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Nebraska Rural Hospital Flexibility Grant Program Evaluation Report

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Introduction

The purpose of this assessment of the Nebraska Rural Hospital Flexibility Grant (Flex) program is to report findings regarding the administration and activities of hospital networks in Nebraska and initiatives being undertaken in Nebraska's critical access hospitals (CAHs) related to patient safety and quality improvement (QI). This assessment is part of an ongoing evaluation of the Flex program. The intent of this phase of evaluation, its content, and its timing are in concordance with an agenda agreed to by the Flex program director, the steering committee, and the evaluator. This report is considered to be formative in nature and is intended to suggest further directions for the program, which will continue to be assessed as part of the ongoing evaluation.

Key Findings

Findings Related to the Administration and Activities of Rural Networks in Nebraska

- Allowing networks (not individual CAHs) to set their own agendas and to request and receive grant funds creates opportunity to adapt initiatives to differences among groups of CAHs in the state.
- Providing grants to networks without requirements for specific activities and documented outcomes has generated mixed results; activities have been undertaken but not within a central purpose of the Flex program and with varied levels of success across networks.
- Decision making within networks varies, but all networks seek to engage individual CAHs in the process. The dominant mode is decision by consensus, starting with either the recommendations of a network hospital or with ideas from among the CAHs. For the smaller networks, this process has been effective. In larger, more diverse networks, the same process can lead to either decision paralysis or a sense of disconnection.
- All network activities have been received positively and have resulted in positive outcomes. The outcomes, though, have not been measured or shared with others.
- Most network activities have taken advantage of lateral learning networks for specific purposes, including creating networks of specific types of hospital leaders (for example, directors of nursing).
- With a notable exception, network activities are driven by annual agendas, not long-term commitments to a particular strategy or set of goals.
- ***Nebraska's networks have been successful in meeting the program's objective of creating a collaborative environment through which regional health care services in the state are improved.***

Findings Related to Initiatives in Patient Safety and QI

- CAHs are engaged in a variety of activities to improve patient safety, including medication error reporting and process change, falls assessment, patient satisfaction, and peer review.
- The most impressive efforts are those designed to create a culture of patient safety and QI throughout the entire hospital organization.
- CAHs are using a natural advantage of small scale to involve everyone in patient care in their patient safety/QI initiatives.
- The Balanced Scorecard (BSc) may provide a platform for integrating patient safety and QI activities into the operations of CAHs.
- The Quality Improvement Committee within the Flex program has developed a systematic approach to QI, but their work is not referenced by CAH staff in discussions of QI.

Recommendations

- Network coordinators and state Flex staff should develop a statement of long-range purpose for networks that is focused on measurable outcomes within state service areas.
- Network coordinators and state Flex staff should develop a more systematic methodology for sharing lessons learned across the networks.
- In general but especially in larger networks (large in geography or number of CAHs), networks should use telecommunications technology to provide services, share resources, and conduct meetings.
- Also in general but especially in networks with more than 6 CAHs, networks should consider developing a menu of activities all linked to the same network goal and objective, allowing each CAH to engage in the activities most appropriate to its circumstances.
- The blueprint developed by the Quality Improvement Committee should be integrated with the activities of the state's Quality Improvement Organization, the Nebraska Patient Safety Coalition, and other statewide efforts to improve patient safety and quality of care in Nebraska's hospitals. It should also be communicated directly to all CAH directors of quality.

Network Administration and Activities

Nebraska's approach to network development has focused on inter-hospital affinity networks anchored by regional/urban hospitals (regional hospitals are located in Nebraska's larger cities, including 4 hospitals in metropolitan areas and 5 in micropolitan areas). There are 9 multi-hospital networks based in Nebraska, with the number of participating CAHs ranging from 2 to 17; in Nebraska, 8 CAHs participate in networks originating in South Dakota (3 networks), Iowa, or Colorado; 2 Kansas CAHs participate in Nebraska-based networks. For this evaluation, qualitative research was conducted in the 4 largest Nebraska networks (those with 6, 8, 14, and 17 CAHs). At least one site visit was made to a CAH in each network (3 CAHs in one network), and the regional coordinators of the 4 network hospitals were interviewed. Interview instruments are appended. Reports filed by the 4 networks with the state Flex program were reviewed.

An objective of the Nebraska Flex program is to develop CAH networks, defined to include a supporting hospital, affiliated CAHs, and others. A major goal of the Flex program is to develop a close working relationship between the supporting hospital and the CAHs. The relationship is intended to yield collaborative work on common projects. Specific projects are determined by the networks themselves. Network accountability to the Flex program is maintained through a process of submitting annual work plans and reports of accomplishments.

This evaluation report focuses on the decision-making processes used by networks to allocate resources, how the Flex dollars are used to support specific activities, and the role of the network/supporting hospital. The report also includes an examination of how the full set of network activities can or cannot be characterized as consistent with a pattern, and what might be done within the Flex program to improve the effectiveness of network activities.

Decision Making in the Nebraska Networks

The networks are based on natural affinities between the participating CAHs and the network hospital; CAHs can choose their affiliation. Consequently, networking may, on the surface, appear to be inconsistent with relationships between hospitals near each other. For example, Phelps Memorial Health Center in Holdrege is linked to Bryan LGH Medical Center in Lincoln, not the closer Good Samaritan hospital in Kearney, and hospitals in northeast Nebraska are linked with network hospitals in Omaha and Lincoln, not the closer regional hospital in Norfolk.

Nebraska Flex networks are primarily service organizations, with the clients being the participating CAHs. They exist as a means of using the greater good of the network (defined in terms of dollars allocated through the Flex grant combined with the personnel resources of the large network hospitals) to meet the needs of individual participating CAHs. The participating CAHs and the network hospital decide each year to meet a set of defined needs, based on broad goals related to patient care in CAHs. Services are provided more cost effectively through the network than they would be if provided to one CAH at a time, and CAHs share experiences through their peers in networks.

Networks are thought of as regional entities, but rather than using single, regional integrated systems, they work to improve care in the region one place at a time. One network in the Panhandle of the state is making decisions about activities that are uniform across the network, with the intention of creating a regional system of care. That network is developing a regional system of care and marketing its services as a network to all the communities in the region.

During site visits, only one common concern was voiced about how networks function in Nebraska: at various points in time the key persons involved in managing network affairs, such as the leadership at the network hospital or executives of participating CAHs, may not act in the best interests of the network. An advantage of allowing networks to develop by affinity rather than basing them on any arbitrary assumptions regarding linkages is that hospitals can change affiliations, although only a few have done so. Two CAHs participating in larger networks voiced a concern that by aggregating resources within the network (network allocations from the Flex grant are based on a per-CAH allocation, implying that individual CAH “shares” are being allocated to the network) the needs of individual CAHs are not necessarily met by the collective activities of the network. From the network perspective, attempts to reach consensus among all participating CAHs can lead to decision paralysis and therefore underutilized resources (one network has a large balance of unused funds accumulated for more than one year). At the time of the interviews completed for this report, one large network recognized this problem and was considering a strategy of a menu of activities for network CAHs, being sure there were activities of interest for each CAH. That network’s goals, as stated in its work plan, are general statements that could accommodate multiple strategies. Similarly, another large network used general goal statements in its work plan followed by several different action statements, presumably allowing tailoring to specific CAH needs and circumstances.

Nebraska’s experience demonstrates that rural networks are similar to rural hospitals—considerable variation exists in their goals, work plans, and decision-making styles. The network-by-affinity approach is working well, including allowing CAHs to change affiliations when the nearest tertiary hospital is not seen as a collaborative partner. By not forcing any particular model, the Flex program is allowing for regional needs to be determined and met by the hospitals in each region of the state. There is room for improvement in this approach: requiring networks to expend the grant awards in a more timely manner could serve as an incentive for the large networks to accommodate a variety of needs within their networks instead of prolonging program decisions while hoping to achieve consensus on activities to be conducted in common across all participating CAHs. Networks might also be required to present a work plan that includes goals that demand measurable results that cannot be achieved without changes in current practices (changes could include differences in service mix). And networks could be required to demonstrate how Flex dollars are used in combination with other sources of funding, with the contribution of each specified (this is already done by some networks).

Use of Flex Dollars to Support Specific Activities

The networks have a history of activities in 3 general areas: administrative performance improvement, personnel development, and QI. In many CAHs, the funds awarded through the network grants are combined with other sources (such as the Small Hospital Improvement

awards), creating leverage for Flex resources and challenging any effort to attribute outcomes solely to the Flex program. Variation in networks also results in different internal distributions of Flex dollars to support network personnel and contracts with external vendors, and to support CAHs directly.

Administrative performance improvement. A common theme across networks is learning how to optimize use of health information technology (HIT). In one network, a major project is underway to link the information systems of all participating hospitals through a regional health information organization (RHIO) that will facilitate access to patient electronic medical records at any of the 8 participating hospitals. This project has a primary focus on improved patient care because complete medical information about all patients in the region will be available wherever they receive services in the network. To complete this project, each hospital must be using an HIT system that can automate patient records and will allow that information to be shared with other systems. Reaching that point is requiring new systems in some hospitals, training in all hospitals, and use of a troubleshooter for the entire network. Those activities will have a spillover effect on the use of information technology for multiple purposes in the CAHs, e.g., performance improvement. One hospital is an early user of the BSc approach to performance improvement, and the information system is an important reason for the anticipated success of that approach.

The BSc is being used by 4 hospitals in another network. That network, as well as others, developed training programs to help CAHs deal effectively with regulatory compliance (e.g., hiring practices, EMTALA, HIPAA), changes in policies and procedures, and human resources policies. The network has begun discussions regarding using electronic health records (EHRs). Currently, hospitals are using electronic communications systems for Web-based staff education, access to drug lists and information, and finding research articles (e.g., treating particular diseases, drug information, and assessments of new technology). Another network is providing training to each CAH that will improve the use of HIT. Laptop computers, purchased with Flex resources, are used to conduct on-site training (the computers are then retained by the participating CAHs). The training sessions focus on effective use of Microsoft products, including Access database software and Excel spreadsheets. (Through another project of the Nebraska Center for Rural Health Research, we are aware of CAHs in Nebraska using dated versions of Excel, with limited staff experience, that make it difficult for them to participate in externally sponsored shared data projects.) Training includes use of electronic coding for medical data. That network is also using IT connections to improve patient care, specifically using secure T-1 lines to improve wound care in CAHs by connecting the CAH emergency department to a regional trauma center. The telecommunications system is also used to provide on-site educational opportunities (focused on care of neonates), which one CAH identified as very helpful to obstetrics staff.

A statewide effort is underway to implement the use of the BSc in CAHs. That effort is not a network-based activity. Several hospitals interviewed for this evaluation participate in the project, and network coordinators described prospects for better meeting the needs of CAHs because of the analysis provided by the BSc. As more hospitals in the state use the BSc, it may provide a means to target network activities on common needs of CAHs as evident in BSc presentations.

Personnel development. All of the Flex networks engaged in activities that contribute to professional development of staff. CAH personnel interviewed described the benefits of a network of peers that learn from each other (only one CAH site visit did not include mention of the benefits of peer networks, and that site saw potential in some activities). Two specific peer groups were described, CEOs and directors of nursing (DONs). One CEO described the exchange of information that he found to be quite valuable, including financial information (within the limits allowed by antitrust regulations) to compare experiences with major expense lines. Another CEO described sessions of CAH leaders in her network that were devoted to problem solving for the entire region. Two administrators specifically identified keeping pace with changes in public policies (e.g., regulation, payment policies) as something they did more effectively as a result of networking with other CAH administrators. The benefits of networking were summarized by this phrase: “people you can call when things come up.” Specific items that CEOs have helped each other with include job descriptions, forms used in surgery, EMTALA policies and procedures, and HIPAA compliance.

Nurses were quite active in the networks visited for this report. The networks organized meetings of the nurses, typically focused on their efforts in patient safety and QI. One nurse interviewed captured the peer relationship well with these phrases: “got to know the DONs well;” “we’re all [from hospitals that are] about the same size;” and “became more personal.” The QI officer from the same institution described working as a group on network projects to be very beneficial. In another network, the QI officers meet bimonthly to share successes. In another network, some nurses interviewed identified the peer networking (as compared to services from the hub hospital) as the greatest advantage of being in the network. Nursing leaders in 2 CAHs in the same network described the benefits of special groups of nurses meeting as being “invaluable.” The groups were surgery nurses, nurse leaders, and nurses focused on QI. By focusing the meetings, the network has been able to attract different types of speakers, each addressing a specific need of network CAHs. One such meeting focused on telemetry and led to a grant to assist rural CAHs that have low telemetry use and therefore need someone to read and monitor patterns. The network is taking steps to accomplish that task by using Internet connections.

Other personnel in the CAHs also benefit from the educational offerings of the networks. Workshops are offered, sometimes in one location (including on-site in specific CAHs) and often through telecommunications. Topics covered have included EMTALA and HIPAA compliance, medication administration, and emergency preparedness. In the network working to develop a regional system for transmitting EHRs, the educational activities have included training and technical assistance in information technology. In another network, a specific project hailed by the CAHs as a success has been a “traveling road show” to train CAH staff in various computer programs, including current versions of Microsoft office software. This training is helping staff take advantage of programs that use such software, including generating reports from patient culture surveys.

QI. All 4 networks visited had implemented specific projects designed to help CAHs with QI efforts. One network has initiated a new project to provide training to its CAHs in the use of root cause analysis (RCA), a technique that can be used to uncover problems in any system, patient care or management. The tool is used after a sentinel event such as a serious error in patient care. Staff from the network hospital provide the training, and they follow up with technical assistance

when a CAH uses RCA. At the time of the interview, 2 CAHs had completed RCAs on their own after staff training. The outcomes from RCAs will be changes in systems of care that improve quality.

In another network, the meetings of QI officers have been used to implement a system of reporting medication errors; the network focuses on data reporting and entry. In bimonthly meetings, the QI officers have worked toward common definitions of medication errors and error rates so that results of reporting can be compared across hospitals. The QI officers have heard of possible action steps from guest speakers brought to their meetings. That same network takes advantage of peer relations among CAHs to have peers among the medical staff complete required chart reviews. Another network conducts patient safety conferences annually, in most years, 2 such conferences. That same network engaged in a year-long project to develop a resource document and manual on clinical outcome indicators for CAHs that is now available to all the physicians practicing in the network's CAHs. At the time of this study, another network was preparing a project to improve medication reconciliation in the CAHs in their communities.

Role of the Network/Supporting Hospital

Four network/supporting (hub) hospitals were included in this study. The network coordinators of all 4 were interviewed, and CAHs were asked for their reflections on the performance of the network hospitals. While the approaches of the network hospitals to their roles varied, there were these common characteristics: decentralized decision making, focus on service to CAHs, and performance improvement for the CAHs. A common theme from the perspective of both the network hospitals and the CAHs was that the network hospitals learn a great deal about the operations (and difficulties) of CAHs.

The network hospitals all recognized that a motivation for their activity was to maintain good relationships with CAHs in their market area. Clearly there are sound business reasons for doing so. However, the approach of the 4 network hospitals was not purely to capture business for themselves. Instead, their perspective (stated directly in all 4 interviews) was to provide care for the residents of rural communities in the most appropriate setting. That is, the network hospital administrators were interested in helping CAHs retain patient care locally to the extent possible. Of course care requiring large investments in technology and use of subspecialties would take place in the network hospital, with more referrals coming from communities where there are CAHs and clinical staff pleased with relationships developed by the network hospital as compared to elsewhere in the catchment area. In some instances, though, network hospitals are connected to CAHs from which only a small number of referrals in a specialty or two could be expected (there are other large hospitals in close proximity to the CAH). The theme of keeping care local works to the business advantage of the network hospitals as much as it does for the CAHs. The network hospitals, by being connected to the CAHs, become part of the "local" system of care for a region of the state.

Network hospitals see themselves as sources of specialized management and clinical expertise that would otherwise be expensive for CAHs to access. Each of them sees a different means of doing so. For one, it is expertise at the hospital in information technology that is used to help

drive the network initiative to create and use an EHR throughout the network. For another, it is the staff of the network hospital sharing their expertise in computer software and RCA. For another, it is the ability of the network hospital to organize conferences and aggregate data from CAHs to address key areas of interest. The remaining network hospital sees a strong role in providing educational support for the CAHs and facilitating the exchange of successful programs across the CAHs. The network hospitals do not see themselves as focal points of integrated systems of care. However, their vision of care provided locally in their regions implies integrated delivery of services with a patient-centered focus.

Operationally, all network coordinators visit the participating CAHs, although this is easier for networks in the eastern third of the state than for those in the west, where distances are considerable. Telecommunications are used to overcome the barrier of distance, and Nebraska's new system of high speed connections across all hospitals was cited as the desired means of improving communications in the larger (geographically) networks. All network hospitals viewed communications with the CAHs as critical to the success of network initiatives.

Network hospitals have to overcome several challenges to be effective, and Nebraska's networks have had a range of experiences confronting the challenges. The foremost challenge is to build trust between the hub hospital and its affiliated CAHs. In northeast Nebraska, the challenge could not be completely overcome, and the CAHs in that region bypass a regional hospital to establish Flex network relationships with hospitals in Lincoln and Omaha. In 2 other regions of the state, leadership has turned over in CAHs and/or hub hospitals, and the level of productive activity of the network has reflected the interpersonal dynamics of the time. In one interview, a CAH administrator expressed concern about the future of the network because of expected turnover in CAH administrators over the next few years. A second challenge is meeting the varying needs of CAHs in large networks. In such situations, the network hospital may become the focal point of difficulties the network has in determining how to use network resources. In one area of the state, turnover and network size compound each other as key challenges. A third challenge is balancing the desire to serve individual CAHs and still maintain a cohesive program of work for the network. Since the motivation for the network hospital to participate in the program is at least in part to secure and maintain relationships with each CAH that result in mutual care of local patients, there is a natural desire to please each CAH. As evident for at least one network, that desire can lead to decision paralysis.

Most CAHs reacted positively when asked about their network hospital. When reflecting on the benefits from network hospitals, CAH administrators and QI officers spoke about specific educational and training activities (RCA, use of information technology, and compliance issues). The role of the network hospital as a facilitator of peer-to-peer communications among the CAHs was mentioned as a key role in all but one interview. However, one respondent speculated that such communications could have occurred without the network hospital. That comment, though, comes *after* an effective pattern of communication for which the network hospital played a facilitating role. CAH administrators and QI officers were most impressed with their network hospitals when they could recall specific instances of special help from the coordinator or others at the network hospital. This response points to the importance of network hospitals considering each CAH to be a client that requires servicing, while still providing leadership to the network to achieve common goals.

There were comments about room for improvement in the activities of network hospitals. One comment was that the network hospital seemed more reactive than proactive, at times having to be “dragged kicking and screaming” to programming desired by the CAHs. That complaint, though, was temporal and not meant to characterize current activities and relationships. For this report, it serves as a reminder of the importance of the network hospital building and maintaining trust with CAHs by allowing CAHs to express their needs and then being responsive to those needs. In a related comment, another CAH complaint was that a network hospital was trying too hard to act only on the will of the entire network and therefore was either providing services at very basic levels (when some hospitals did not need that level) or not using the network resources at all. That approach risks alienating CAHs from network and Flex program management.

Pattern in the Aggregation of Network Activities

Several themes are present in the activities of the networks participating in Nebraska’s Flex program. First, *all networks use a consensus process to develop annual work plans*. These are affinity networks, meaning that the CAHs affiliate by choice with hub hospitals, sometimes not the hospitals with which they have patient transfer agreements. Therefore, the hub hospital is not in a position to compel member CAHs to adhere to a centrally determined work plan.

Second, *activities are carried out as part of annual work plans and as a result meet temporal needs*. There is an exception to this statement: one network has combined Flex resources with an implementation grant from the Agency for Healthcare Research and Quality (AHRQ) to pursue a long-range objective of a common EHR for all hospitals. Any other linkage of work plans across years is coincidental. The nature of grant programs is a partial explanation for this approach; hospitals are not confident that annual grant support will be available to pursue long-term objectives (the AHRQ grant is for multiple years, which helps to change the dynamic in that network). Network plans range from quite general and focused on services such as educational services and exchange of ideas and practices, to much more aggressive, action-oriented plans to change operations and/or services in CAHs. Most network plans use goal statements that are general in nature and do not imply a process for achieving an operating or service status measurably different from the status quo. The general statements are a logical byproduct of an affinity model, but well-established networks may want to venture into more aggressive long-range work plans.

Third, *efforts to integrate services take place in the context of integrating patient care, not integrating a delivery system under unified management*. Activities such as a system-wide EHR, telehealth connections for radiology and trauma care, and using network resources for credentialing contribute to improvements in patient care when interactions occur among the participating hospital staffs. *A patient-centered approach* to network activities is also evident in activities to improve the environment of safety in participating hospitals, network hospital support of peer groups focused on patient care (such as the QI officers and the directors of nursing), and educational programs focused on patient care.

Fourth, *the networks foster interactions among peers in the CAHs*. The ability to contact peers when there are questions about hospital organization or patient services was cited by all CAH interviewees as being a strength of the network. That interaction is encouraged by the network through regularly scheduled meetings and workshops, and peers are comfortable making informal contact as a result of improved communications.

Recommendations for Improving Effectiveness of Network Activities

The Nebraska Flex program has committed substantial funds to developing regional networks of CAHs and hub hospitals. In doing so, much has been accomplished, consistent with the national objectives of the Flex program:

- All Nebraska CAHs are participating in horizontal networks (objective 2).
- Performance improvement programs, in both management and patient care, have been implemented by networks (objective 4).
- The networks have acted to support CAH activities, including using patient satisfaction surveys and using telehealth to strengthen the ability of CAHs to deliver services locally, that in turn help retain patient care services locally (objective 5).
- The networks provide special programming in workforce development (objective 6).

The networks have engaged in innovative activities that exceed expectations implicit in the national objectives. Activities focused on patient safety and **QI**—including sharing data, offering regional workshops, facilitating peer-to-peer learning, and bringing the best of patient practices and management skills from the hub hospital to the CAHs (an excellent example is training in **RCA**)—have taken advantage of the resources of hub hospitals.

In moving forward, Nebraska can build on the solid foundation put in place by the networks to set and achieve *program goals* through network activities. Two characteristics should be evident in a strategic approach to using networks: (1) annual activities will be linked to long-range goals, and (2) activities throughout Nebraska will fall into general themes that advance the goals and objectives of the Flex program. These characteristics do not imply changing the current practice of local decisions regarding the specific activities and use of Flex resources. Rather, they imply a bottom-up generation of specific ideas and a top-down framework that facilitates learning from activities and assessing the effects of activities in the context of continuous improvements in health system sustainability, patient care, and community well-being.

The following steps would be *one, but not the only, approach* to follow the recommendations in this report:

1. Create a summary of network activities combined into categories based on targets (e.g., patient safety, quality of care improvement, organization performance improvement, personnel development).

2. Convene the network coordinators to develop a broad framework within which future activities will be identified.
3. Determine long-term (e.g., 3-, 5-, and 10-year intervals) goals for the Flex program through a consensus process that starts with network coordinators, is vetted with CAHs, and is supported by the state grantee.
4. Require that network work plans use the framework established in the first 3 steps.
5. Build sufficient flexibility within each network plan to facilitate diverse stages of development in the network's CAHs (e.g., some CAHs may have in place the necessary infrastructure to support new strategies in performance improvement, while others may need to build or strengthen an infrastructure), and use network resources to benefit all network CAHs either directly or indirectly (strengthening systems in some CAHs may help all CAHs through enhanced ability to accomplish change throughout the network).
6. Create a data collection instrument for each CAH to use for reporting the activities undertaken through the Flex program and the impact of those activities on hospital operations and community health.

Patient Safety and QI Activities

The authorizing legislation that created the Flex program, the Balanced Budget Act, included QI among the program goals. During the early years of the program nationally, resources were devoted to assisting hospitals with the process of becoming CAHs, including preparing for surveys and completing any necessary reconfiguration of services. A second focus was strengthening the delivery of emergency medical services (EMS) as an essential component of local delivery systems in rural communities. With CAHs now in the program for more than 1 or 2 years, and with programming well established for EMS, the focus nationally has shifted in the direction of QI in clinical services and performance improvement overall. Nebraska has evolved from early purposes to these newer points of emphasis more rapidly than most states due to much more rapid rates of conversion and substantial early investment in EMS. For example, in the past 2 years of the Nebraska Flex program, a major initiative has been underway to facilitate using the BSc methodology to improve hospital performance. The next cycle of the state evaluation will focus on that development. Nebraska's program has devoted resources to QI from the beginning of the program, including using a state QI committee with participation from the state, the QI organization (currently CIMRO), the hospital association, network coordinators, and CAHs. The networks have used their resources to support activities in both patient safety and QI, which are assessed in this section of this report.

Patient Safety

All of the networks have programs underway targeting improvement in patient safety. There are specific efforts underway to improve the process of medication administration in CAHs. In the

network that is developing a new information infrastructure for the entire network (including EHRs), the information system forming the core of the effort includes modules for reporting medication errors, including near misses. The network hospital is providing expertise to create the information system and is facilitating network-wide collaboration to identify sources of error and implement changes in the process of care to reduce the future likelihood of those errors. The CAHs in another network are all participating in a statewide project funded by AHRQ to develop a reporting system for medication errors (using MedMarx), compare types of errors (not error rates) across CAHs both within Nebraska and nationally, and take action based on the reports. The Nebraska Flex program is contributing resources to supplement the AHRQ grant. In another network, the hub hospital has hosted at least one special workshop each year focused on patient safety. Best practices have been shared among network hospitals. As described earlier, in another network the goal of patient safety has been advanced through a training program in RCA, staffed by the network hospital.

In addition to network-sponsored activities, the CAHs are engaged in activities initiated within their own institutions. The most important of these has been developing a culture of patient safety. The best examples of accomplishing this goal came from CAHs that promoted attention to safety issues throughout all departments in their hospitals. One CAH official stated the organizational imperative quite well—that anyone walking into a patient room is empowered to notice, report, and act on any observed situation that threatens patient safety. This can include noticing inappropriately placed furniture that blocks important lines of vision or pathways of movement, and moving that furniture. A similar point was made by another CAH administrator who described a process for patient safety that included all department heads (e.g., clinical, housekeeping, security) on the patient safety committee because the culture of constant vigilance should be maintained throughout the organization. A network hospital QI director described using model safety plans to help CAHs recognize threats to safety, and then sharing effective responses. An example provided was using yellow shoes to identify patients at risk of falling. Another CAH QI officer, in describing patient safety as something that should be the focus of all personnel in the hospital, included examples of knowing the water temperature in the bath used by patients and guarding against patient falls.

Several CAHs are taking steps to engage their boards of trustees in discussions of patient safety. Reports using indicators of patient safety can be required of all departments in the hospital, and those reports can be aggregated for use by the board. Trends can be followed in quarterly reports to the board. CAHs also look to patients as a resource for patient safety information. Patient satisfaction surveys can reveal specific problems affecting safety, such as the door to the obstetrics unit being open and closed too often, disturbing the rest of OB patients, which can contribute to safety problems that would not occur if those patients were better rested and more alert. The lesson to be learned from these CAHs is that safety is *everyone's special charge, including persons not directly engaged in patient care*. Flex resources are being combined with funds from the Small Hospital Improvement program to support special efforts in CAHs to promote patient safety. Equally important, for those CAHs with rigorous programming in place, general hospital resources are devoted to patient safety because it is treated as a normal operating procedure, not something done because of a special grant. Flex program funds and other external resources are used to be innovative, build infrastructure (e.g., reporting systems), and participate in larger projects (e.g., the AHRQ grant program).

QI

Several CAHs reported that QI is built into the normal reporting and reward systems for department heads in the hospital. In one instance, a CEO cited policy that quality is 20% of every supervisor's annual evaluation. In another hospital, each department performs a quality study every month. Others described a general effort in QI without providing a level of detail to indicate how various departments in the hospital participate in QI initiatives. All CAHs had a designated QI officer who was included in the interviews for this project. Those persons each were able to dedicate protected time to the function of QI, even if they had other responsibilities in the CAH. One CAH QI officer said QI was easier for them than for many hospitals because they are small. In that hospital, a system of care coordination was described that uses a care coordinator 5 days a week. The QI officer also described a system of communication across departments that is efficient because of size, to which she attributed the absence of an incident report for 5 consecutive months.

Specific efforts in QI reported by the CAHs included the following:

- Use of interchangeable crash carts
- Use of a quality assurance form to identify problems
- Full risk assessment of every patient, which includes medications, age, diagnosis
- Use of a controlled lift program
- Programs to improve infection control
- Case reviews (blood work, surgery, emergency department)
- Annual programs built around 8 priorities
- Focus on pain management
- Use of patient satisfaction surveys
- Use of chart audits and 25 indicators for events in obstetrics, emergency care, other
- Use of the National Quality Foundation and the Joint Commission standards for patient safety
- Project on hand washing
- Use of the Solucent database
- Monitoring anesthesia

The CAHs described general programming within their networks that contributed to QI activities, with the principle benefits coming from special training programs and interactions with peers in other CAHs. The network developing a regional EHR is using that platform for developing dashboards to deal with quality and patient safety issues. The networks, including the hub hospitals, were said to be especially important in dealing with regulatory policies affecting safety and quality, such as EMTALA regulations. The network hospital personnel described recent initiatives in patient safety and QI, which may not yet have reached the sample of CAHs visited for this report. Future evaluation reports will continue to monitor QI activities in the CAHs, with a focus on what is done as a result of network activity or special state initiatives.

Recommendations for Improving Effectiveness of QI Activities

The design used in this evaluation was supplemented by a review of state and network documents, including committee deliberations and work plans. Those documents identify specific activities that were not discussed in the interviews conducted during field research. Some of the discrepancy is due to activities at the local hospital not being recognized as emanating from Flex program work plans (and supported by Flex resources). A final recommendation of this report is to more clearly establish linkages between the statewide efforts of the Quality Improvement Committee and the specific activities carried out in network work plans. In addition, consideration should be given to using the Flex program as leverage to aggregate the success of QI efforts regardless of original source of funding. Nebraska's health care providers and the organizations serving them have been actively pursuing multiple opportunities to improve quality of health care and demonstrate that they are doing so; strong leadership from the Flex program could propel Nebraska into leadership nationally and further enhance patient-centered quality care for all Nebraskans.