

Quality of Care as a Driver of Hospital Consolidation: A Look at Indiana Hospitals

Over the past 20 years, the U.S. healthcare system has experienced a rapid increase in hospital consolidation in the form of systems and networks [1]. The Affordable Care Act (ACA) offers hospitals a new incentive to join a system or network. ACA links hospital reimbursement to quality of care provided, making systems and networks financially more attractive because of the opportunities they offer in quality improvement. However, membership in a health system does not guarantee heightened quality, as they face additional challenges in coordinating and improving care.

The purpose of this brief is to show how quality will be an important driver for hospital consolidations in the near future. We will discuss opportunities and threats to quality improvement in multi-hospital systems, provide national evidence and use two major Indianapolis health systems to illustrate how quality coordination and quality improvement is being put into action.

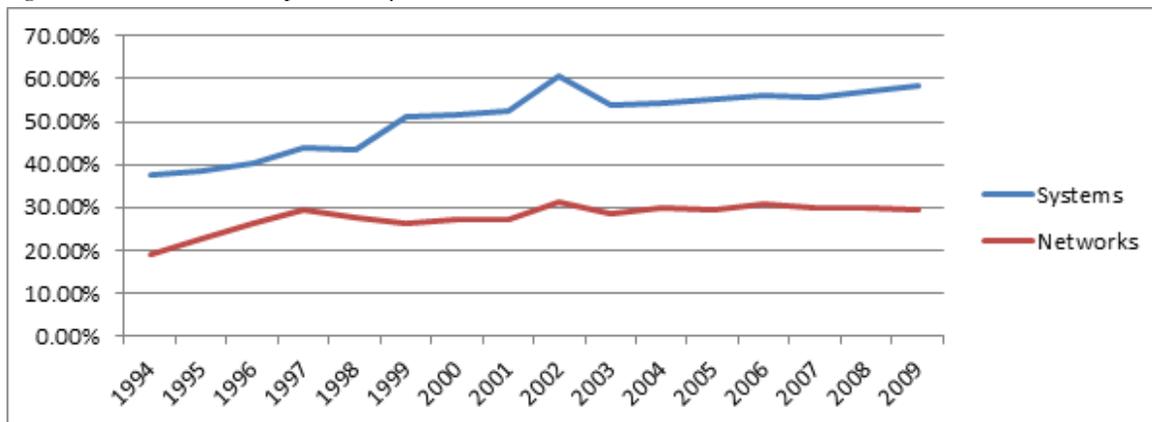
Health Systems and Networks in the U.S.

There has been a national increase in hospital consolidations

over the past 20 years [1]. Figure 1 displays the trend in U.S. systems and networks from 1994 to 2008. Specifically, the consolidation has predominately been in private hospitals. The number of private hospitals that were not part of a system or network dropped from approximately 50% to 42% between 1995 and 2000 [2]. As shown by figure 1, the percent of hospitals in systems peaked in 2002 but overall has been increasing since 1994. The AHA defines systems as a more concrete relationship, usually bounded by common ownership, leasing, sponsoring, or a contract [3].

Networks are defined as a fluid relationship in which hospitals work together to coordinate and deliver a wide range of services [3]. The number of networks has also increased over time but has leveled out over the past few years (Figure 1). Networks may be leveling out due to the limited amount of collaboration possible with the unstructured governance [2]. Most networks are formed for information sharing and not for service collaboration or restructuring, which may make structured systems more attractive [2].

Figure 1: Percent of U.S. Hospitals in a System or Network



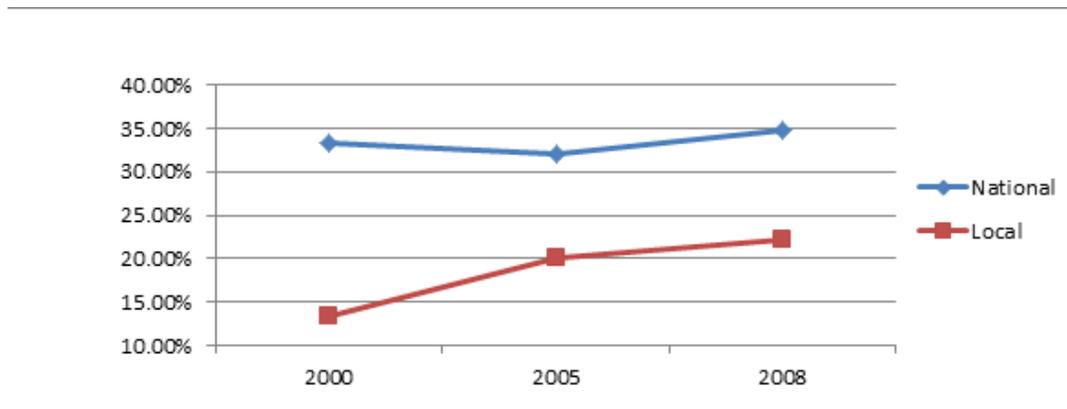
Local and National Health Systems in Indiana

The increase in systems and networks has also been most pronounced in the local markets. Figure 2 illustrates the rapid increase of hospitals in a system over the past decade. In 2000, 13.49% of Indiana hospitals in a system were in a local system¹ and in 2008 that number rose to 22.15%. The number of hospitals in a local system¹ more than doubled from 2000 to 2008; going from 17 hospitals to 37. See Box 1 for a map of all hospitals and health systems

in Indiana.

Meanwhile the number of Indiana hospitals in a national system has also been increasing but not as rapidly. This rapid increase in local systems may be contributed to the fact that it is easier to coordinate when hospitals are close in proximity [4]. Proximity facilitates market concentration and cost-savings, the two main drivers of hospital consolidation prior to ACA.

Figure 2: Percent of Indiana Hospitals in a National or Local System



Source: American Hospital Association Guide, different years

Initial Factors Encouraging Integration in Health Systems

Many factors drive hospitals decision to integrate with a health system, but the primary goals are growth and financial return. Prior to ACA the main drivers to achieve those goal could be grouped in three factors: 1) cost-savings (economies of scale, centralized purchasing, administrative activities, technology adoption, etc.); 2) market power (leverage in reimbursement and management care contracting, hiring, etc.); and 3) patient re-allocation (acquisition of “feeder” hospitals to increase referrals to tertiary hospitals) [4, 5].

Indirectly, consolidation created an environment conducive to quality improvement through better alignment of medical staff, higher leverage and access to capital for the acquisition of health information and medical technology, etc. However there was no guarantee for quality enhancement because quality was not the main driver of consolidation. One of the main changes with the health reform is that it creates direct financial consequences for low quality performers, making it a top priority.

Factors Encouraging Integration in Health Systems for Quality Improvement

Two major effects of the Affordable Care Act include the increased assessment of quality and the increased provider accountability for the quality of care they provide. Soon quality and reimbursement will be linked, making quality the fourth direct driver of hospital consolidation.

The ACA has several provisions concerning quality, many of which involve Medicare. An example of this is the formation of Accountable Care Organizations (ACOs) and the bundled payment system [6, 7]. ACO’s will be responsible for the health of a set group of Medicare patients and will receive one set reimbursement rate for the health of that patient.

Another good example of how the ACA uses Medicare to link quality in reimbursement is that starting in 2013 hospitals will not be reimbursed for Medicare patients who are readmitted within 30

¹ Local system is defined here as a system of hospitals that for the majority operates within the state border.

days for the same condition [8, 9]. Also, beginning in 2015 hospitals in the highest quartile for Medicare risk-adjusted rates of hospital acquired infections will not receive full reimbursement. Changes to Medicare such as these are extremely influential and pertinent to providers because Medicare is often the largest payer to hospitals.

Other significant quality reforms include the formation of Medicare Advantage quality-based reimbursement and the formation of the value-based purchasing program [9, 10]. Additional changes brought on by ACA include a shift in risk from the payer to the provider which will make providers more concerned with quality and chronic disease management [11]. Also, there will be an increased amount of administrative reporting and documentation which can be done more efficiently when centralized.

Due to such changes, quality is now more than ever a major concern for many hospitals. In 2011, 58% of hospitals stated that quality/patient safety was one of their top three priorities [12].

Opportunities and Threats of Systems and Networks in Quality Improvement: National Evidence

Health systems have more opportunities to increase quality, but they also face significant threats that make quality improvement uncertain. This is shown by the mixed results found in research regarding system organization and quality of care, indicating quality can only be increased under certain circumstances. Some studies have found that centralized systems are more likely to have higher quality ratings across their hospitals than decentralized systems [13]². However, other studies have found that centralized systems have higher quality for some measures but not for others [14]. One factor that may be affecting the quality of networks and systems is the fluidity of the classifications. It has been shown that within the system categories, each classification is becoming more decentralized over time [15]. Networks are also becoming more decentralized and are doing so at an even faster rate. In 2004, there was a 10% increase in the number of decentralized or independent networks from 1998.

Three Opportunities for Increased Quality

The first opportunity is that networks and systems have access to better technology because of their larger size and their heightened access to capital. Due to this advantage, several hospitals systems often have state-of-the-art technology [11]. Health Information

Technology and quality identification programs can significantly increase their ability to improve quality [16, 17]. Boxes 2 and 3 describe how Indiana health systems are using new technologies to increase quality of care.

The second opportunity is access to more information. Being part of a system or network gives the opportunity to collaborate with other hospitals. For example, systems and networks commonly share and help implement best-practice methods. This often includes sending managers from a high performing facility to a low performing facility to train their managers or implement their processes.

Finally, systems allow hospitals to have access to high value specialists through a referral system to the most qualified providers. This offers hospitals the opportunity to improve the quality of care by getting them to the facility that will provide the best quality. This also improves the hospitals' quality rating by transferring higher risk patients or patients they are not equipped to handle.

A Threat against Increased Quality

The major barrier to increasing quality surrounds coordinating care. As the number of providers caring for a patient increases so does the risk of miscommunication. Health Information Technology (HIT), mainly Electronic Medical Records (EMRs), can facilitate coordination of care, but right now they are in the development phase and present limits [18]. Studies have shown that HIT is being utilized and is very helpful in coordinating care amongst non-ambulatory care centers but is not being maximized when coordinating care between ambulatory and non-ambulatory centers [19]. There are several contributing factors to why HIT is not being maximized including: The lack of required information being communicated between doctors, not all clinics or physician's offices have Electronic Medical Records, the difficulty in managing information overflow in EMRs, and because EMRs do not capture all the information needed in the decision-making process.

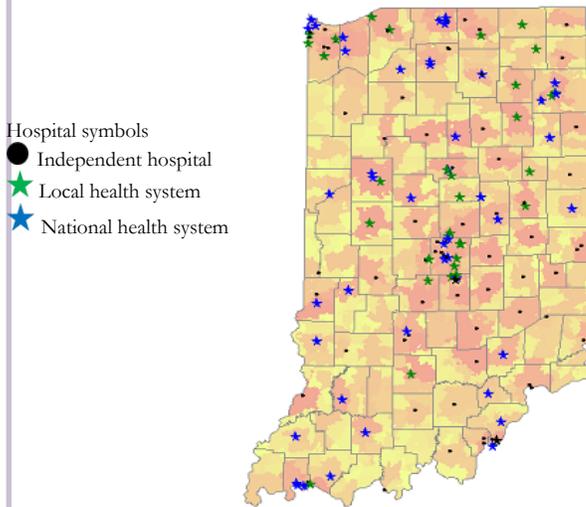
Boxes 2 and 3 narrow in on the two largest health systems in Indiana. The first is a local system, Indiana University Health and the second is a national system, Ascension Health. Both systems have been very active in hospital consolidations in Indiana [20], and comparing them offers a good opportunity to illustrate how quality improvements are being put into action.

²Centralized system is defined by the AHA as is one in which service delivery, physician arrangements, and insurance product development are centrally organized and there is a moderate number of different services that are offered [3].

Box 1
Indiana Health Networks and Systems

This map illustrates all of the hospitals in Indiana that are part of a hospital system as well as independent hospitals. The goal of this map is to show the dispersion of local and national systems so we chose not to include networks in this example. As shown, hospitals in local and national systems seem to compete in densely populated areas of the state.

Indiana Local and National Health Systems, 2009



The majority of the local systems seem to be concentrated in the North and East parts of Indiana whereas the national systems appear to be more dispersed throughout the entire state. It is also important to note that independent hospitals appear to be dispersed throughout the state as well. However, there appear to be fewer independent hospitals in the Southwest portion of Indiana.

This link ‡ provides an interactive version of the map. The interactive map displays every hospital name, system name, as well as the degree of centralization as classified by the AHA.

‡ <http://php.pbhealth.iupui.edu/arrietaa/healthsystems>

Box 2
Indiana University Health: A Local Perspective³

Indiana University Health is an example of a local health system in Indiana. IU Health is the largest local health system in the state and it composes its own health system consisting of 19 large hospitals across Indiana as of December 2011⁴. IU Health was formerly known as Clarian Health but changed its' name on January 1st, 2011. IU Health has both not-for-profit and for-profit hospitals within the system. IU Health also consists of a wide range of facilities from small rural hospitals to IU Health University Hospital and Methodist Hospital which are tertiary and teaching hospitals in Indianapolis, as well as a children's specialty hospital (Riley).

In order to coordinate quality amongst these hospitals, IU Health has developed an interactive computer program called the Quality and Safety Panel. This program shows current levels for different quality ratings for each hospital on a daily basis. The software consists of over 200 quality indicators that touch on all aspects of care. Physicians from all IU hospitals were gathered to choose the quality measures that they felt were important and were relevant to them. These were compiled and then each hospital got to choose which measures they use based on what is relevant to them. IU Health encourages the hospitals to put in quality measures in which they rank poorly. IU Health is using this information to examine the quality differences between hospitals and determine the best-practice approach that produces the best patient outcome. Once patient outcomes have been maximized they go upstream in the process and ensure that cost is being minimized. Once they have maximized quality of care and reduced costs, IU Health then applies the process to other IU hospitals. In order to influence providers to use this information, IU Health has started to allocate incentive pay to the hospitals' staff based on quality of care.

The IU Health quality department is also using a relational coordination measurement system as well as a central transfer center to improve quality. Relational coordination can be defined as "a mutually reinforcing process of interaction between communication and relationships carried out for the purpose of task integration" [21]. Through this system they have developed sound relationships with providers from all around the country in order to collaborate and improve quality. The transfer center consists of one central phone number in which a patient or caregiver can call and they will determine the location that will provide them the best care⁵. The transfer center then arranges the entire transfer including the mode of transportation (ambulance or helicopter) and for a doctor to be there waiting for the patient. The transfer center is a good example of how IU Health is taking advantage of their large size. They can improve quality by transferring critical patients to the best equipped location. The large number of hospitals and their close proximity also allow IU Health to closely coordinate with each other. Methods and information are consistently taken from one hospital and implemented in others. For example, managers from various hospitals are often called in to help implement a practice or make improvements.

³Information was obtained through an interview with Dr. Gene Beyt, SVP of Quality

⁴More information available at: <http://iuhealth.org/>

⁵Information is available at: <http://iuhealth.org/provider-portal/24-7-transfer/>

Box 3

Ascension and St. Vincent Health: A National Perspective⁶

St. Vincent Health is an example of a national health system. St. Vincent Health is a large organization consisting of 22 hospitals and health-care centers in Indiana⁷. They are also part of the health system Ascension, which is composed of more than 500 locations in 20 different states across the nation. St. Vincent also has a wide variety of facilities within the state of Indiana including small rural hospitals, tertiary hospitals, and specialty hospitals such as the Seton Specialty Hospital and the St. Vincent Heart Center of Indiana. Unlike IU Health, St. Vincent is not affiliated with IU medical school however they do have residency programs with several medical schools in the country.

Rather than using an in-house system to evaluate quality of care and clinical outcomes like IU Health, St. Vincent utilizes several system-wide business intelligence software programs to evaluate the performance of their facilities and individual physicians. St. Vincent is also working on spreading electronic medical records throughout their hospitals and ambulatory centers. Once implemented, they plan to use these records to evaluate the quality of care in different settings, especially ambulatory care centers. An important difference between St. Vincent and IU Health is the fact that IU Health has developed their own quality system with input from their doctors, whereas St. Vincent uses a system-wide quality system that was created in collaboration with the other hospitals.

They also have a similar transfer center, called the “One Call Center”⁸. This center is similar to that of IU Health’s in that a physician can call one phone number and talk to a nurse who will arrange for the patient to be transferred to the best center for their condition. They also arrange for transportation and ensure that there will be a physician ready to see the patient when they arrive. Ascension monitors and communicates quality ratings on a quarterly basis. Every quarter St. Vincent receives reports with numerous quality indicators and how each hospital compared to the other hospitals in Ascension along with the national average. Based on the reports, St. Vincent sets goals for each hospital to improve their quality. In order to provide employees an incentive to improve quality they align management bonuses to these quality goals. An important distinction between the two is that because of IU Health’s smaller size and more centralized leadership they are able to constantly monitor quality whereas St. Vincent is given a quarterly report. However, St. Vincent has the advantage of seeing how they compare to a larger number of hospitals and they have access to more information, capital resources, and human resources for help.

Thoughts for Policymakers

The ACA will soon link quality of care to reimbursement, creating direct financial consequences of quality performance, and thus providing an additional incentive for hospitals to join a health system or network. We expect that this new driver will raise the trend of hospital consolidations in the country. Although multi-hospital systems may help to achieve quality improvement, there are requirements and potential side effects that policymakers must be aware of.

First, assessment of quality and transparency is required at the system level. So far, we only have information at the hospital level (hospitalcompare.hhs.gov, for example), but systems need to be assessed for various reasons. For example, even if a patient chooses a hospital, he can be referred to a different hospital in the system. We need to assess the quality along the continuum of care, which may include many hospitals and providers within the same system.

This is particularly more important with Accountable Care Organizations (ACOs) [6, 7]. ACOs will be assigned a set group of Medicare beneficiaries and they will be responsible for providing or coordinating all of their care. ACOs will share gains and losses linked to quality of care. Therefore, in order to maximize reimbursement, ACOs must ensure high quality care at all facilities,

making this data and transparency essential.

Second, additional efforts for patient protection are required. Relying on quality measures create more incentives for “cherry-picking” or patient’s selection based on health status within a health system. There will be more incentives to keep healthy patients in community hospitals and send risky patients (more likely to affect quality assessment) to tertiary hospitals in order to hide quality problems and increase the intensity of care. This may create an excess of unnecessary referrals to highly specialized hospitals with important welfare effects.

Third, a side effect of more consolidation is market power. As we described in this document, hospital consolidation provides opportunities to improve quality, but more consolidation will also increase multi-hospital’s market concentration to levels that may threaten competitive practices [5]. While this is beneficial for hospitals, it should be a concern for the public. Market power tends to increase hospital reimbursement rates, which in turn increase insurance premiums charged to businesses and individuals. We expect tougher regulations for hospital mergers and acquisitions in the coming years, and more oversight on the way health systems operate.

⁶Information was obtained through an interview with Dr. John Rahman, COO

⁷More information is available at: www.stvincent.org

⁸Information is available at: <http://www.stvincent.org/ONE-Call-Transfer.aspx>

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This report was prepared for Midtown Mental Health Center to evaluate the integration of health care into their array of client services. The evaluation was designed to: track the integration process; identify the challenges and successes associated with the integration; and determine the impact of integrating health services on client health outcomes.

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