Rural community-based hospitals have been undergoing significant ownership changes over the past 10 years, with many that had been independently owned and operated transitioning to being owned, leased or managed by larger multi-hospital health care systems. The Rural Health Advisory Committee (RHAC) and the Office of Rural Health and Primary Care at the Minnesota Department of Health sought to investigate and document the status of this trend, and to explore the reasons rural hospital leaders are choosing to become affiliated with regional systems of care, or to remain independent.

System affiliation appears to be accelerating in Minnesota, and is in a state of flux. Many hospitals have joined large systems in recent years, and more are considering the shift. The latest available official data, from 2010, comes from Minnesota’s Health Care Cost Information System (HCCIS). To identify changes that have happened since that time, ORHPC staff utilized HCCIS and a variety of other sources to develop a list of Minnesota hospitals and their affiliations as of December 2012 (See Appendix 1 for 2012 map of Hospital System Affiliations).

This issue brief is intended to present baseline information about rural hospital system affiliation and its effects on hospitals in rural Minnesota. The first section establishes a clear trend in the number of hospitals that are joining hospital systems in Minnesota. The second section presents data gathered from Critical Access Hospital CEOs throughout the state on the status of their hospitals and their opinions on how system affiliation affects access to health care and hospital sustainability in rural Minnesota.

Trends in Hospital System Affiliation in Minnesota

The trend in system affiliation among rural and urban community hospitals is occurring both in Minnesota and nationally. Figure 1 illustrates the trend in the percentage of hospitals affiliated with health systems from 1999 to 2010, both nationally and in Minnesota. From 1999 to 2010, the number of US hospitals affiliated with health systems increased from 51 percent to 59 percent, adding 417 hospitals for a total of 2,941 affiliated in 2010.
This trend was also seen in Minnesota, where the percentage of affiliated hospitals increased from 53 percent in 1999 to 59 percent in 2010 (Figure 1). A look further back in time shows that the increase in system affiliation in Minnesota has been steadily occurring since 1987, when there were 50 affiliated hospitals, to 2012 when there were 85 affiliated hospitals, representing an increase of 24 percent in 25 years (Figure 2).

**Figure 2: Trend in Hospital Affiliation in Minnesota 1987 – 2012**

*Hospital Affiliation includes any hospital that is owned, leased or managed by an organization that oversees multiple hospitals. Excludes VA hospitals, Federal or State government run hospitals, Indian Health Services, the Philips Eye Institute in Minneapolis, and Mayo Psychiatry and Psychology Hospital. 2012 data were obtained through updates tracked by Minnesota Department of Health, Office of Rural Health and Primary Care staff and include any known changes from the 2010 HCCIS data.*
Despite differences in resources and the number and size of health systems, since 1987 both urban and rural hospitals in Minnesota have experienced similar trends in the percent of hospitals affiliated with health systems (Figure 3). System affiliation is not the same in all rural community-based hospitals, and local communities may decide to become affiliated for a variety of reasons. System affiliation can include a management arrangement, in which the hospital leadership is employed by the larger system but the hospital itself is owned by the local government or a private nonprofit local entity. Typically, these managed hospitals have local members sitting on the hospital board. Health systems can also lease or buy the hospital itself, in which case the local community may no longer have authority over hospital operations. Systems also differ in their level of system oversight and management. Large systems may exercise a great deal of control over their affiliated hospitals, or may defer much of the control to local leadership of each hospital.
Survey of Critical Access Hospitals (CAHs) in Minnesota

Critical Access Hospitals are licensed, not-for-profit hospitals that have 25 or fewer acute care beds and participate in the Medicare program. They must also be in a rural area and located at least 35 miles from another hospital or certified by the state as being a necessary provider. The Balanced Budget Act of 1997 established the CAH designation to maintain health services in rural area. CAHs have a different reimbursement structure than non-CAHs, in which they receive 101 percent of reasonable costs for most inpatient and outpatient services.

To identify advantages and disadvantages of system affiliation in rural Minnesota hospitals, ORHPC and the Flex Advisory Committee sent a questionnaire to each of Minnesota’s 79 Critical Access Hospitals (CAHs).

The primary aim was to learn what CEOs at Critical Access Hospitals thought about key issues in rural health, and to understand how those issues relate to current trends in health system affiliation. Of the 79 CAHs surveyed, 65 (82 percent) responded. Among respondents, 29 were independently owned and managed hospitals and 36 were affiliated with a system either through ownership, lease agreements or management contracts (Figure 4). Of the 14 hospitals that did not respond, seven were independent and seven were affiliated.

Figure 4: Ownership Status of Critical Access Hospitals in Minnesota - N=65†

The survey included 14 questions focusing on the perceptions of the hospital CEO about topics such as recruitment and retention of staff, ability to provide specialty services, electronic health record adoption, and hospital sustainability. It also included general questions about the effect of system affiliation on rural CAHs in Minnesota. Results of each question were compared between independent and affiliated hospitals to determine if there were major differences between the two groups. The sample size of this questionnaire made it difficult to draw strong conclusions about these differences - there were no questions where the groups differed notably in their responses. Instead the responses were remarkably similar, indicating that rural CAHs face some of the same challenges regardless of whether or not they are affiliated with a large system.

*Cass Lake Hospital is a federally owned hospital owned and operated by the Indian Health Service (IHS). †Note: Minnesota has a total of 79 CAHs, 65 of which responded to the survey.
The majority of respondents from both affiliated and independent hospitals indicated that physician recruitment and retention was difficult (Figure 5). Non-physician professional recruitment appeared to be difficult for some and easy for others (Figures 6). In neither case did affiliated or independent hospitals differ markedly in their responses.

**Figure 5:** How would you rate your ability to meet physician recruitment and retention needs for both primary care and specialty physicians at your hospital?

![Graph showing physician recruitment and retention ratings for affiliated and independent hospitals.]

**Figure 6:** How would you rate your ability to meet recruitment and retention needs for non-physician healthcare professionals (eg. Nurses, Advanced Practice Nurses, PAs etc.) at your hospital?

![Graph showing non-physician healthcare professional recruitment and retention ratings for affiliated and independent hospitals.]

A larger percentage of respondents from independent hospitals indicated they were able to provide access to many physician specialty services, while most affiliated hospitals had a neutral response to that question (Figure 7).
Figure 7: Please indicate the degree to which your hospital is able to provide access to physician specialty services.

Most of the hospitals surveyed (50 of 65) had added services in the past 5 years (Figure 8). The types of services added were: Endocrinology, Diabetes Management, Pain Clinic, Memory Care, Depression Care, Orthopedics, Family Practice, Bariatric Services, Sleep Studies, Pediatrics, Mental Health, Telestroke, Bone Density Studies, 24/7 Ultrasound, Allergy, Podiatry, Neurology Outreach and Pulmonology Outreach.

Figure 8: Number of Hospitals that Added Services in the Past 5 Years

Most respondents from both affiliated and independent hospitals indicated they had made significant progress on implementing electronic health records and achieving meaningful use. The results were largely the same for both types of hospitals (Figure 9).
A slightly higher percentage of independent hospitals indicated that their current patient volume and net revenues were sufficient to provide ongoing sustainability. However, as in all the questions for this survey, the sample was too small to test for a significant difference (Figures 10 and 11)."
Figure 11: Please rate the ability of your current patient volume to provide the ongoing sustainability of your hospital.

The majority of respondents from both independent and affiliated hospitals indicated that system affiliation would increase their access to capital, as well as increase their hospital’s cost for providing services (Figures 12 and 13).

Figure 12: In your opinion, would affiliation with a large hospital system increase or decrease your cost for providing services?
When asked whether the recent trend in system affiliation will increase or decrease access to local health services in rural Minnesota, the majority of respondents from both types of hospitals indicated that affiliation would increase access to services (Figure 14). *

Figure 13: In your opinion, would affiliation with a large hospital system increase or decrease your access to capital?

Figure 14: Do you feel that recent trends in system affiliation will increase or decrease access to local health services in rural Minnesota?
Results were mixed regarding the potential effect of the trend in rural hospital affiliation on the viability of CAHs in Minnesota. Some responded that it will make things worse and some that it will make things better (Figure 15). ii

Figure 15: In your opinion, what effect will the trend in rural hospital affiliation with large health care networks/systems have on the viability of Critical Access Hospitals in Minnesota?

![Bar Chart]

Conclusion

This baseline study suggests that while there is a clear trend in Minnesota hospitals joining larger systems, among Critical Access Hospitals (CAHs) there did not appear to be substantial differences in how independent and affiliated hospital CEOs feel their hospitals are faring in terms of recruitment, access to services, electronic health record adoption and sustainability. Many but not all CEOs from both independent and affiliated CAHs indicated that system affiliation was likely to increase local access to health services, and increase access to capital. At the same time, a majority of CEOs in both independent and affiliated hospitals said that system affiliation would likely increase their hospitals’ cost for providing services.

This initial survey data is qualitative and presents respondents’ impressions, so few definitive conclusions can be drawn. The questionnaire provided information from 65 of the 79 CAHs in the state, but left out the other 56 hospitals not designated as CAHs. These hospitals face different economic circumstances, which could dramatically affect their responses to questions like those posed in this survey. To gain a more complete understanding of how the growth and consolidation of systems affects rural health care and rural hospitals, more information is needed on objective differences in patient care, patient satisfaction and hospital viability from both Critical Access Hospitals and non-Critical Access hospitals in rural Minnesota.
Appendix 1: Hospital System Affiliations in Minnesota-2012

Minnesota Hospital Affiliations 2012

*Affiliated hospitals are owned, leased, or managed by a healthcare system.*
Notes

1 The Rural Health Flex Committee advises ORHPC’s work with Critical Access Hospitals, emergency medical services and rural health networks. Much of this work is funded through the federal Rural Hospital Flexibility Program.

2 *Respondents could choose answers on a scale of 1-5. The percentage of respondents choosing each answer is indicated by the size of the shaded section, with negative responses on the negative side of the y axis and positive responses on the positive side of the y axis. The neutral “3” response on the scale is evenly split between the negative and positive sides of the y axis. The resulting bars are further to the right of the graph if most of the responses were positive, and further to the left if most of the responses were negative.*

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