for HCMC in 2010 included below: <ul style="list-style-type: none"> <li>• Clinic Infrastructure / Staffing / Build out to create a CCDS Tier 3 (high need patients) Clinic. Mid-year Budget of \$1,200,000 approved and implemented against: Assume \$300k of build out Q1 (then assume \$100k per month or \$300k per quarter)</li> <li>• Consulting directly related to HCMC participating in and setting infrastructure for \$150,000</li> <li>• HFA Payments as Medical Staff for HCMC Enrollees. HCMC subcapitation payment to HFA of \$1.2m Q1</li> <li>• Other Costs Not quantified at this time: (All Applicable, not priced out)               <ul style="list-style-type: none"> <li>○ Transportation/Bus Costs</li> <li>○ Call Center/Contact Center focus on CCDS and GA Uncompensated Care</li> <li>○ DME Management and Physician oversight ( Work teams, steering groups, startup and maintenance work) EPIC Setup and changes to track IT Costs quarterly reporting</li> </ul> </li> </ul>
Quarter 2	Certain Non Standard Costs and/or other direct costs for CCDS for HCMC in 2010 included below: <ul style="list-style-type: none"> <li>• Clinic Infrastructure / Staffing / Build out to create a CCDS Tier 3 (high need patients) Clinic. Mid-year Budget of \$1,200,000 approved and implemented against: (Again, assume \$100k per month or \$300k for quarter)</li> <li>• Consulting directly related to HCMC participating in and setting infrastructure for \$50,000 Q2</li> <li>• HFA Payments as Medical Staff for HCMC Enrollees. HCMC subcapitation payment to HFA of \$1.2m Q2</li> <li>• Other Costs Not quantified at this time: (All Applicable, not priced out)               <ul style="list-style-type: none"> <li>○ Transportation/Bus Costs</li> <li>○ Call Center/Contact Center focus on CCDS and GA Uncompensated Care</li> <li>○ DME Management and Physician oversight ( Work teams, steering groups, startup and maintenance work) EPIC Setup and changes to track IT Costs quarterly reporting</li> </ul> </li> </ul>
Quarter 3	Certain Non Standard Costs and/or other direct costs for CCDS for HCMC in 2010 and 2011 included below: <ul style="list-style-type: none"> <li>• Clinic Infrastructure / Staffing / Build out to create a CCDS Tier 3 (high need patients) Clinic. Mid-year Budget of \$1,200,000 approved and implemented against: (Again, assume \$100k per month or \$300k for quarter)</li> <li>• Consulting directly related to HCMC participating in and setting infrastructure for \$50,000 Q3</li> <li>• HFA Payments as Medical Staff for HCMC Enrollees. HCMC subcapitation payment to HFA of \$1,400,000 Q3</li> <li>• Other Costs Not quantified at this time: (All Applicable, not priced out)               <ul style="list-style-type: none"> <li>○ Transportation/Bus Costs</li> <li>○ Call Center/Contact Center focus on CCDS and GA Uncompensated Care</li> <li>○ DME Management and Physician oversight ( Work teams, steering groups, startup and maintenance work) EPIC Setup and changes to track IT Costs quarterly reporting</li> </ul> </li> </ul>

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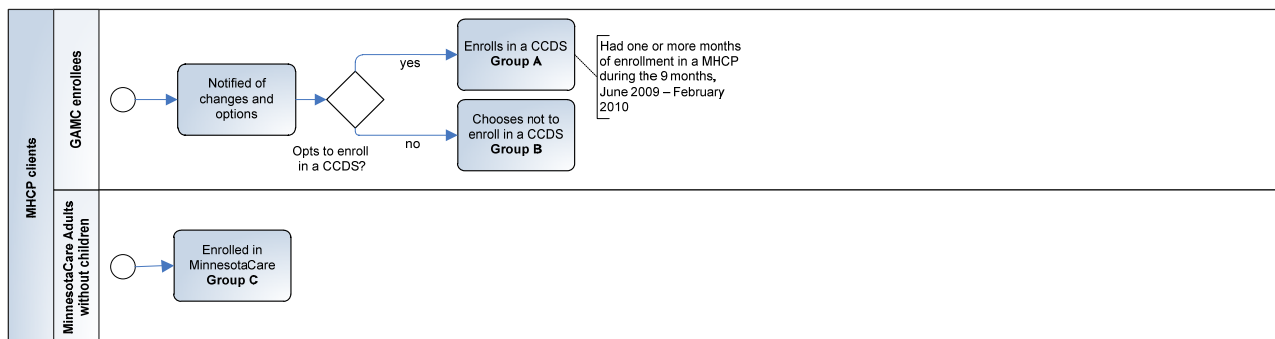
## Appendix A: 9-months comparison – 12 months before CCDS

Because CCDS was a new service delivery model, we identified three comparison groups in order to provide context for better understanding the CCDS model. The clients who enrolled in CCDS largely came from GAMC – a Minnesota Health Care program (MHCP) for low-income adults without children. Although many GAMC enrollees elected to enroll in a CCDS, a greater number of GAMC enrollees did not enroll. This section – Appendix A -- describes the experience of three MHCP client groups during the same months (June--February) the CCDS program operated, but for the nine-month period beginning one year before the start of the CCDS program. This Appendix reports statistics on the experience of three client groups from June 1, 2009, through February 28, 2010.<sup>6</sup>

The three groups<sup>7</sup> are:

1. **Group A: 15,431 GAMC clients who later enrolled in CCDS.**<sup>8</sup>  
These clients were mostly in GAMC during the 9 months, June 2009 – February 2010, and they enrolled in the CCDS program at some point after it started in June 2010.
2. **Group B: 37,091 GAMC clients who never enrolled in CCDS.**  
These clients were primarily enrolled in GAMC during the 9 months, June 2009 – February 2010, but they did not enroll in CCDS after it became available in June 2010.
3. **Group C: 53,748 enrollees – a comparison group of MinnesotaCare adults without children.**  
These clients were similar to Group A and B clients in being adults without children. However they were primarily enrolled in MinnesotaCare. As such, they normally had full- or part-time employment and paid a portion of their health care insurance costs, based on their resources.

The diagram below illustrates the three groups.



For convenience, statistics reported here are organized identically to those in the report. However, strict comparison is not warranted, for the following reason: Completeness and accuracy of claims reporting directly affects reimbursement to fee-for-service health care providers. Also, Health Plans are contractually obligated to send complete, accurate encounter claims data for clients in pre-paid health

<sup>6</sup> Statistics describing the three client groups during the comparison period – the 9 months that started one year before the changes to the GAMC program -- are compiled from the DHS data warehouse.

<sup>7</sup> See last page of Appendix A for additional definitions of these groups.

<sup>8</sup> Note: Statistics compiled in the report are on *all* enrollees who enrolled in CCDS. Statistics compiled on Group A in this Appendix are only on the 15,431 clients who had one or more months of enrollment in a MHCP during the 9-month comparison period.

care plans. This means that data on the three groups in the comparison period is detailed and accurate. In contrast, the four CCDSs received grant payments to provide care for a fixed number of clients per quarter. They had less stringent reporting requirement. They could send fee-for-service claims-style data to DHS but they also had the option to do much more limited data reporting.

**Tip:** Statistics for Group A – GAMC clients who later enrolled in CCDS – are shaded in the following tables for ease of reading.

## I: Enrollment overview

Not all clients in the three groups were enrolled for all 9 months during the comparison period. In Group A (clients who later enrolled in CCDS), about 11,000 to about 13,000 were likely to be enrolled in a given month, and about 12,000 to 14,000 had enrollment in a given quarter. In all, 15,431 were enrolled at some point during the 9 month comparison period. In any given month, there were about twice as many Group B (GAMC clients who never enrolled in CCDS) clients as Group A clients. The last comparison group – Group C (MinnesotaCare adults without children) was about twice as large as Group B, and about three times as large as Group A.

**Table 1: Enrollment**

Enrollee Group	Total Enrollment by Month and Unduplicated Enrollment by Quarter											
	June	July	Aug	Quarter 1 Total Unduplicated Count of Enrollees	Sept	Oct	Nov	Quarter 2 Total Unduplicated Count of Enrollees	Dec	Jan	Feb	Quarter 3 Total Unduplicated Count of Enrollees
	2009						2010					
Group A	11,047	11,314	11,583	12,394	11,846	12,132	12,436	13,193	12,737	12,983	13,248	14,080
Group B	19,633	20,309	20,988	23,887	21,623	22,902	23,667	26,803	24,663	25,642	26,683	30,189
Group C	43,987	44,466	44,971	47,593	45,079	45,365	45,598	47,956	45,653	45,648	45,647	48,194
<b>Totals</b>	<b>74,667</b>	<b>76,089</b>	<b>77,542</b>	<b>83,874</b>	<b>78,548</b>	<b>80,399</b>	<b>81,701</b>	<b>87,952</b>	<b>83,053</b>	<b>84,273</b>	<b>85,578</b>	<b>92,463</b>

The total unduplicated count of clients enrolled across the 9-months was as follows:

Group A (GAMC clients who later enrolled in CCDS)	15,431
Group B (GAMC enrollees who did not enroll in CCDS)	37,091
Group C (MinnesotaCare adults without children)	53,748
<b>Total</b>	<b>106,270</b>

As described in the report, 22,531 clients were enrolled at some point in CCDS, yet the table above shows that Group A had 15,431 members. The reason for the difference is that the 22,531 figure includes 7,100 persons who had no MHCP enrollment over the nine-month period for which statistics are compiled in this Appendix. The 15,431 figure represents all clients who both (1) had at least one month of enrollment in any MHCP between June 2009 and February 2010, and (2) enrolled in the CCDS program.

## II. Demographic profile

The GAMC clients who later enrolled in CCDS (Group A) were somewhat older than Group B (GAMC clients who never enrolled in CCDS): 44% were aged either 45-54 or 55-64, compared to 33% of Group B. Group C (a comparison group of MinnesotaCare adults without children) had a bimodal age distribution: 39% were under 35, then only 13% were in the middle 35-44 year-old age group, and then 48% were over 44.

**Table 2: Distribution of Age Groups**

Enrollee group		21-24	25-34	35-44	45-54	55-64	All	Mean age
Group A	Number	1,501	3,459	3,714	4,648	2,109	15,431	41.1
	Percent	9.7	22.4	24.1	30.1	13.7	100.0	
Group B	Number	6,505	10,938	7,434	8,421	3,793	37,091	37.6
	Percent	17.5	29.5	20.0	22.7	10.2	100.0	
Group C	Number	7,952	12,802	6,850	13,548	12,596	53,748	41.7
	Percent	14.8	23.8	12.7	25.2	23.44	100.0	

Notes for Table 2:

1. Enrollees are assigned to age groups based on their age as of February 28, 2010.

A highly disproportionate share of Group A and Group B clients (66% and 71% respectively) were males. In contrast, females slightly outnumbered males in Group C.

**Table 3: Gender Distribution**

Enrollee group	All	Female	Male
	Total number of enrollees	Percent of total enrollment	
Group A	15,431	33.6	66.4
Group B	37,091	29.4	70.6
Group C	53,748	51.2	48.8

Minority populations were much more highly represented in the two GAMC groups. In Group A, only 43% were White; 43% were Black and 7% were American Indian. In Group B, only 58% were White; 25% were Black and 8% were American Indian. In contrast, fully 79% of Group C were White.

**Table 4: Distribution of Racial/Ethnic Groups**

Enrollee group	Group A		Group B		Group C	
	Number	Percent	Number	Percent	Number	Percent
White	6,674	43.3	21,550	58.1	42,905	79.8
Black	6,662	43.2	9,344	25.2	4,639	8.6
American Indian/ Alaskan Native	1,008	6.5	3,009	8.1	683	1.3
Asian/ Pacific Isl.	389	2.5	899	2.4	2,265	4.2
Other	231	1.5	886	2.4	2,139	4.0
Hispanic	467	3.0	1,403	3.8	1,117	2.1
Total	15,431	100.0	37,091	100.0	53,748	100.0

Notes for Table 4:

1. Other: includes those who chose two or more races, those who chose some other race, and those who did not choose a race.
2. Hispanic: includes all races who indicated Hispanic ethnicity.

### III: Health status -- diagnostic categories

Group A (GAMC clients who later enrolled in CCDS) enrollees had a substantially greater burden of illness than the other two groups: 45% had a chemical dependency diagnosis, compared to 30% among Group B and 18% among Group C clients. The Group A clients were also much more likely to have a mental health diagnosis and to have an injury or poisoning diagnosis than clients in Groups B or C. Group A also had more diagnoses in each of the six chronic disease categories than the other two groups.

**Table 5: Percent of Enrollees with Diagnoses in Selected Categories**

Enrollee group	Chemical dependency	Mental Health	Injury and Poisoning	Chronic diseases					
				Asthma	Diabetes / Retinopathy	Heart	Hypertension	Cirrhosis and chronic liver disease	Kidney disease
Group A	44.5	44.1	31.9	8.5	9.4	9.0	21.6	6.7	4.1
Group B	30.4	29.4	23.1	4.7	5.6	5.7	11.7	3.5	2.6
Group C	17.7	26.7	23.3	5.2	9.4	6.6	18.0	2.8	2.9

Notes for Table 5:

1. An enrollee may have diagnoses in more than one category.
2. Refer to [Appendix E](#) for a complete listing of the ICD 9 diagnoses used to identify the diagnostic categories.

## IV: Health care utilization

Tables 6 through 10 report use of health care services by the three groups. Group A (GAMC clients who later enrolled in CCDS) used by far the most services in each of five general health care areas.

- Per 100 enrollees, Group A had about one-half to two-thirds more Emergency Department visits than Group B, and fully four times as many Emergency Department visits as Group C (Table 6).
- Group A averaged over 300 Physician and Other Professional visits per 100 enrollees in each of three quarters, compared to just over 200 for Group B and about 250 for Group C (Table 7).
- Group A had more general medical inpatient stays -- about one-eighth to two-fifths more than the group B clients and about two-and-one-half to three times as many as the Group C clients (Table 8).
- The disparity among the groups was greater still on mental-health-related inpatient stays. Group A had one-fifth to three-fifths more such stays than Group B and about seven times as many as Group C had (Table 9).
- Lastly, Group A filled the most prescriptions, averaging close to 7 per client per quarter, compared to a little over 4 for Group B, and about 6 for Group C (Table 10).

**Table 6: Emergency Department Visits**

Enrollee group	ED visits per 100 enrollees			Total number of ED visits			
	Quarter 1	Quarter 2	Quarter 3	Quarter 1	Quarter 2	Quarter 3	Total Visits
Group A	55.4	56.1	49.3	6,863	7,398	6,948	21,209
Group B	37.9	35.1	29.5	9,063	9,415	8,911	27,389
Group C	13.4	14.0	12.3	6,370	6,696	5,934	19,000

**Table 7: Physician and Other Professional Visits**

Enrollee group	Visits per 100 enrollees			Total number of visits			
	Quarter 1	Quarter 2	Quarter 3	Quarter 1	Quarter 2	Quarter 3	Total Visits
Group A	300.3	331.9	335.7	37,221	43,787	47,270	128,278
Group B	218.7	217.9	209.1	52,238	58,392	63,128	173,758
Group C	241.4	257.8	245.5	114,888	123,621	118,334	356,843

Note for Table 7:

1) See [glossary](#) for definition of this category "physician and other professional visits."

**Table 8: General Medical Hospital Inpatient Care**

Enrollee group	General Medical Inpatient Stays per 1,000 enrollees			Total number of General Medical Inpatient Stays			Total General Medical Inpatient Stays	Average Length of Stay in Days		
	Quarter			Quarter				Quarter		
	1	2	3	1	2	3		1	2	3
Group A	68.1	60.9	54.3	844	804	794	2,412	5.8	5.3	5.3
Group B	60.7	54.3	39.2	1,450	1,456	1,184	4,090	5.2	5.5	5.7
Group C	23.2	23.7	22.6	1,106	1,137	1,087	3,330	4.4	4.9	4.8

**Table 9: Mental Health Related Inpatient Care Stays**

Enrollee group	Mental Health Related Inpatient Stays per 1,000 enrollees			Total number of Mental Health Related Inpatient Stays			Total Mental Health Related Inpatient Stays	Average Length of Stay in Days		
	Quarter			Quarter				Quarter		
	1	2	3	1	2	3		1	2	3
Group A	22.9	20.4	18.8	284	269	265	818	7.4	7.8	7.8
Group B	19.3	14.4	11.7	460	386	352	1,198	7.1	7.6	7.7
Group C	3.4	2.8	2.6	164	134	127	425	6.1	7.6	7.8

**Table 10: Pharmacy Utilization**

Enrollee Group	Percentage of enrollees with no prescriptions			Percentage of enrollees with one or more prescriptions			Average number of prescriptions filled per client		
	Quarter			Quarter			Quarter		
	1	2	3	1	2	3	1	2	3
Group A	35.0	33.3	33.1	65.0	66.7	66.9	6.7	7.0	7.2
Group B	49.9	51.2	52.3	50.1	48.8	47.7	4.5	4.3	4.1
Group C	32.2	31.0	31.2	67.8	69.0	68.8	5.9	6.1	6.1

## Summary

In summary, Group A (GAMC clients who later enrolled in CCDS) had a much greater burden of health care problems than was true of the other two comparison groups. The CCDS clients consistently had (1) the highest percentages of illness diagnoses, (2) the highest rates of health care service utilization during the same 9 months that the CCDS program operated, except one year earlier, and (3) the highest cost per month enrolled.

### Technical note regarding how the three groups were identified:

The three groups were defined as:

**Group A:** Enrollees (aged 18-64 throughout the 9-month period, 06/01/2009--02/28/2010) who enrolled in the Coordinated Care Delivery System (CCDS) program after that program became available on June 1, 2010. As of early August, 2011, 24,329 clients are known to have had at least one month of enrollment in the CCDS program. Of that number, 15,431 had had one or more months of enrollment during the 9-month period, 06/01/2009--02/28/2010. They comprise Group A in this analysis, and the statistics compiled here summarize their diagnoses and health care utilization during the months they were enrolled between June, 2009, and February, 2010.

**Group B:** GAMC enrollees (aged 18-64 throughout the 9-month period, 06/01/2009--02/28/2010) who had more of their enrollment months in GAMC than in other programs during the 9-month period. Also, these enrollees did not enroll in the CCDS program.

**Group C:** MinnesotaCare adults (aged 18-64 throughout the 9-month period, 06/01/2009--02/28/2010) who had more of their enrollment months in "MinnesotaCare adults without Children" than in other programs during the 9-month period. Also, these enrollees did not enroll in the CCDS program.

### Additional explanation regarding how enrollees were assigned to groups

Sometimes enrollees were in one program for some months and then left that program and enrolled in a different one. The following rules were adopted for classifying enrollees into Groups A, B, or C.

If the enrollee had 1 or more months of enrollment during the 9-month period, June, 2009, through February, 2010, and was at least 18 years old and not more than 64 years old throughout those 9 months, then:

- If the enrollee enrolled in CCDS at any point during the 9 months it operated, s/he was assigned to Group A.
- For enrollees who did not enter CCDS:
  - If the enrollee was in Medical Assistance (MA, i.e., Medicaid) for the same number of months, or for more months, than s/he was in either MinnesotaCare or GAMC, s/he was assigned to MA, and hence prevented from being assigned to Group B or Group C.
  - If the enrollee was enrolled in MinnesotaCare and GAMC for the same number of months, the enrollee was assigned to MinnesotaCare. If an enrollee assigned to MinnesotaCare had more months in "MinnesotaCare Adults without Children" than in other MinnesotaCare subcategories, s/he was assigned to Group C.



## **Appendix B: CCDSs narrative reports – their lessons learned**

The department asked the CCDSs to express their clinical, contracting, and cost experiences with CCDS. Following are reports submitted by HCMC, Regions Hospital, and UMMC/Fairview.

North Memorial Medical Center elected not to submit a report. However, North Memorial Medical Center responded to the University of Minnesota's six questions about the CCDS experience (see [Appendix C](#)).

**Hennepin County Medical Center  
Our Experience as a Coordinated Care Delivery System  
Provided to the Department of Human Services  
Performance Measurement Quality Improvement Division  
June 23, 2011**

Background

Legislation was passed in 2010 that enabled Coordinated Care Delivery System(s) (CCDS) to contract with the Department of Human Services (DHS) to offer health services for the population that previously had been eligible for the General Assistance Medical Care Program, i.e. the adult population with incomes at or below 75% of Federal Poverty Guidelines. There were many shortcomings in the funding and architecture of the program, and it was recognized that it was a ‘shared sacrifice’ policy direction offered by the legislature and the Pawlenty administration.

Hennepin County Medical Center provides more care for Minnesota Health Care Program (MHCP) enrollees and uninsured patients than any other hospital and clinic system in the state. Despite recognition of the program’s under funding (reduced to only 35% of the previous funding level) and risk associated with the program, we felt the need to demonstrate our leadership and step forward as a participating CCDS, to try to make the best of a very difficult situation in the interest of serving our most vulnerable citizens. During the 9 month duration of the programs existence, a total of 10,206 persons were enrolled in the HCMC CCDS.

Implementation

The contract negotiation process between HCMC and DHS was finalized in mid-May, 2010 with June 1 the ‘go live’ date for the CCDS program. Planning for the program was challenging, given the rapid implementation and a scarcity of data with respect to the likely enrollees, their health conditions, and their past utilization. HCMC provides a broad continuum of services within the HCMC system and the multispecialty physician practice at HCMC, Hennepin Faculty Associates (HFA).

At the program’s outset, we established a new, dedicated clinic site on the downtown campus, and made clinic capacity available at a half dozen previously existing primary care clinics in our system located in the west metro area. We began to monitor our capacity and capability to respond to the needs of the patients that were enrolling in our CCDS. As the need for additional services became evident, HCMC began contracting with clinical service providers, including HFA, North Point Health and Wellness Center (an FQHC), the Minnesota Visiting Nurse Association (MVNA), and selected mental health service providers and durable medical equipment companies. (The contracts were heavily discounted.) These relationships brought us not only additional capacity but also established a more focused holistic perspective to the ways by which patients could be served. This increased attention to evidence-based best practices and increased interaction among providers representing not only health but also human/social

services helped to assure that the social challenges (homelessness, unemployment) that inhibited the health of the CCDS patients would be addressed as well.

HCMC has familiarity with the clinical needs and social complexity of the classic GAMC/CCDS patients. We were unsure as to how quickly our enrollment would grow, and we recognized that the transformation of our care model would be accomplished over time as skill mix changes were implemented in response to the needs of our patients.

We recognized it would be important to focus our initial efforts on the patients that historically had demonstrated the greatest need for the most intensive services. We believed that a portion of the CCDS patients that would select our care system would need and benefit from a heightened concentration of care coordination. In fact, we referred to these virtual concentrations of resources as ‘health care homes on steroids’. We identified patients who had been admitted to HCMC three or more times in the previous year (Tier 3), and directed available resources to working with those patients on their chronic care needs. At HCMC, dedicated clinics and clinic sessions and care teams comprised of nurses, social workers, Pharm Ds, et al were engaged in care planning with patient engagement to assure that holistic approach to optimal care was being developed.

Data was gathered to track demographics, health status, patient satisfaction and utilization. Tier 3 patient satisfaction typically scored higher than overall HCMC patient satisfaction. While the Tier 3 patients were admittedly a very small proportion (3 to 5%) of our total CCDS enrollment, for those patients that were enrolled in Tier 3 and receiving intensive care coordination, we were able to reduce the rate of emergency room visits and hospitalization by up to 35%.

### Service Gaps

Our approach to providing services to the CCDS population was to closely monitor the demand for services by our CCDS enrollees. Because HCMC has been providing substantial quantities of services for HCMC patients (e.g. 2,400 inpatients per year, 12,000 ED visits and 25,000 clinic visits in 2009) we believed that our system would be able to respond to much of the demand, though we stood ready and began to contract with other provider organizations (as referenced above.)

The CCDS/GAMC program confirmed perceptions that we have held relative to the demand for and supply of services needed by the population. We confirmed our notion that anywhere from 40 to 60% of the classic GAMC/CCDS patients are also afflicted with some form of mental illness or chemical dependency/substance abuse. We also saw that a great many of the CCDS patients were afflicted with chronic pain, from which they were persistently seeking relief.

Our care model programming included the co-location and leadership of medical and mental health professionals to provide multi-disciplinary care plan development and patient-focused engagement.

The shortage of behavioral health providers throughout our region has been well chronicled. The need for providers who are willing and able to provide service for patients with chronic pain is also an ongoing challenge. The inadequacy of these resources was magnified by CCDS, though

the shortage is felt among many of our population segments, i.e. the shortages exist for persons covered by other programs, not just CCDS enrollees.

### Lessons Learned

We learned a great many things from our CCDS work, and we will use these learnings in our operational planning and ongoing engagement with other provider organizations and policy makers.

A. From the perspective of the patients we served, and the population at large:

-The roll-out of the program in a short period of time created a great deal of confusion and consternation among the patients (despite extensive communication efforts by DHS and the CCDS), no doubt inhibiting program enrollment and timely access to appropriate sites of service.

-The CCDS program became metro-oriented, with all four participating CCDS in the Twin Cities. This caused persons in Greater Minnesota to select a metro-based CCDS (and therefore incur substantial travel challenges), or to remain essentially uninsured and therefore subject to the willingness and capability of provider organizations to see them under the auspices of charity care.

-Many patients in the metro area also lost the continuity of their pre-existing primary care relationships. For example, patients whose primary care was previously provided by community health centers or mental health centers were required to enroll with a CCDS for access to a broader array of services, but had no assurance that the respective CCDS would include their primary provider within the CCDS contracted network. In addition, access to the prescription drug benefit was inhibited in that without access to a provider, there is no pathway to receiving prescriptions.

-The ‘churn’ of enrollment and subsequent loss of eligibility makes it challenging to establish ongoing relationships and to reap the benefits of health coaching and related measures for upstream intervention that enables health to be maintained.

B. From the perspective of our operations:

-There is opportunity to provide for improved health status and refine utilization patterns for chronic disease management through increased patient engagement and coordination of care, provided investment in those resources can be made.

- HCMC in essence received a total cost of care CCDS payment. The flexibility to align financial/business incentives encourages creativity of the accountable organization to allocate resources in the most cost-effective means to enhance the health of the patient.

-The need for acute care needs services and responses to the onset of illness and injury is not within the control of the health care system, and a provider-based model such as CCDS should have some form of stop-loss protection for those episodes it cannot prevent or control.

-The shortcomings of the CCDS program resulted in financial stress on the organization. This occurred as a result of the need to rapidly respond with care model changes to meet the time frame, and also because the program left the majority of the GAMC-eligible patients uncovered, i.e. the total number of persons covered by the GAMC program at some point in 2009 was 70,000, yet only 16,000 persons were enrolled in the CCDS program.

We estimate our losses for the nine months of CCDS operation, including the increase in our uncompensated care, to be \$9 million.

C. For public policy considerations:

-Under funding programs is not the pathway to transformational reform; short term budget balancing expediency does not provide for sustainable innovation. Change takes time, capitalization and technology, the evolution of staffing models, and patient education and engagement that can support behavior modification.

-The framework for system change needs to be flexible enough to permit customization that recognizes the diversity of geography, demographics, and the provider systems that are willing and able to be accountable for providing service and the health outcomes of their patients.

-The safety net system in Minnesota is comprised of many organizations across the continuum of care. The CCDS system concentrated resources and accountability in a limited number of hospital systems. Though well intentioned, this concentration created extreme peril for a great many organizations (FQHCs, community mental health centers, MVNA) that have historically served the most vulnerable of our citizens and provided portals of entry to the health care system upstream from hospital emergency rooms.



## **Coordinated Care Delivery System Report**

### **April 29, 2011**

Committed to serving the community, Regions Hospital made significant investments to provide care, access, and support to Coordinated Care Delivery System (CCDS) patients for 9 months, spanning June 2010 through February 2011.

#### **Introduction**

Regions Hospital's experience as a CCDS provided opportunities to redesign the way care is delivered to a low-income population. However, the risk, financial payment levels and variability, the lack of infrastructure, and the widespread deleterious effects on community resources made the program unsustainable. It is unlikely that Regions Hospital would be able to participate in such a program in the future. The state and enrollees are best served by a focus on care model innovation and learnings combined with sustainable funding.

Regions Hospital reviewed and evaluated its CCDS data, including comparing it to the former GAMC patient data. DHS and CCDS hospitals need to exercise significant caution and restraint in making any conclusions about the data for the following reasons:

- The data are incomplete – for example, the care provided by a variety of community organizations and CCDS charity care are excluded. More than half of the health care system was excluded from the CCDS program. Thus, full utilization and costs are not available.
- The true costs and losses are hidden. Those few providers that were paid, e.g., ambulance, radiology, community clinics, hospital emergency departments, were paid at a steep discount – a rate that no provider could accept and sustain beyond a short-term program.
- There was such variability in the services, specialties, and capacity provided by the participating CCDS hospitals to the CCDS patients, so comparisons cannot be made within the CCDS program. For example, due to the comprehensive mental health access that Regions CCDS provided from the beginning of the program, Regions attracted a particularly high preponderance of patients with mental health needs.
- With only four CCDS hospitals participating, the needs and services for the CCDS enrollees living farther away from the CCDS are not fully captured.
- The composition of the GAMC program changed as the more self-sufficient enrollees enrolled in MinnesotaCare and the most vulnerable remained in GAMC and CCDS.
- The DHS administrative infrastructure was inadequate. For example, the lack of functioning eligibility files from DHS made it very difficult to track who was enrolled in the CCDS and which services they received. No standard claims processing ability was possible due to the lack of working eligibility files and inadequate funding for a claims payment infrastructure (on top of the limited ability to make payments to providers due to the inadequate funding). DHS CCDS reporting specifications were premised upon a more traditional health plan eligibility and claims model which the CCDS program infrastructure did not have.
- Finally, the former GAMC program is not a baseline comparison for the CCDS due to all the factors just described.

### **Care model innovation**

Each CCDS had six weeks to develop its “program.” The services and specialty access provided varied among the four CCDS hospitals. This variability resulted in patient inequities as well as disproportionate pressures on the CCDS program enrollment. The initial focus of the Regions CCDS was two-fold: 1) to be able to have full care access beginning on day one of the CCDS, and 2) to assist patients with the enrollment process. These goals were met. The overall Regions CCDS principles were:

- Access – Access to primary care, specialty care including mental health, hospital care and emergency care, including a new CCDS clinic on Regions Hospital campus.
- Service Integration – Integration of medical and mental health care.
- Teamwork – Optimize use of advanced practice professionals within a full care team.
- Technology – Optimize use of the electronic medical record.

Many of the patients in the Regions CCDS were new to Regions and HealthPartners clinics. Regions CCDS made investments in the following areas in order to best serve the CCDS patients:

- Active support with the enrollment process including help understanding where to go for care.
- Active face-to-face and telephone education during the enrollment process and first set of visits.
- Telephone access for patients to enroll, make an appointment, talk to a nurse, and receive help with transportation.
- Integration of medical and mental health, including centralization of access to mental health services at Regions Hospital as well as comprehensive mental health access from the start of the CCDS program.
- Establishment of a clinic on the Regions campus, which had walk-in access.
- Expanded use of advanced practice professionals.
- Establishment of a medical director for the CCDS program.
- Active use of the electronic medical record, including for specialty orders, provider communication, and generating letters to patients.

### **Integrating medical and mental health services key**

Integrating medical and mental health is critical to this population. Pairing of medical and mental health care in one outpatient setting streamlined care. More than 50 percent of patients had a mental health or chemical dependency diagnosis and 48% of CCDS inpatient days were related to mental health. Our team approach to patient care provided access and continuity. Many patients appeared to lack primary care and therefore access to primary care, urgent care, and specialty care remained essential. At the CCDS, patients were educated about the health care system, encouraged to find a primary care home within the CCDS, and had a care plan that could be shared across all providers through our electronic medical record.

For the more fragile patients, we established a CCDS clinic on campus, where we co-located primary care and mental health services. This clinic allowed walk-in access, enhanced case management and shared care for patients with medical and mental health co morbidities. The majority of the mental health visits occurred in our clinic on campus which averaged 248 patient encounters per week. We used the clinic to help provide immediate care, establish a relationship with the patient and get them

connected with a medical home within our CCDS. Especially beneficial was the development of a care plan that could be viewed by any provider through the electronic medical record. Whether the patient was in the emergency department, the clinic, or in the hospital, all physicians understood and followed the same treatment plan for the patient.

Having a clinic right on the Regions campus may have reduced some unnecessary emergency room visits. Our data showed that 84% of the CCDS admits to the hospital came through the emergency department. Under the GAMC program, for comparison, 64% of admits at Regions Hospital came through the emergency department. We could conclude that many CCDS patients were visiting the emergency room appropriately as it resulted in a hospital admission. On the other hand, we could conclude that there was insufficient care in the community if so many admits occurred via the emergency room. We continued to be challenged in serving this population, because the emergency department persisted as the first point of care for many enrollees.

Despite the limited scope of providers and services of the CCDS, we were able to meet the needs of this patient population. Integrating mental health and medicine was one way. We also met patient needs by:

- Having support services at the point of patient care, which helps coordination.
- Focused primary care access at certain clinics – access at select clinics allowed for relationship building with patients and continuity of care.
- Access to acute care appointments with walk-in availability.
- Using deliberate transitions: inpatient to ambulatory; high-risk emergency department follow up; follow-up on failed appointments.
- Medical director review of specialty orders.

### **Learnings about care and community partnerships**

The CCDS program also resulted in learnings in the areas of: care model, transitions of care/handoffs, care plan, and community. Following is a brief summary of each:

- Care model
  - Assigning patients to a primary care provider improves coordination and utilization of care. Many patients lack primary care, which may cause an increase in uncoordinated and unnecessary care.
  - Having support services at the point of patient care helps coordination
    - Social needs met
    - Financial needs identified
    - Staff provided education (e.g., use of the emergency department, transportation gaps, wound care/diabetes)
    - Care coordination – relationship with care team and not just provider
    - Allowed provider to focus on care delivery
  - Access to acute care appointments – these patients had significant medical needs including illness and unmanaged chronic conditions. The “no show” rate was lower at the clinic on campus (an appointment “day” was set rather than a specific time).



- Mental Health and Medicine practicing side by side was key. “Curbside” consultations and crisis intervention (e.g., blood pressure or psychiatric warning signs). This approach saved visits and delays.
- The clinic on the Regions Hospital campus provided short-term care and care management support for the patients, however, it was not financially sustainable.
- Transitions of care/handoffs
  - Inpatient to outpatient
    - Epic (electronic medical record system) lists identifying CCDS patients on the floor
    - Case manager would reach out to make personal connection and follow up. Hospitalized patients were the most fragile and high risk for re-admission if follow-up care was not received.
  - Emergency department to outpatient
    - Epic automated a note to the clinic for patient follow up.
    - Additional follow up occurred with the case manager or financial counselor interactions.
  - No shows/failed follow-up appointments – followed up with high-risk patients who missed appointments in the clinic on campus to ensure follow up.
  - Non-emergency use of the emergency department
    - Pre-visit planning identified patients with high use of the emergency department.
    - Scripting and education to help patients plan for visits and know where to go.
- Care plan
  - Use and identification of Care Plans to communicate to the care team
  - Use of addictive medication is high in the population. Provided additional information and impetus to an organizational improvement effort for managing chronic pain.
  - Having the security team present on the Regions Hospital campus was helpful for patients with challenging behavior.
  - Having patients assigned to “one system” helped coordinate care and helped patients be accountable for their care.
- CCDS community issues
  - Chronic pain and narcotic misuse is a community issue, and is an opportunity to share tools across organizations.
  - Having patients assigned to a care system has been positive for care.
  - Support systems and models of care have been implemented in the CCDS programs that are not physician centric.
  - While community groups stepped up to bridge the gap, the CCDS funding model was not sustainable for community resources.

The final pages of this report include graphs on Regions Hospital CCDS Inpatient Visits by Service Line, Regions Charity Care Inpatient Data, and the Percentage of CCDS Inpatient Visits Originating in the Emergency Department.

### **Financing was not sustainable**

Financing of the CCDS program was not sustainable or equitable. The payment model was based on 2008 payment history and did not reflect the realities of the current program enrollment, and resulted in significant payment variation between the CCDS programs. As a result, Regions lost roughly \$500,000/month while it was a CCDS, providing care for pennies on the dollar. Being one of only four participating hospitals added to the cost. Without full participation and the medical records that come with it, we ran the risk of duplicating care, which adds cost to the system.

Grant funding in lieu of comprehensive funding with standard benefits was unsustainable and inequitable. All enrollees should have access to similar services. The lack of consistency in CCDS services and specialty access resulted in inconsistencies for patients and in CCDS enrollment patterns. It is not possible to compare the results of the CCDS programs with such variability. Also, the program administrative infrastructure was inadequate. The lack of an eligibility file and claims structure made it very challenging to track who was enrolled in the CCDS and what services they received. A significant learning from the CCDS program was the importance of standardized benefits and adequate program infrastructure including fully functional eligibility files.

While our community partners stepped up and were a great help, the system also was not sustainable for them. In fact, the lack of community and social services for patients was a huge drawback to the CCDS program. Essentially half of the health care system was cut off for patients.

Charity care for Regions Hospital increased by 34% over the previous year, rising from \$18,396 in 2009 to \$24,774 in 2010.

### **Conclusion**

The Regions Hospital CCDS provided care and service including:

- Access to needed health services, including primary care and mental health.
- Access to enrollment, case management and financial services.
- Bus passes and other transportation for specific cases.
- Walk-in access to primary care and mental health services.
- Close coordination with community resources and partners, specifically West Side Community Clinic, Ramsey County Mental Health Services, St. Paul Emergency Medical Services and many others.
- Homeless shelters, including Dorothy Day, Union Gospel Mission, and the Diane Ahrens Crisis Residence.

Becoming a CCDS forced us to take a critical look at the way we provide care. We developed a unique model of care and were creative about the infrastructure and care team. When patients made a commitment to use our CCDS and we used broad case management and social worker resources and active medical director review, we were more effective, and focused care on prevention, accessibility

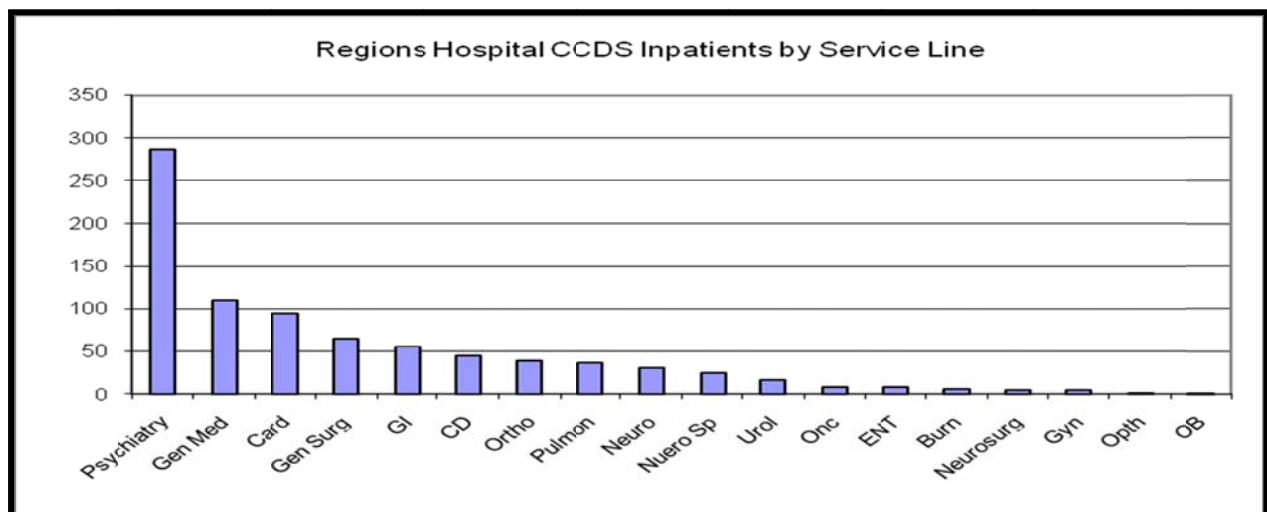
and continuity. The expansive case management and social worker resources that were deployed under CCDS are not funded under the traditional Medicaid infrastructure. Because of the large financial limitations of the system, the lessons learned are best applied in a different model.

Applying what we learned from being a CCDS and the work underway in the HealthPartners clinics will become integral portions of improved care management under HealthPartners health plan for state public programs and in continued development in care delivery as a health care home and accountable care organization. Regions Hospital is a member of the HealthPartners family of care, which is an integrated care delivery system. While Regions anticipated being able to utilize more health plan capabilities, the severely circumscribed CCDS funding and infrastructure permitted Regions to include only very limited HealthPartners health plan resources in the program.

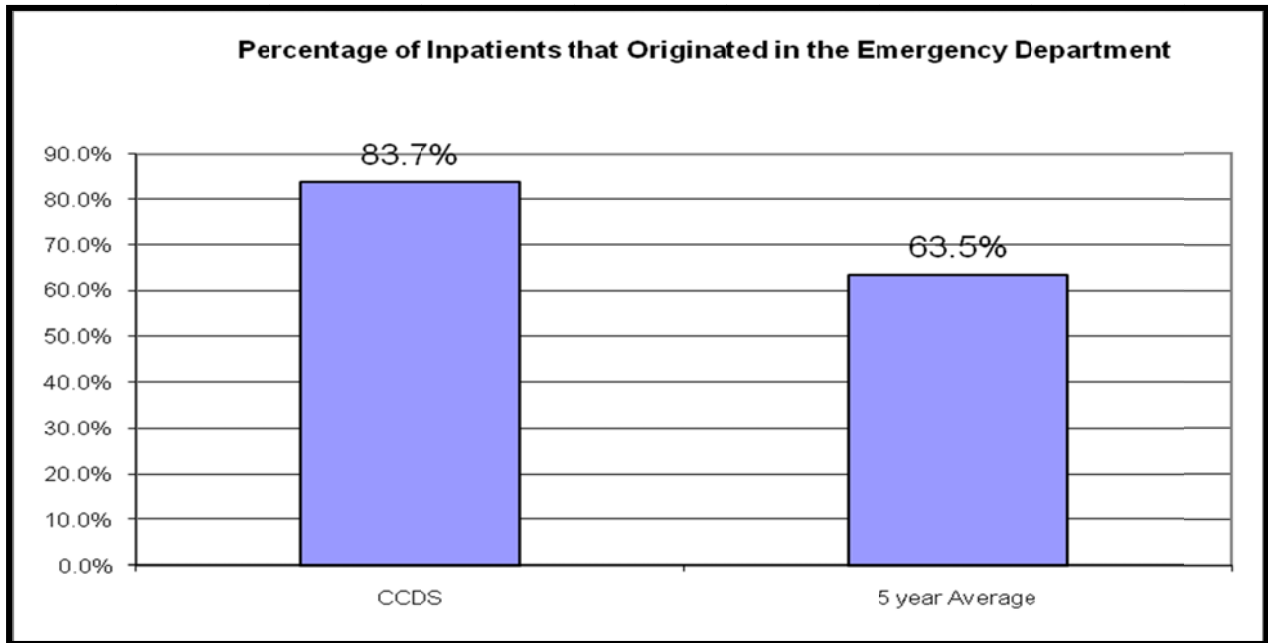
Regions Hospital learned how to better connect with and serve this vulnerable population in an integrated, creative model, however, it is not able to conclude that it achieved better health outcomes at a lower total cost of care for the enrollees based upon the limitations of the data. The CCDS programs were innovative, and also relied heavily on the support of multiple community organizations. The community did an outstanding job of supporting the CCDS enrollees. Unfortunately, their investment and support was a significant sacrifice for fragile organizations and only possible for a short-term program. Finally, we again caution against making definitive conclusions about the CCDS programs based upon the incomplete, limited data available.

**Graphs**

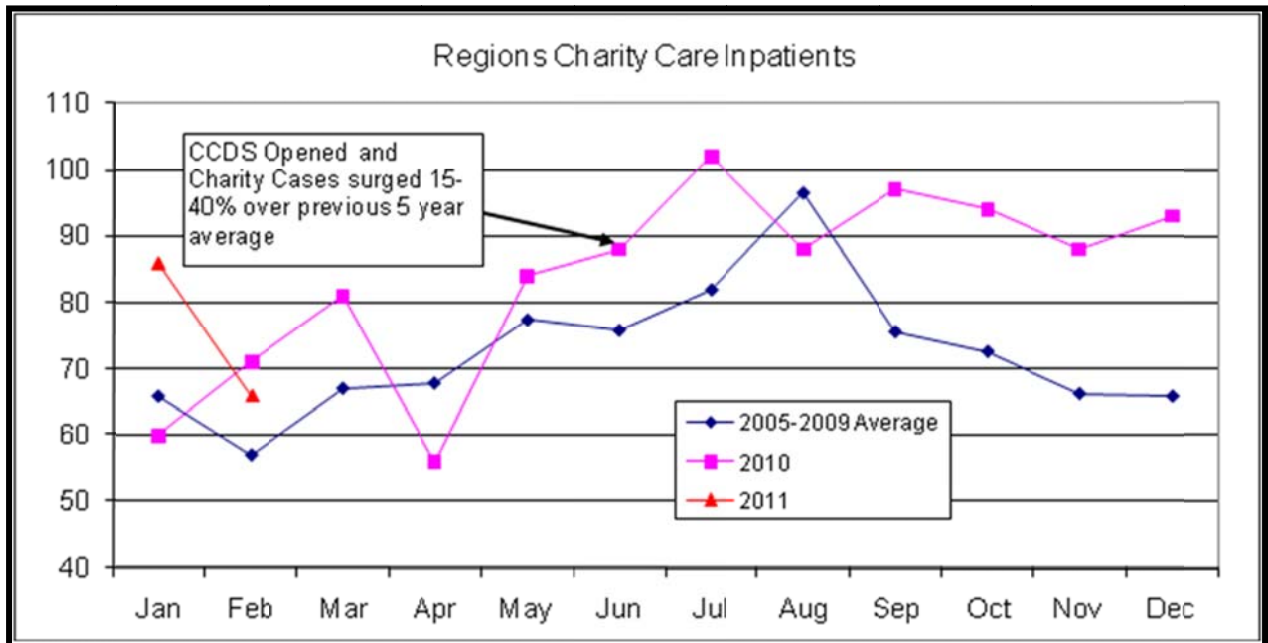
Regions Hospital CCDS Inpatient Visits by Service Line



Percentage of CCDS Inpatient Visits Originating in the Regions Hospital Emergency Department



Regions Hospital Charity Care Inpatient Data





## Learning from the CCDS structure

*April 30, 2011*

In May 2010, University of Minnesota Medical Center, Fairview—a part of Fairview Health Services—agreed to be one of four designated hospital/clinic locations for the state’s GAMC population—uninsured single adults ages 19 to 64—under a new and significantly reduced reimbursement agreement called the Coordinated Care Delivery System (CCDS). The UMMC Riverside Primary Care Clinic—the medical home for individuals enrolled in the CCDS—opened on June 1, 2010 at the medical center. Through the nine months in the CCDS structure, Fairview experienced both the challenges and opportunities of the new, experimental model.

### **Negatives about the CCDS structure** include:

- limited access for individuals covered by GAMC, particularly in outstate Minnesota
- reimbursement that was dramatically less than the cost of delivering services
- complete financial risk on the providers
- significant contracting and infrastructure were needed to execute the model, yet, no time to build these services prior to program implementation

### **Positives about the CCDS structure** include:

- enrollment meant patients and care providers were connected for the six-month enrollment period
- tight network of providers meant the UMMC CCDS staff could manage the care of enrollees
- from a clinical view, no fee-for-service structure meant caregivers could singularly focus on delivering the right care at the right time.

### **Clinical experience**

Like other CCDS providers, the enrollees in the UMMC CCDS had unique and complex needs. Up to 85 percent of our enrollees had co-occurring medical and mental health diagnoses. Approximately 60 percent had three or more different diagnoses. Thirty percent had more than six diagnoses. Virtually all of them had challenging socio-economic conditions in their lives.

Over nine months, more than 3,000 individuals were at one time enrolled with the UMMC CCDS.

To meet the unique needs of the enrollees, the UMMC CCDS used an *integrated primary care model* (IPC) as the care delivery model for the clinic. As with all the efforts within the CCDS, the model is built on the Triple Aim principles—increased patient experience, improved health and reduced overall total cost of care.

The IPC model promotes a comprehensive approach to health care delivery by fully integrating medical and behavioral health care services. The goal of the model is to provide the primary care patient population with a fully integrated approach that identifies and responds to the interactive and interdependent dimensions of physical and behavioral health, as well as the overlying mental health problems that accompany chronic physical health problems and/or chronic disease.

What does the integrated medical-behavioral model look like? A physician and a behavioral health consultant—a licensed master’s- or doctoral-level clinical social worker or psychologist—assess all new-to-clinic patients and set the stage for the development of a plan of care by the patient and medical and behavioral providers. Physical, mental and social needs are addressed at each visit. Each patient is treated as a whole person—provided respectful, thorough and cost-effective care. Patients are cared for ongoing in a team-based model. For example, the medication-management pharmacist may see a patient weekly for a period of time to help develop an optimal medication regimen to which the patient is able to adhere. The RN care coordinator may follow a patient for several weeks between clinic visits. All of these activities are interdependent, yet, utilize the right person for the right job at the right time.

The medical center’s CCDS used a tight network of providers, largely relying on our partnership with University of Minnesota Physicians (UMPhysicians) for specialty care. All the care and services were managed through the clinic and provided by referral only. Because patients were enrolled in our CCDS network, we had the opportunity to really manage the care and positively impact our patients’ health.

Providers within the CCDS model learned that intense care coordination, a limited network and enrollment were key factors in successfully managing the health needs of enrollees.

The model certainly had challenges. Because there was no reimbursement for any services not provided or sub-contracted with the CCDS, clinic staff spent considerable time tracking down free or reduced-cost services, work-arounds and other creative solutions. Over time, Fairview ended up authorizing certain services, such as dental and eye care, rather than causing a greater burden on the patient and higher future costs to the system. CCDS clinic staff say preventive/routine vision and dental care as well as transportation were the most requested and needed services but couldn’t be offered due to funding/reimbursement.

## **Patient stories**

One of our CCDS patients was a man with MRSA—an antibiotic-resistant infection that had been very difficult and costly to treat and control. The man had been ostracized for his condition, feeling he didn't belong anywhere. The clinic physician and the behavioral health consultant welcomed him and told him he was to come to the clinic whenever he had concerns. With the medical-behavioral model, staff focused not only on his medical conditions but also his depression and sense of isolation. In one of his many follow-up visits, the patient told our staff that, when he first came to the clinic, he had planned to kill himself. However, the patient stated he didn't do so because he felt staff cared about him and helped him feel he was worthy.

Another patient in our CCDS was a man with diabetes, chronic pain and chemical dependency issues. He initially came to the clinic seeking pain medications. Through a team medical-behavioral model, staff helped wean the man off his pain meds. Our pharmacist worked with the patient to better control his diabetes. Overall, the man made significant strides to turn his life around, stopping his chemical use and addressing significant anger-management issues. He is now enrolled in school with a goal of becoming a chemical dependency counselor.

## **Contracting experience**

There was much time and attention spent contracting with various provider entities, as well as a third-party administrator of services. The most significant contract Fairview secured was with UMPHysicians to provide specialty physician services. The contract was set up so care was provided by referral only. The self-imposed referral process was a key way to manage care and ensure the right individuals were seeking care with the right specialty provider.

In addition to the UMPHysicians contract, Fairview also sought contracts with the other GAMC CCDS participants, ground transportation providers, other community mental health providers, emergency care physicians, anesthesia providers and other hospitals for emergency services. Some provider groups and community partners declined contract offers, citing the significant underfunding of the programs as reason for not participating.

Once Fairview established contracts, they were handed off to a third-party administrator responsible for benefit, referral and eligibility management as well as reimbursing the providers based on these factors. Fairview's third-party administrator made significant efforts to work with the state and Fairview to receive and load eligibility data on a regular basis. They spent time working with the state in the required reporting submission, as well as working through any appeals.

In addition, many hours were spent on the claims education process with providers who were unclear about how the program or referrals process worked. Time and effort also were invested by clinical staff to submit and track referrals. All in all, there was significant effort by many parties from contracting, claims payment, reporting and clinical personnel to set up, maintain and execute a system robust enough to handle the significant challenges of claims adjudication with an ever-changing population.

### **Cost experiences**

The financial model for the CCDS structure was flawed in various ways. The model underfunded providers and put the full financial risk on providers.

Fairview has attempted to track all the associated costs with the CCDS. But, given the lack of reimbursement, there are numerous instances where physician practices and other providers didn't even submit a claim to CCDS providers. Therefore, costs tracked by CCDS providers for their enrollees are almost certainly an underestimation of total costs incurred by providers in the health care community.

### **Policy lessons**

Innovation in state programs is essential as we move to change payment, change care and change patient experience. There are certainly lessons learned from the CCDS experience that can inform future innovations:

- Rapid-cycle innovation is important, but sufficient time must be allotted to create appropriate processes and allow for adequate patient/enrollee communication.
- Innovation is sustainable only if the payment model is sustainable. The CCDS was an opportunity for innovation, yet, it was entirely unsustainable and shifted the financial burden/risk to providers.
- The enrollment process brought patients and providers together into a “relationship.” The six-month enrollment period meant patients stayed with their CCDS provider.
- The enrollment/limited network model significantly reduced GAMC enrollees' ability to jump from provider to provider. This was especially powerful tool for managing individuals on controlled substances.
- Community services—particularly state- and community-operated mental health services—are a key element of the care and support continuum.

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Appendix C: Opportunities within a Crisis:  
Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)

**Appendix C: Opportunities within a Crisis: Lessons Learned from CCDSs  
Treating the GAMC Population (report from the University of Minnesota)**

The University of Minnesota's report begins on the next page. Please note that HealthPartners is Regions Hospital.

## Opportunities within a Crisis:

# Lessons Learned from CCDSs Treating the GAMC Population

Sheila Riggs and Doug Magney

### Strategic Lessons Learned

1. Freedom and flexibility are needed to move toward and achieve the Triple Aim.
2. A cultural shift occurred in terms of the overall understanding of the GAMC population.

Each of the CCDSs established a different working prototype. The early indications are that movement toward the Triple Aim was in the right direction regardless of health system approach. All health systems are confident this initiative will help them when designing their eventual Accountable Care Organization (ACO). In particular, the health systems now have a much greater appreciation for the power of truly getting to know the population under their care. Assessing the health needs in context of the whole person and meeting them ‘where they are’ was necessary in this model. This broader understanding of an enrollee was the primary driver in the evolution of each working prototype.

### Operational Lessons Learned

1. While each patient needed an individualized care plan, treatment need trends emerged.
2. Therefore, the ‘keep them well’ team took on a whole new look.
3. Communication improvements will be at the heart of future iterations.

There was no single profile of a GAMC enrollee. Some had never visited a primary care clinic (previously used only an Emergency Room) while others actively sought engagement in their health once the CCDS had earned their trust. All CCDSs underestimated the depth and breadth of the mental health needs, especially the impact of depression and anxiety. All CCDSs had a relatively small segment of their enrollees that drove the consumption of most of the healthcare resources. Intense care coordination teams were formed with sometimes up to five members ~ a primary care provider, a medication therapy manager, a behavioral specialist, someone focused on social determinants, and a care coordinator. All CCDSs saw a large increase in the need for increased communication, both between patients and providers and between providers, taking the form of increased ‘warm handoffs’, huge increases in telephone contacts, and a redesign of some basic IT needs.

### Economic Lessons Learned

1. When the chips were down, these organizations did the right thing.

The level of funding was severely inadequate and unsustainable. Also, Greater Minnesota GAMC enrollees would have benefitted from a CCDS that was closer to their home in terms of coordinating and integrating with their primary care providers.

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## The HCMC CCDS Experience in Treating the GAMC Population

### Answers to Questions that Created the Summary Document

#### Background

Beginning June 1, 2010, a new hospital-based coordinated care delivery system started to manage health care and provide medically necessary services for eligible GAMC enrollees. Hospitals were provided capped block grants. Four hospitals established coordinated care delivery systems: Hennepin County Medical Center, North Memorial Medical Center, Regions Hospital, and the University of Minnesota Medical Center, Fairview.

On January 20, 2011, Gov. Mark Dayton and Human Services Commissioner Lucinda Jesson announced that DHS will begin implementing expanded Medical Assistance (MA) March 1. Therefore, current GAMC recipients were automatically converted to MA and Coordinated Care Delivery System (CCDS) contracts were terminated.

#### Gaining Insights

The following questions are to capture insights gained from the leaders at the four hospitals as it relates to their nine month experience as a CCDS.

##### Question #1

What, if any, guiding principles did you use as you created your strategy to become a CCDS? How did these principles change over time; what new ones did you add or learn you needed?

The mission of HCMC drove the guiding principles. To execute from scratch on this initiative, HCMC organized a Steering Committee around four Task Forces; IT, Finance, Care Model, and Community Resources. Operational issues initially emerged like how will our providers know this is a GAMC patient, what information will we get from the state, etc. Eventually, it all coalesced around designing the Care Model. The mission-driven attitude became ~ the legislation created an opportunity within a crisis.

##### Question #2

What were the top three things you learned about the needs of the GAMC population? How did your principles/operational model meet these needs?

It quickly became evident that there were three 'tiers' of patient needs; a very large group who had episodic needs but were rarely admitted into the hospital, a middle group with a few inpatient admissions, and a third small group who had tremendous needs. The first group overwhelmed the primary care clinics because they had often never seen a primary care provider. Typically they arrived at their first visit with chronic conditions and taking several medications.

HCMC also focused on learning a great deal about the smaller number of enrollees who had the greatest needs. They determined this segment of the GAMC population needed a wide array of health professionals and services to be 'wrapped' around them like behavioral specialists, social workers, and experts in chronic pain relief.

Appendix C: Opportunities within a Crisis:

Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)

However, while treatment need trends emerged, HCMC realized they needed to stay focused on rising up to meet each enrollee's needs. Everyone needed help coordinating their care from Day 1.

Question #3

What were the top three operational changes you decided to make? How did these affect the clinical outcomes of the enrollees?

A team based approach to care was created, especially for the small group of enrollees (7%) with great treatment needs. For this segment of HCMC's GAMC enrollee population alone, the expanded team based approach resulted in a 40% decrease in admissions, a 30% decrease in emergency room visits, and a 300% increase in primary care visits.

HCMC also determined they had inadequate capacity to treat all the mental health, addiction, and chronic pain issues that afflicted the GAMC population. Hennepin County, Minnesota VNA, and Northpoint Community Clinic supplemented some of these needed services.

The primary care providers needed assistance with managing all the medication needs of the GAMC population, especially those on psychiatric medications.

Questions #4

What are two learnings from your CCDS experience that you will use in developing the new models of health system organizations, e.g. health home, ACOs, other?

Improve the functioning of the electronic record and IT in general so a patient can go to any clinic to be seen. HCMC did not restrict their enrollees in terms of access to any of their clinics. The IT system was built to virtually communicate the necessary information on GAMC enrollees across the entire HCMC system.

Internal capabilities were also built to create a Charitable Care Committee. The Committee helped the HCMC physicians and patients have a process to determine what procedure would be 'in' the service basket and what procedures would be deemed elective. The Committee was comprised of a set of peer physicians.

Question #5

What changed about the patient experience as a result of this initiative? In terms of patient engagement, did you implement any non-financial incentives?

The patient experience scores, especially for those with high treatment needs, jumped to greater heights. Because of the coordination of care, GAMC patients were getting the right care, at the right time, by the correct expanded member of the care team. These patients were brought to 'the front of the line' for primary care. Additionally, all the administrative hassles were removed and there was a single point of contact for all their questions. HCMC had an incremental budget to cover transportation costs.

Question #6

What are your comments about the financial model used and how might it be improved in the future arrangements? Did your CCDS care model impact the Total Cost of Care?

Appendix C: Opportunities within a Crisis:

Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)  
Funding was the 'dark side' of the whole program. There are clear learnings on patient experience and total cost of care but there is no reward for this innovation. If a health system is funded to align the care in a new model, it can work.

The North Memorial CCDS Experience in Treating the GAMC Population

Answers to Questions that Created the Summary Document

Background

Beginning June 1, 2010, a new hospital-based coordinated care delivery system started to manage health care and provide medically necessary services for eligible GAMC enrollees. Hospitals were provided capped block grants. Four hospitals established coordinated care delivery systems: Hennepin County Medical Center, North Memorial Medical Center, Regions Hospital, and the University of Minnesota Medical Center, Fairview.

On January 20, 2011, Gov. Mark Dayton and Human Services Commissioner Lucinda Jesson announced that DHS will begin implementing expanded Medical Assistance (MA) March 1. Therefore, current GAMC recipients were automatically converted to MA and Coordinated Care Delivery System (CCDS) contracts were terminated.

Gaining Insights

The following questions are to capture insights gained from the leaders at the four hospitals as it relates to their nine month experience as a CCDS.

Question #1

What, if any, guiding principles did you use as you created your strategy to become a CCDS?  
How did these principles change over time; what new ones did you add or learn you needed?

North Memorial started with three guiding principles and built work groups around these strategies; communication, access, and partners. They knew they wanted strong communication between patients and providers and between providers. In terms of access, they decided to open up seven clinic sites to the GAMC enrollees. The seven were determined by geography (i.e. Elk River for out-state enrollees) and the clinic's high level of functionality with their EPIC electronic medical record. Since North Memorial is a smaller health system, they had fewer employed specialists. Therefore, they sought and formed partnerships with the typically needed specialists like orthopedic surgeons, neurologists, etc. What they discovered is they also needed to form partnerships around issues that were not typically seen like infectious diseases.

There was one overarching CCDS Steering Committee consisting of a Director and a senior leader from Primary Care, Emergency Department, Hospital, Pharmacy, IT , Administration, Finance, and the Business Office.

Question #2

What were the top three things you learned about the needs of the GAMC population? How did your principles/operational model meet these needs?

Appendix C: Opportunities within a Crisis:

Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)

North Memorial underestimated the need and volume of mental health services. They anticipated the need for MTM and the role severe mental health issues played in accessing the Emergency Department but not the need for 'lower level' mental health services around depression and anxiety. It was the primary care physicians that alerted the Steering Committee early on to this issue. North Memorial learned early on that they could not manage a patient's overall health until they got the mental health issues stabilized first. Nystrom and Associates, a faith based mental health provider with offices all over the Twin Cities became a key partner to North Memorial. Overall, however, Minnesota needs greater capacity to deliver all levels of mental health services.

Once a member of the GAMC population enrolled with North Memorial, an initial 'meet and greet' with the primary care team was scheduled. The second learning was that within North Memorial's enrollees, only a small percent drove most of the costs. Another set needed care coordination for their chronic medical condition.

Thirdly, there was a need for "Healthcare Navigation Education" or how to properly use the healthcare system. Some enrollees were raised only knowing how to use the Emergency Department and had no experience with a primary care provider. North Memorial provided the education on proper use of urgent and primary care. They also reduced the barriers for accessing primary care. If an enrollee came into the Emergency Department, they were scheduled for a follow up visit with the PCC. All logistics related to that PCC visit were taken care of by North Memorial. This same focus on facilitating a PCC visit occurred upon discharge from an inpatient stay.

Question #3

What were the top three operational changes you decided to make? How did these affect the clinical outcomes of the enrollees?

Once an enrollee selected and signed up for care at one of the seven North Memorial clinics, all their care was delivered there. When a patient was referred to a specialist, the primary care provider needed to be consulted on treatment plans. The primary clinic became the center of the patient's universe which positively altered needless care-seeking behaviors. There was a high level agreement between North Memorial and their specialists, many of whom were their high volume specialists for other North Memorial patient types. .

The second operational change was discussed earlier. North Memorial handled all the scheduling, transferring of medical documents, etc to make the follow up PCC visit hassle free for the enrollee after their visit to the Emergency Department or upon discharge from the hospital.

North Memorial also gained an understanding of the use of DMEs (durable medical equipment), especially the need for diabetic supplies. While insulin was covered under a separate Rx benefit, the testing strips were the responsibility of the CCDS. North Memorial found this a useful way to bring patients in for more PCC visits.

Questions #4

What are two learnings from your CCDS experience that you will use in developing the new models of health system organizations, e.g. health home, ACOs, other?

Communication. To meet the needs of the patients, North Memorial was in telephone contact with the CCDS enrollees more than they anticipated. This element in the operational plan showed the largest increase and was more time consuming than originally planned. Emails

Appendix C: Opportunities within a Crisis:

Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota) between providers also increased. Some specialists (e.g. MAPS pain clinic, orthopedic surgeons) were also willing to do telephone consults. North Memorial also built the capability for system-wide dialogue on treatment choices. Improving effective communications will be major piece of their ACO model.

IT empowers the examination of access patterns. With the use of an electronic medical record, you can see where and how patients 'vote with their feet'.

Benefit design must support the care model. Open Access to any provider makes it extremely difficult to coordinate/manage a patient's care over time and across diseases/illnesses.

Question #5

What changed about the patient experience as a result of this initiative? In terms of patient engagement, did you implement any non-financial incentives?

North Memorial guided the enrollees' access points. Immediately upon enrollment, a 'meet and greet' was scheduled between the enrollee and the primary care clinic they had selected to launch the engagement with the patient. Behavioral specialists were not a part of this initial team as North Memorial does not employ them in their clinics. Patient handoffs were enhanced by North Memorial handling all that was needed as the patient moved from Emergency Department to inpatient, PCC to specialists, etc.

North Memorial removed any barrier they found to an enrollee accessing their primary care clinic, except transportation, which was addressed on a case by case basis. The largest unresolved hurdle was for out-state GAMC patients. Transportation costs could not be covered for these individuals. Out-state clinics started to realize that the monthly MNCare premium would be lower than the cost of a tank of gas for a GAMC patient. At that point, MNCare enrollment was encouraged by the out-state clinics.

Question #6

What are your comments about the financial model used and how might it be improved in the future arrangements? Did your CCDS care model impact the Total Cost of Care?

The level of funding was severely inadequate and unsustainable. The funding must be actuarially sound to ensure a more viable/sustainable financial base. Doing so will allow the provider to offer broader coverage to the served population. The global payment approach however did allow for maximum flexibility at the health system level. North Memorial was able to eliminate a great deal of administrative expenses because no claims needed to be submitted or reviewed. An individually tailored patient-centered care plan could be crafted without regard to what covered CPT code would be used.

However, providers must not be expected to take on insurance risk...adverse selection, catastrophic or stop loss claims etc. Providers do not possess the necessary infrastructure to administer insurance products. A third party administrator should be selected to take on underwriting, claims processing, benefit determination, and member services.

Finally, providers must have control over the cash flow for the program. Control over dollars allows the provider to manage access and coordinate care for the patient, allowing the provider to better measure and control for quality and the total cost of care.

## CCDS Questions

### HealthPartners

#### Question #1

What, if any, guiding principles did you use as you created your strategy to become a CCDS? How did these principles change over time; what new ones did you add or learn you needed?

Each CCDS had six weeks to put together its "program." The services provided varied across the four CCDS. The initial focus of the Regions CCDS was two-fold: 1) to be able to have full access beginning on day one of the CCDS, and 2) to assist patients with the enrollment process. These goals were met. The overall Regions CCDS principles were:

- Access - Access to primary care, specialty care, hospital care, and emergency care, including new CCDS clinic on Regions Hospital campus was essential to the Regions CCDS
- Service Integration - Integration of medical and behavioral health care
- Teamwork - Optimize use of advanced practice professionals within full care team
- Technology - Optimize use of the electronic medical record

#### Question #2

What were the top three things you learned about the needs of the GAMC population? How did your principles/operational model meet these needs?

Needs:

- Significant behavioral health needs as patients lost access to their previous provider.
- Many patients appeared to lack primary care thus access to primary care, urgent care, and specialty care remained essential.
- Education about care (including when to use urgent care instead of the emergency department) and patient connection and reassurance (this was important because many of the patients in Regions CCDS were new to our system).

Operational model met the needs with:

- Having support services at the point of patient care helps coordination
- Focused primary care access at certain clinics
- Access to acute care appointments with walk-in availability
- Behavioral health and medicine practicing "side by side" improved patient care
- Deliberate transitions: inpatient to ambulatory; high-risk emergency department follow up; follow-up on failed appointments
- Medical director review of specialty orders



Appendix C: Opportunities within a Crisis:  
Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)

**Question #3**

What were the top three operational changes you decided to make? How did these affect the clinical outcomes of the enrollees?

- Clinic on campus at Regions - It was clear that many of our patients would not utilize the primary care clinics in the community. Developing a clinic not too far from our emergency department provided quick access at a lower cost to the emergency department.
- Focused primary care access at certain clinics - Allowing access to limited clinics allowed for relationship building with patients and continuity of care.
- Centralized behavioral health access - Many of our patients had behavioral health conditions. It was critical for the Regions CCDS to have adequate access to these services.

The data on the clinical outcomes is incomplete. Comparing state data on GAMC utilization and to CCDS data is not appropriate due to the funding and service mismatch and the limited duration of the program. Thus Regions CCDS analysis is focused on population management and access for all the CCDS enrollees rather than a small subset of patients.

**Questions #4**

What are two learnings from your CCDS experience that you will use in developing the new models of health system organizations, e.g. health home, ACOs, other?

The CCDS program was a stop-gap solution to the elimination of GAMC. Despite the limited funding and duration of the program we did have key learnings including:

- Integrating medical and behavioral health can lead to improve outcomes
- Improved pain management plans are needed

Regions Hospital member of the HealthPartners family of care, which is an integrated care delivery system. HealthPartners clinics have been certified as health care homes by NCQA and the State of Minnesota. The learnings from the CCDS experience and the work underway in the HealthPartners clinics will become integral portions of a HealthPartners ACO.

**Question #5**

What changed about the patient experience as a result of this initiative? In terms of patient engagement, did you implement any non-financial incentives?

- Patients had access to needed health services, including primary care and behavioral health.
- Patients had access to enrollment, case management and financial services.
- Regions CCDS provided bus passes and other transportation for specific cases.
- Regions CCDS had close coordination with community resources and partners, specifically West Side Community Clinic.
- Regions CCDS clinic on campus provided walk-in access.

Appendix C: Opportunities within a Crisis:  
Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)

**Question #6**

What are your comments about the financial model used and how might it be improved in the future arrangements? Did your CCDS care model impact the Total Cost of Care?

The financing system of CCDS program was not sustainable and equitable. The payment model was based on 2008 payment history and did not reflect the realities of the current program enrollment. The lack of community and social services for patients was a huge downfall for the program. Half of the healthcare system was cut off for patients.

Historical Claims data on each patient was not provided. As result, program outcomes are different across the four CCDS. Furthermore, it is difficult to know if the Regions CCDS model impacted Total Cost of Care.

## The Fairview CCDS Experience in Treating the GAMC Population

### Answers to Questions that Created the Summary Document

#### Background

Beginning June 1, 2010, a new hospital-based coordinated care delivery system started to manage health care and provide medically necessary services for eligible GAMC enrollees. Hospitals were provided capped block grants. Four hospitals established coordinated care delivery systems: Hennepin County Medical Center, North Memorial Medical Center, Regions Hospital, and the University of Minnesota Medical Center, Fairview.

On January 20, 2011, Gov. Mark Dayton and Human Services Commissioner Lucinda Jesson announced that DHS will begin implementing expanded Medical Assistance (MA) March 1. Therefore, current GAMC recipients were automatically be converted to MA and Coordinated Care Delivery System (CCDS) contracts were terminated.

#### Gaining Insights

The following questions are to capture insights gained from the leaders at the four hospitals as it relates to their nine month experience as a CCDS.

##### Question #1

What, if any, guiding principles did you use as you created your strategy to become a CCDS? How did these principles change over time; what new ones did you add or learn you needed?

The guiding principles were to benefit the patient and increase the efficiency of delivering care in a way that would inform the community and treat the patient with respect. What became clear was that Fairview needed to meet each person 'where they were' with an individualized care plan. This meant that the patients often needed a combination of primary care, expertise from a behavioral health specialist, and an understanding of the social determinants in the person's life. Fairview was continually adapting its prototype but patient enrollment in and assignment to the Fairview CCDS was essential to the overall success of their strategy.

##### Question #2

What were the top three things you learned about the needs of the GAMC population? How did your principles/operational model meet these needs?

The Fairview system had not had to understand the whole person before. Often, Minnesotans needing General Assistance Medical Care (GAMC) were temporarily down on their luck. Many had a desire to improve their health. After building enough trust, Fairview was able to reach them in a way that the person could step up and play a proper role in being accountable for their own health. Also, these Minnesotans had more depression and anxiety than was originally anticipated.

##### Question #3

What were the top three operational changes you decided to make? How did these affect the clinical outcomes of the enrollees?

Appendix C: Opportunities within a Crisis:

Lessons Learned from CCDSs Treating the GAMC Population (report from the University of Minnesota)  
Fairview set up one clinic at the Riverside Hospital for all of their GAMC enrollees. The exam room took on a whole new look. There were up to five provider types in the room at one time ~ primary care, behavior specialist, someone focused on social determinants, a medication management therapist, and a care coordinator. There were daily huddles, an operations group, and a focus on using everyone at the top of their license. Some patients had transportation issues so telephone visits were used to a great extent, e.g. to check in with the patient to see if they thought their mental health medications were working well.

Questions #4

What are two learnings from your CCDS experience that you will use in developing the new models of health system organizations, e.g. health home, ACOs, other?

The team will take on a new look. We will need to figure out how to have more elements of the delivery system come together to create a virtual team. We now know we will need to ask questions like 'For the benefit of this patient, could we have a kiosk at Somalian community center? How can we connect with their cultural leader?'

The other learning is around the benefit of 'warm' handoffs. There is a clear benefit in increasing the amount of personalized communication as one provider type transfers the patient to another member of the team.

Question #5

What changed about the patient experience as a result of this initiative? In terms of patient engagement, did you implement any non-financial incentives?

Fairview underestimated the improved level of patient engagement they were able to achieve with their care model innovations. Designing and implementing a new care coordinating delivery system meant all new kinds of interactions for the patient also. Fairview was constantly seeking feedback from patients on whether their needs were being met. One additional approach was the use of the Truthpoint customer service feedback hand held device. Fairview gained a new level of understanding of this population through every data source available to them. Some patients needed bus tokens, paid parking, Subway food cards, or increased number of telephone contacts to seek the care they needed.

Fairview also had their eyes opened to the value that exists with forming partnerships with non-medical partners that also provide community based services to this population. There is untapped potential opportunities that could be realized by a strong bond with homeless shelters, LSS, Catholic Charities, etc but HIPAA considerations will need to be addressed.

Question #6

What are your comments about the financial model used and how might it be improved in the future arrangements? Did your CCDS care model impact the Total Cost of Care?

Fairview didn't have much of a choice. Having risen to the challenge of becoming a CCDS, they are glad they did it although it was woefully underfunded. The legislature needs to understand this is a population of Minnesotans who "there but for one job go I".

Minnesotans with complex medical needs are not going away. Fortunately, the UMP specialists had a "Let's all pitch in" attitude toward providing specialty care. As a CCDS for GAMC patients, Fairview moved toward the Triple Aim but the global payment for this population must increase to sustain these patient-centered innovations.

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Appendix D: Coordinated Care Delivery Systems: The why, who, what, when, where and how of CCDS and implications for the future (from the 14<sup>th</sup> Annual ICSI/IHI Colloquium on Health Care Transformation presentation May 18, 2011)

**Appendix D: Coordinated Care Delivery Systems: The why, who, what, when, where and how of CCDS and implications for the future (from 14<sup>th</sup> Annual ICSI/IHI Colloquium on Health Care Transformation presentation May 18, 2011)**

The CCDS presentation begins on the next page. This presentation was adapted from a PDF file on the Web.

Appendix D: Coordinated Care Delivery Systems: The why, who, what, when, where and how of CCDS and implications for the future (from the 14<sup>th</sup> Annual ICSI/IHI Colloquium on Health Care Transformation presentation May 18, 2011)

5/18/11

## **Coordinated Care Delivery Systems:**

**The why, who, what, when, where  
and how of CCDS and  
implications for the future**

## **What led to CCDS?**

**In 2010 the MN Legislature and Governor Tim Pawlenty changed General Assistance Medical Care which covered medical costs for low income, non-disabled adults aged 21-64 without dependent children. GAMC provided many of the MA services (except post-acute). Without dental or eye coverage.**

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## Who participated?

- Coordinated Care Delivery Systems: 4 hospitals opted to become a CCDS:
  - Hennepin County Medical Center
  - North Memorial Medical Center
  - Regions Hospital
  - University of MN, Fairview
- Of the qualifying 35,000 GA patients ,19,000 were eligible to enroll in one of the CCDS
- All were metro based. Out state patients were at a grave disadvantage.
- Other hospitals (144) could bill a (very limited) temporary uncompensated care pool for those not enrolled in a CCDS

## Reimbursement Methodology

- The legislatively constructed reimbursement methodology created a significant disincentive for health systems to participate.
- From \$71M, each CCDS received a block grant to cover (!) any services provided, including ED, medical transportation, professional fees, OP, preventive health, mental health services and prescription drugs administered in the clinic. **This was about 1/3 of the amount received previously, and represented 9-10 cents on a dollar of medical expense.**
- Outpatient drugs continued to be covered under the prescription drug pool on a FFS basis. A CCDS had to pay DHS 20% of the cost of drugs provided.

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## Capping

- Each CCDS was capped at a patient number based on its proportion of GAMC patients served in the past.
  - HCMC~9700
  - Fairview~2400
  - Regions~3500
  - North Memorial~2000
- Once the cap was reached, there was no new enrollment in that CCDS until its numbers fell below.
- There was no cap on the costs – in essence hospitals became managed care organizations—managing utilization.

## When

- CCDS started June 1, 2010. It was anticipated to run at least a year. CCDS systems had time varying from 2 months to two weeks to prepare.
- CCDS ended February 28, 2011, when governor Dayton signed the bill for Expanded Medical Assistance

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## Domains

- Planning and preparation
- Enrollment
- Services
- Care Model
- Effect on patients
- Evaluation

## Domain: Planning & Preparation

- Analysis of anticipated total cost
- Review of data within correct clinical context
- Service set development
- Risk mitigation strategies
- Communication to the organization and to patients
- Development of contracts with key partners

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**Few Patients Account for lots of money**

- **60 ICU admissions**- accounted for nearly 10% of total payments overall
- the same as **24,861 outpatient visits** or **16,068 emerge**

**PAYMENTS**

**Domain: Enrollment**

- Tracking compared to cap
- Assisting eligible patients to enroll on a rolling six month basis created a paperwork burden
- Working with the different systems
- Ongoing enrollment turnover

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### Domain: Services

- **Service set**
  - Defining it
  - Prescriptions
  - Supplies
  - Dental
  - Specialists
- **Closed network, contracting with other providers**
- **Denial/Termination/Reduction (DTR) process**

### Domains: Care Model

- **“Keep them well”**
- **Focus on primary care**
- **Mental health, Chemical Dependency, Pain Management**
  - Focus of almost all visits
  - Team-based approach
- **Coordinating care between clinic, ED, hospital, and community services a primary goal to improve outcomes.**
- **Use of the electronic health record**

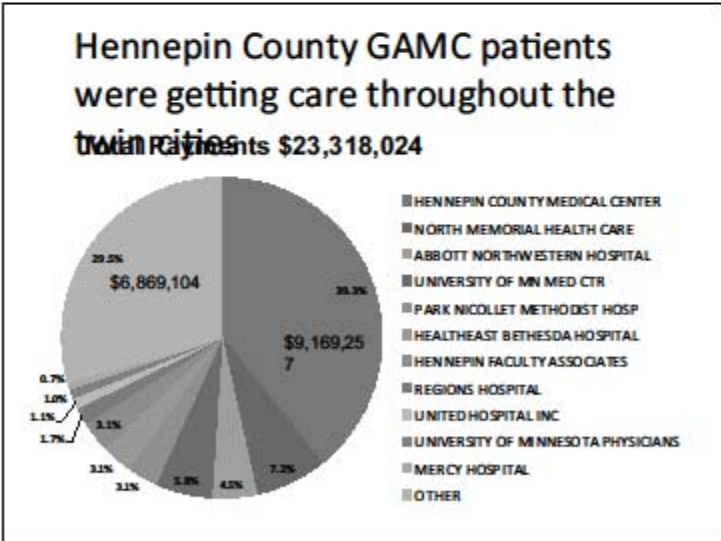
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**Domain: Patient Care Disruption**

- Creation of a new system with only four provider systems created dislocation from established provider.
- Relationships were ended.
- Choose one of the four or nothing.
- Decreased service offering:
  - No dental coverage
  - No eye coverage
  - No transportation services
  - Uneven specialty services, depending on CCDS offerings
- Demand outpaced resources, creating access difficulties.



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### Domain: Evaluation

- Quality
- Patient Experience
- Provider Experience
- Utilization/cost—decreased ED visits and admissions
- Challenges of tracking

### Lessons Learned

- Operational lessons
  - Focus on value, not volume – keep them well
  - Primary care and care coordination were key
  - It was challenging to meet the need for mental health, chemical dependency and pain management services
  - Technology changes, from the phone to the EHR, were necessary

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## Lessons Learned

- **Economic lessons**
  - Incentives were finally aligned: keeping the patient well, utilizing less expensive venues including decreasing readmissions and ED use, minimizing duplication, opting for the conservative approach were “rewarded” through lower costs; contrast to high volume in FFS
  - Funding was severely inadequate and underfunded. All systems lost money

## Lessons Learned

- **Strategic lessons**
  - Important to know your population and design programs accordingly
  - Good preparation for Accountable Care Organization care

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## Appendix E: Universal Table Notes

1. The department allowed the CCDSs to report services and costs differently, either by standard fee-for-service health care claims or by flat files. This report combines data from both sources in order to report the utilization as completely as possible. For HCMC and Regions Hospital, data are from flat files submitted to a Web reporting system. For North Memorial Medical Center and UMMC/Fairview, data are from standard fee-for-service health care claim.
2. There may be duplication between CCDSs; an enrollee may have been enrolled in more than one CCDS during a quarter.

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## Appendix F: ICD 9 Diagnosis Codes by Diagnostic Category

### **Alcohol/Drug/Tobacco – Chemical Dependency**

291 – Alcohol induced mental disorders  
292 – Drug induced mental disorders  
303 – Alcohol dependence syndrome

304 – Drug dependence

305 – Nondependent abuse of drugs (305.1 is Tobacco use disorder)

### **Asthma – Chronic Disease**

493 – Asthma

### **Cirrhosis and Chronic Liver Disease - Chronic Disease**

070 – Viral hepatitis  
571 – Chronic liver disease and cirrhosis

572 – Liver abscess and sequelae of chronic liver disease

573 – Other disorders of liver

### **Diabetes/Retinopathy - Chronic Disease**

249 – Secondary diabetes mellitus  
250 – Diabetes mellitus

362.0 – Diabetic retinopathy

### **Heart - Chronic Disease**

391 – Rheumatic fever with heart involvement  
392 – Rheumatic chorea  
393 – Chronic rheumatic pericarditis  
394 – Diseases of mitral valve  
395 – Diseases of aortic valve  
396 – Diseases of mitral and aortic valves  
397 – Diseases of other endocardial structures  
398 – Other rheumatic heart disease  
410 – Acute myocardial infarction  
411 – Other acute and subacute forms of ischemic heart disease  
412 – Old myocardial infarction  
413 – Angina pectoris  
414 – Other forms of chronic ischemic heart disease  
415 – Acute pulmonary heart disease

416 – Chronic pulmonary heart disease

417 – Other diseases of pulmonary circulation

420 – Acute pericarditis

421 – Acute and subacute endocarditis

422 – Acute myocarditis

423 – Other diseases of pericardium

424 – Other diseases of endocardium

425 – Cardiomyopathy

426 – Conduction disorders

427 – Cardiac dysrhythmias

428 – Heart failure

429 – Ill-defined descriptions and complications of heart disease

440 – Atherosclerosis

441 – Aortic aneurysm and dissection

442 – Other aneurysm

### **Hypertension - Chronic Disease**

401 – Essential hypertension  
402 – Hypertensive heart disease  
403 – Hypertensive chronic kidney disease

404 – Hypertensive heart and chronic kidney disease

405 – Secondary hypertension

## Appendix F (cont.)

### **Injury and Poisoning – *Injury and Poisoning***

800–804 – Fracture of skull  
 805 – 809 – Fracture of neck and trunk  
 810-819 – Fracture of upper limb  
 820-829 – Fracture of lower limb  
 830-839 – Dislocation  
 840-848 – Sprains and strains of joints and adjacent muscles  
 850-854 – Intracranial injury, excluding those with skull fracture  
 860-869 – Internal injury of thorax, abdomen, and pelvis  
 870-897 – Open wound  
 900-904 – Injury to blood vessels  
 905-909 – Late effects of injuries, poisonings, toxic effects, and other external causes  
 910-919 – Superficial injury

920-924 Contusion with intact skin surface  
 925-929 – Crushing injury  
 930-939 – Effects of foreign body entering through orifice  
 940-949 – Burns  
 950-957 – Injury to nerves and spinal cord  
 958-959 – Certain traumatic complications and unspecified injuries  
 960-979 – Poisoning by drugs, medicinal and biological substances  
 980-989 – Toxic effects of substances chiefly nonmedicinal as to source  
 990-995 – Other and unspecified effects of external causes  
 996-999 – Complications of surgical and medical care, not elsewhere classified

### **Kidney – *Chronic Disease***

580 – Acute glomerulonephritis  
 581 – Nephrotic syndrome  
 582 – Chronic glomerulonephritis  
 583 – Nephritis and nephropathy, not specified as acute or chronic  
 584 – Acute renal failure  
 585 – Chronic kidney disease  
 586 – Renal failure, unspecified

587 – Renal sclerosis, unspecified  
 588 – Disorders resulting from impaired renal function  
 589 – Small kidney of unknown cause  
 590 – Infections of the kidney  
 591 – Hydronephrosis  
 592 – Calculus of kidney and ureter  
 593 – Other disorders of kidney and ureter

### **Mental Health – *Mental Health***

290 – Dementias  
 293 – Transient mental disorders due to conditions classified elsewhere  
 294 – Dementia in conditions classified elsewhere  
 295 – Schizophrenic disorders  
 296 – Episodic mood disorders  
 297 – Delusional disorders  
 298 – Other nonorganic psychoses  
 299 – Pervasive developmental disorders  
 300 – Anxiety, dissociative and somatoform disorders  
 301 – Personality disorders  
 302 – Sexual and gender identity disorders  
 306 – Physiological malfunction arising from mental factors

307 – Special symptoms or syndromes, not elsewhere classified  
 308 – Acute reaction to stress  
 309 – Adjustment reaction  
 310 – Specific nonpsychotic mental disorders due to brain damage  
 311 – Depressive disorder, not elsewhere classified  
 312 – Disturbance of conduct, not elsewhere classified  
 313 – Disturbance of emotions specific to childhood and adolescence  
 314 – Hyperkinetic syndrome of childhood  
 315 - Specific delays in development  
 316 - Psychic factors associated with diseases classified elsewhere

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## Appendix G: Glossary

These definitions relate to the terms used in this report.

Term	Definition
Professional	In Table 7, "Physician and Other Professional Visits," the term "professional" is intended to denote that an enrollee visited an office or clinic and received a service from a person licensed to provide that service. If the enrollee received the service in the course of an Emergency Department visit, or during a hospital inpatient stay, then the service was considered subsumed in those categories and was not counted separately in the "physician and other professional visits" category. Following are the 12 specific service areas included in the professional category: physician, mental health, physical therapy, speech therapy, occupational therapy, podiatry, chiropractic services, audiology, vision, nurse midwife, nurse practitioner, and nutrition services.
General Medical Hospital Inpatient Care and Mental Health Related Inpatient Care stays	These codes were classified as Mental Health: '290x', '293x', '294x', '295x', '296x', '297x', '298x', '299x', '300x', '301x', '302x', '306x', '307x', '308x', '309x', '310x', '311x', '312x', '313x', '314x', '315x', '316x' These codes were classified as Chemical Health: '291x', '292x', '303x', '304x', '305x' Everything else was classified as General Medical
Non-standard claims data	The department's protocols that specified the reporting data elements for the flat files sent via a Web application are non-standard claims data because these do not meet standard claims specifications (i.e. 837P, 837I). Two of the CCDSs chose to send flat files rather than MHCP standard fee-for-service claims.

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