ABSTRACT

Hospitals in the United States are facing a paradigm shift from caring for individual patients to using population health management approaches focusing on preventative care for the larger community. Critical access hospitals (CAHs) will play a major role in this transformation by empowering rural residents and community organizations to partner in managing overall community health. To accomplish meaningful population health management, Illinois CAHs are proactively addressing the challenges and researching promising practices in order to leverage resources, explore new revenue models, and connect with other community organizations to collect and share consistent and reliable data on community health indicators.

Even more important is using the data to influence community wellness strategies across the continuum of care and address the issues emerging from the data. With assistance from the Illinois Critical Access Hospital Network, 28 CAHs in Illinois have completed Community Health Needs Assessments to better understand their populations. In addition, 25 CAHs are involved in a study to determine the feasibility of a rural care coordination organization focused on a population health revenue model. This report highlights several promising practices in Illinois CAHs and other health care organizations along with recommendations for population health management approaches moving forward. These promising practice areas include implementation of a hospital employee wellness program, a CAH supported secondary education obesity outreach project, a community wellness program that addresses community health needs, and a program aimed at increasing access to care by assessing patient eligibility for financial assistance and subsequent enrollment. The on-going work in Illinois provides a solid basis for CAHs to continue to develop successful and efficient programs that focus on population health management while facilitating the implementation of the Affordable Care Act.

INTRODUCTION

The Illinois Critical Access Hospital Network (ICAHN) asked the Center for Governmental Studies (CGS) at Northern Illinois University (NIU) to prepare three white papers on emerging rural health care issues. The three issues—quality of care, collaboration in rural settings, and population health management (PHM) were identified and prioritized by an ICAHN Vision Committee that included chief executive officers from Illinois critical access hospitals (CAHs) (Figure 1). The white papers will help policymakers
understand the unique conditions in rural Illinois that affect the provision of health care, provide examples of successful strategies used to address important issues, and identify barriers that complicate the replication of successful urban-based models of health care service expansion.

In April 2012, the first report produced by ICAHN, “Illinois Critical Access Hospitals: Enhancing Quality of Care in Illinois,” demonstrated that CAHs are essential to the effective delivery of rural health care and play an important role as a safety net for rural patients by providing high-quality services in a challenging environment. The research showed that CAHs rank well on several national patient outcome measures, patient satisfaction indicators, and provide a high-value, affordable option for rural patients.

Released in January 2013, the second paper in the series, “Illinois Critical Access Hospitals: Collaborating for Effective Rural Health Care,” surveyed CAH staff in six Midwestern states and described effective approaches to achieving successful rural collaboration. The research found that some problems or challenges are too complex, or the solutions too costly, for one organization to manage alone.

**FIGURE 1. ILLINOIS CRITICAL ACCESS HOSPITAL ISSUE PAPER PROCESS**
The complexities of population health management require a joint effort between CAHs and other rural health care partners to increase their financial resources, data collection and analysis capabilities, and available staff to ensure improved health outcomes for the entire community. While quality of care improvements and collaboration initiatives are essential in small rural hospitals, managing community health and implementing successful strategies will be equally important as health care reform focuses more attention on outcomes instead of activities or services. The quality of care report documented that Illinois CAHs have consistently improved quality outcomes and partnered with other organizations to improve the health status of the residents of communities in their service areas. The report on collaboration showed that CAHs seek to better understand their patients and to increase their focus on core services.

This third report on population health management was guided by a panel discussion in which CAHs from several regions in Illinois examined PHM challenges, alternative revenue models, and promising practices. This report begins by examining why PHM is so important to CAHs and how the Affordable Care Act (ACA) has affected and intensified its implementation. Next, is a discussion of how Illinois CAH staff use their Internal Revenue Service (IRS) required Community Health Needs Assessments (CHNAs) to formulate PHM strategies. Then, the responses of population health panel members to presentations from John Gale, University of Southern Maine, and Steve Hyde, Stroudwater Associates, are reviewed. The conceptual framework and evolution of PHM relative to the environment in which CAH staff make decisions about community wellness are then presented. The subsequent section describes how community health issues are affected by a collective impact approach and the various external and internal determinants of health within the context of challenging demographic trends affecting CAHs and rural health care in Illinois.

Finally, the report highlights PHM promising practices in Illinois and suggests several recommendations for moving forward. The discussion presents CAHs with potential market opportunities and revenue streams along with promising practices used by CAHs and other organizations to effectively manage local and regional health care. Most, if not all, rural hospitals are in a transformation phase involving payment models, system integration, quality reporting, or other challenges. Thus, CAHs continue to require up-to-date data and information to make effective decisions.

**WHY POPULATION HEALTH MANAGEMENT, WHY NOW?**

Population health management, while not a new concept, is quickly gaining popularity with health care organizations because of planned changes to the health care reimbursement model. Providers will be compensated for meeting quality objectives for the entire patient population, rather than only those actively seeking health care. PHM goes well beyond analyzing data on life expectancy, heart disease, or diabetes; instead, it is a comprehensive community health management approach. The term “healthy” involves a life-long process that includes complex support systems in rural communities served by critical access hospitals. In this context, communities can include a neighborhood, a rural city or county, a specific population, or a larger region served by a hospital.

While the ACA may promote formal and informal collaborations through regulatory policy, CAHs and health care organizations benefit directly by focusing on core services, new and alternative revenue streams, and partnerships with other community organizations to share resources. Several models emerging from ACA discussions have components that aim to reward health care organizations for efficiency in managing the health of community residents and patients. While taking different
approaches, the models have a common goal — to encourage integrated and collaborative health care among organizations sharing a collective financial risk while pursuing improved quality and financial outcomes based on community health indicators. Transforming the health care system is a substantial and complex undertaking and all health care organizations will play a significant role in improving the coordination of care.

CAHs and other rural providers have an advantage in PHM because they often have more detailed knowledge of their communities and residents. Due to these smaller numbers, they are better able to coordinate local efforts and able to more easily identify issues and needs. In this coordinating role, CAHs must be aware of the systems of people (populations), places (built environment), and prosperity (resources) in their service areas. CAHs currently partner with community organizations such as schools, community and economic development sectors, public health departments, neighboring hospitals, recreation facilities, financial institutions, healthy food providers, and other agencies (Figure 2). CAHs and health care organizations must continue to foster effective, lasting, and meaningful partnerships to successfully manage health care and have a collective impact on communities.

An ICAHN report released in January 2013, “Illinois Critical Access Hospitals: Collaborating for Effective Rural Health Care,” showed that many CAHs, in Illinois and the Midwest, collaborate on mental and behavioral health issues, emergency room staffing, telemedicine efforts, and multi-state initiatives. Since CAHs often face limited resources and serve fewer patients, ensuring a coordinated continuum of care requires all organizations, public and private, within the communities to work together toward common health care strategies.

Population health management and improving quality of care are complex issues and much work has been conducted recently to identify successful strategies and approaches. Illinois CAHs are leading the way in several areas of PHM including completing comprehensive CHNAs. As demonstrated by the CHNAs, the hospitals recognize that they are only one component of successful and sustainable population health management and the needs assessments must incorporate strategies aimed at community wellness.
ILLINOIS CAHS USE CHNAs TO ADDRESS POPULATION HEALTH MANAGEMENT

Recent and pending changes in the environment for delivering and financing health care make it imperative that health care administrators and policymakers understand the needs of their regions and adjust local practices accordingly. Community Health Needs Assessments are important tools for understanding the health issues and challenges in a service area and can be instrumental in designing new approaches for population health management. ICAHN works with hospital administrators on this process in several ways to help them identify and implement new approaches.

Since 2012, ICAHN has assisted 28 member CAHs prepare Community Health Needs Assessments as part of ongoing efforts to monitor conditions and learn more about the general health and needs of their communities. Although ACA legislation requires all not-for-profit hospitals to complete the needs assessments every three years, ICAHN has encouraged CAHs to use them as an opportunity to identify new services such as wellness and prevention. Pat Schou, Executive Director of ICAHN, notes that “The CHNAs are meant to connect hospitals to their communities and help in their efforts to increase local access to health care services and keeping people well. ICAHN wants to assist Illinois CAHs in creating needs assessments that have implementable health improvement strategies.”

The National Prevention Council (NPC) and other organizations in the health care and policy arena emphasize that the CHNA process should be a community-wide effort since many factors affect the health of a community. The NPC suggests that “health care systems, insurers and clinicians can partner with... governments, business leaders, and community-based organizations to conduct community health needs assessments and develop community health improvement plans.” ICAHN currently assists member critical access hospitals with their CHNAs, a process that includes many of the following community organizations and residents:

» Health care consumer advocates
» Non-profit organizations
» School officials
» Local government officials
» Community-based coalitions focused on health issues or target populations
» Health care providers, including community health centers
» Providers focusing on medically underserved, low income, and minority groups
» Local public health agencies
» Private businesses, employers
» Involvement by 500 rural residents

Throughout the CHNAs, similar areas of concern were identified based on data collection efforts involving surveys, interviews, focus groups, and town hall meetings. The top concern was wellness education and care focused preventative measures such as diabetes classes, health coaching, and disease prevention (cited by 17 CAHs), which can be addressed through PHM approaches. These efforts should also address the wellness categories of: nutrition education, increasing exercise activities, access to coordinated preventative care, and personal accountability for a healthy lifestyle. Schou explained that this was not as much of a concern even five years ago, but CAHs now recognize the importance of PHM efforts. CAH staff suggested that PHM approaches focused on wellness education and care should be expanded in their service areas to reach all members of the community through outreach activities by many local organizations.

Other issues of concern for Illinois CAHs as

“ICAHN wants to assist Illinois CAHs in creating needs assessments that have implementable health improvement strategies.”

–PAT SCHOU, EXECUTIVE DIRECTOR, ICAHN
identified in the CHNAs were access to mental health services for outpatient and inpatient care (16 CAHs) and lack of coordinated community prevention efforts and availability of counselors for outpatient substance abuse services (12 CAHs). Additional issues of concern included availability of physicians and specialists (12 CAHs) and access to care issues such as non-emergency transportation, lack of after hours care, and absence of pediatric and geriatric practices (9 CAHs).

Illinois CAHs use the CHNAs to incorporate data-driven health management strategies into their community wellness programs and are all encouraged to use collaborative methods to conduct the assessments of these programs. In order to address the community needs identified in the CHNAs, and to implement PHM approaches with measurable outcomes, several key components must be in place. According to Schou and Terry Madsen, CHNA Project Consultant for ICAHN, these components include:

- Community engagement
- Collaboration between providers and organizations
- Accountability for each organization based on identified community needs
- A focus on accessibility of services and prevention rather than only on care and chronic disease
- A focus on population needs of defined service area and
- Connecting medical health with public health through inclusive planning processes

The CHNA process has helped CAHs identify local issues and areas of need in their communities, while recognizing that involving other community and health care organizations is a necessary and positive approach to address these needs. The CHNA process also prompted ICAHN to explore new PHM models and approaches through a panel discussion with two experts in the field of population health and CAH staff in April 2013. The results of the panel discussion and presentations are discussed next.

### POPULATION HEALTH MANAGEMENT PANEL: NEW APPROACHES, FUTURE DIRECTIONS

Building on community wellness efforts including the CHNAs, administrators from 11 CAHs in Illinois participated in a population health management panel discussion sponsored by ICAHN on April 21, 2013. The panel discussion and content of presentations by professionals in the field of population health management were designed to help Illinois CAHs:

1. Better understand the role of rural hospitals in population health management;
2. Identify promising practices in population health management, including new rural revenue models; and
3. Generate strategies that CAHs could implement during the next 6 months to 1 year with minimal financial resources.

An Appreciative Inquiry approach, which focuses on identifying strengths and assets of organizations or groups, was used with the panel and the question posed was: “If your hospital implemented an effective population health management approach, what would be its key characteristics?” Two experts on PHM, John Gale from the University of Southern Maine, and Steve Hyde with Stroudwater Associates, described effective PHM approaches and opportunities for Illinois CAHs. Subsequent discussions focused on the questions:

1. What could we do as a group?
2. What should we do? and
3. What actions will we take in the next 30 days, 60 days, and beyond?
Gale defined PHM as “The health outcomes of a group of individuals, including the distribution of such outcomes within the group.” He explained that PHM was essential for quality of life and the single most effective way to reduce health care costs. Challenges facing CAHs and other rural hospitals in managing population health include:

» Deciding which groups of people or geography to focus on
» Incorporating different terminology from different sectors (i.e., hospitals and public health)
» Using a holistic focus to make the whole greater than the sum of individual parts, and
» Managing complex connections among acute health care delivery systems, public health interventions, health disparities/inequities, and socioeconomic factors

The panel discussion also emphasized that an important goal for rural hospitals in pursuing PHM is to shift the focus from “random acts of kindness” to community engagement and collaboration between providers, public health agencies, community residents, and other organizations.

Presenters and panelists agreed that hospitals must use the CHNAs to identify and track target populations in order to analyze preventative and interventional needs. The CHNAs, however, may require a broader focus on community needs and residents as opposed to those more focused on the patients and conditions most often seen by CAH staff. This new approach will be more time-consuming and labor intensive; however, leveraging community resources and including health care organizations and providers in the service area and beyond can produce more robust health-related information and PHM strategies.

Hyde discussed the hospitals’ roles in PHM and narrowed the PHM definition to “any provider arrangement where a payer agrees to provide care to a defined group of people.” The arrangement must have the following three outcomes to be successful:

1. Improve the group’s medical outcomes
2. Reduce the group’s per capita costs, and
3. Contractually capture the savings from the value created in 1 and 2

Hyde explained that PHM does not always have to start on a large scale, but instead may begin with an employee wellness program or another initiative within the hospital as a first step.

The panel members also identified several strategies that could be initiated with limited funding, time, or staff constraints, as well as examined PHM approaches on both small and large scales. The first approach identified would explore employee wellness programs already in place in several Illinois CAHs. While not all CAHs have the flexibility to reward employees by discounting insurance rates, other components of the wellness program such as employee reward programs for increasing exercise and fitness, could be incorporated into wellness promotion strategies used by hospitals.

The second approach would engage primary and secondary education in hospital outreach efforts. These initiatives could include exercise or obesity reduction programs, health tips on a monthly or quarterly basis, a trainer/nutritionist located at the school and provided by the hospital several times per week, career days presented by hospital staff, and other activities. These approaches use local resources and can provide better integration between hospitals and other community organizations.

The CHNAs may require a broader focus on community needs and residents as opposed to those more focused on the patients and conditions most often seen by CAH staff.

”-POPULATION HEALTH MANAGEMENT PANELISTS

The third suggested strategy would improve the understanding of PHM by all staff and board members of CAHs. This could be accomplished through 2-3 regional training seminars throughout the state of Illinois, where boards and staff meet to share ideas, approaches, and policy implications.
of PHM-related activities. These seminars could feature best or promising practices in Illinois and/or other states.

A fourth strategy would change the narrative about the meaning of the CAH designation. While the designation has clear implications including creating a safety net for rural patients, CAHs can be only one of many collaborative partners responsible for the health of the community. Through press releases, new outreach programs, and exploring new models, CAHs can change perceptions about rural health care by providing an accurate explanation of their roles in health care and in the community.

Finally, a major point of the session’s discussions was the possibility of a rural care coordination organization (CCO). This would include a network of multiple types of health care providers (mental health, acute care as examples) who agree to collaborate and meet the needs of community residents receiving health care coverage under a specific health plan. CCOs focus on prevention and management of chronic conditions thereby reducing unnecessary emergency room visits and preventing or delaying disease progression. The question was posed: “Could a population health revenue model work for CAHs in Illinois?” Based on the discussions at the PHM panel in April 2013, ICAHN contracted with Stroudwater Associates to assess the feasibility of a CCO model with 25 CAHs in Illinois. The pilot project began in June 2013 and initial data are currently being analyzed.

Using information presented in the strategy discussions by the panelists and additional research, CGS identified several promising practices in Illinois that address key PHM issues raised. The first practice involves Mason District Hospital, Havana, Illinois. Its employee wellness program, Integrated Health Advocacy Program (IHAP),* has saved the hospital money, improved the health of the community, and has replicable components for use in other CAHs and organizations.

A second promising practice is being implemented in Salem Township Hospital, Salem, Illinois. Hospital staff is proposing to perform outreach activities in the K-12 education system in a rural area to address childhood obesity and promote exercise and nutrition awareness.

A third practice has been implemented at KishHealth System, DeKalb, Illinois. It uses health indicators from CHNAs to directly influence community wellness programming, such as collecting data on the county’s elderly population and creating partnerships and strategies to address the holistic needs of this population.

Next, Cadence Health, Winfield, Illinois, while not a CAH, is addressing access to care issues using a strategy that could be implemented by nearly any hospital. Cadence Health is identifying and enrolling eligible patients in programs such as Medicaid, Supplemental Nutrition Assistance Program (SNAP), or other assistance as a way to improve overall health conditions by ensuring these newly identified clients receive the services they now are eligible to receive. Detailed descriptions of these efforts, including interviews with principals, are discussed later in the promising practices section to guide CAHs in the development or refinement of these activities to address PHM-related issues.

Hospital CEOs who participated in the PHM panel agreed that creating a “Resource List” of promising practices, grant possibilities, and contacts for more information would be useful, noting that such a list would need to be continuously updated. A list of population health management resources available to CAHs and rural hospitals is presented in the Appendix of this report.

Suggested PHM Strategies to Explore:
» Hospital Employee Wellness Program
» Health Promotion Outreach in K-12 Education
» Regional Training for CAH Staff and Board Members
» Understanding the CAH’s Role as a Community Partner
» Rural Care Coordination Organization
In order to understand the environment in which CAHs operate, and the rationales behind innovative approaches used to achieve meaningful PHM, it is important to recognize the conceptual framework and evolution of population health management. The next section discusses the Triple Aim concept and importance of using a collective impact approach, two components to achieving successful PHM as a community.

ACHIEVING THE TRIPLE AIM AND COLLECTIVE IMPACT

The Institute for Health Care Improvement (IHI) stated that improving the U.S. health care system requires the simultaneous pursuit of three aims: improving the experience of care, improving the health of populations, and reducing per capita costs for health care. In a 2008 Health Affairs article, Berwick, Nolan, and Whittington claimed that preconditions for achieving the Triple Aim include enrollment of an identified population, a commitment to inclusiveness and equity for members, and an organization integrator that accepts responsibility for all three aims for a specific population. The authors further contended that no health care system in the United States had achieved the Triple Aim at that time (2008), and population health management was only one component of a larger, more complex process.

The authors also noted that it may not seem in the interests of hospitals to achieve the Triple Aim, at first glance. “Under current market dynamics and payment incentives, it is entirely rational for hospitals to try to fill beds and to expand services…Most hospitals seem to believe that they can protect profits best by protecting and increasing revenues.” A common question heard in hospital board rooms today, especially those facing tight budgets, is “how do we engage in population health management when the new model means healthier patients, and healthier patients mean less revenue?” Finding the answer means that hospitals must explore other revenue streams and partnerships or collaborations to offset the effects of reductions in services. New models or paradigms in rural areas are needed and are being explored by Illinois CAHs and ICAHN.

The IHI released, “A Guide to Measuring the Triple Aim: Population Health, Experience of Care, and Per Capita Cost” in 2012 as an update to the 2008 Health Affairs article. The overarching finding was that no one sector had the capability to successfully pursue population health improvement without collaborating with other organizations. The Triple Aim explicitly requires health care organizations, public health departments, social service entities, school systems, and employers to cooperate. Achieving the Triple Aim and meaningful population health management requires a community approach. Collaboration is more than using each other’s logo and does not mean only leveraging assets; it is about actionable outcomes and collective impact. If organizations collaborate for strengths, evaluate needs, and are mission-driven, the success rate will increase.

In 2011, the concept of collective impact was introduced by John Kania and Mark Kramer in an article titled “Collective Impact.” Collective impact is described by the authors as “the commitment of a group of important actors from different sectors to a common agenda for solving a specific social problem,” and emphasized that “large-scale social change requires broad cross-sector coordination, not the isolated intervention of individual organizations.” The important distinction between partnerships, networks, and other types of joint efforts is that collective impact initiatives involve a “centralized infrastructure, a dedicated staff, and a structured process that leads to a common agenda, shared measurement, continuous communication, and mutually reinforcing activities among all participants.”

Hanleybrown, Kania, and Kramer in “Channeling Change: Making Collective Impact Work” argued that the complex nature of nearly all social issues, including health care, hinders any one organization in making large-scale change as presented in the original

---

1 A “population” is not necessarily geographic. Enrollment of a defined group of people over time would create a “population” for the purposes of the Triple Aim; as an example “all diabetic patients in DeKalb County, Illinois.” Donald M. Berwick, Thomas W. Nolan, and John Whittington, “The Triple Aim: Care, Health, and Cost.” Health Affairs, 27, no. 3 (May 2008): 759-769.
collective impact article. To have serious collective impact, organizations must make a fundamental shift in the way they operate. Thus, “collective impact is not just a fancy word for collaboration.” Many Illinois CAHs have achieved what the authors call “isolated successes,” that is they successfully partnered with other organizations on approaches that benefited the organizations involved. However, the authors also argued that the large-scale changes needed to accomplish population health management must be more than one or two organizations benefiting from the success of one project or program.

The preconditions for successful collective impact involve an influential champion (or small group), adequate financial resources (at least 2-3 years of time and/or monetary support commitment), and a sense of urgency for change on a specific issue such as PHM and/or a new payment model. Population health management at the comprehensive community level requires several components:

1. A common agenda that defines “health” at the community level and creates a roadmap;
2. A shared measurement system that creates a community dashboard or other web-based data source based on the roadmap;
3. A mutually reinforcing activities evolving from shared measurements; and
4. A continuous communication and a backbone organization such as ICAHN, a department of public health, or a CAH.

Because CAHs operate in a framework of collaboration and community health promotion, a transition from measuring isolated impacts to measuring collective impacts has already started in many CAHs through the CHNA process (Figure 3).

**FIGURE 3. ISOLATED COMMUNITY IMPACT VERSUS COLLECTIVE COMMUNITY IMPACT**

<table>
<thead>
<tr>
<th>ISOLATED COMMUNITY IMPACT</th>
<th>COLLECTIVE COMMUNITY IMPACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community organizations, including hospitals, work separately to produce independent impacts from their individual missions.</td>
<td>Large-scale impact depends on increasing cross-sector alignment and learning among many community organizations.</td>
</tr>
<tr>
<td>Evaluation attempts to isolate a particular organization’s impact.</td>
<td>Progress depends on working toward the same goal and measuring the same things.</td>
</tr>
<tr>
<td>Large-scale change is assumed to depend on scaling a single organization.</td>
<td>Organizations actively coordinate their action and share lessons learned.</td>
</tr>
<tr>
<td>Corporate and government sectors are often disconnected from the efforts to manage population health.</td>
<td>Corporate and government sectors are essential partners.</td>
</tr>
</tbody>
</table>


Another example of collective impact is the Illinois initiative, “Illinois Framework for Health and Human Services (the Framework). The Framework works with 60 programs that provide services through contracted community-based providers or directly through seven Illinois state departments:

- Aging
- Children and Family Services
- Commerce and Economic Opportunity
- Healthcare and Family Services
- Human Services
- Public Health
- Employment Security

The Framework that participants seek to develop is a sustainable foundation of interoperability and information sharing among the seven state agencies empowering Illinois state government to better coordinate client services. Interoperability refers to the ability of two or more systems or components to exchange information and to use the information to make better decisions. This approach is also being pursued nationally as federal agencies attempt to eliminate barriers to communication, technology adoption, and program implementation. The Framework is creating a system that leads to interoperability in Illinois governance by helping agencies to not only focus on their individual agency...
missions and isolated successes, but to understand and apply their collective impact as a system. Collective impacts require all community partners to be engaged. This means that managing populations and healthy communities requires understanding and addressing the many determinants affecting the health of populations. The next section discusses upstream, midstream, and downstream health factors and strategies that CAHs and communities can use to create a more holistic picture of the populations served. The CHNAs conducted in Illinois have created community partnerships and quality data collection procedures, both qualitative and quantitative, that will help hospital staff to understand and address health factors, including those beyond the control or core service areas of CAHs.

**MEASURES AND DETERMINANTS OF HEALTH STATUS**

Population health management requires measures of health status relevant to policymakers and health care providers. These measures require reliable, consistent, and relevant data to assess and describe the population served by a hospital and other community organizations. While health care access is one of the most commonly considered determinants of health, population health is also affected by factors beyond the control of health care providers. Because medical care is only one of several interventions affecting health care outcomes, indices and determinants of population health must reflect the social and economic environmental factors beyond clinical care. The next section discusses a tool for ranking counties based on health outcomes and behaviors as well as different determinants of health.

**COUNTY HEALTH RANKINGS**

Obtaining an overall assessment of factors affecting health care, community health status, and hospital effectiveness is difficult, but essential, to making informed PHM decisions. As one example of these measures, the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute published *County Healthy Rankings* (CHR), an index organized by Health Outcomes and Health Factors. *Health Outcomes* describe the health in a county using two types of measures: how long people live (mortality), and how healthy people feel while alive (morbidity). *Health Factors* in the CHR are of four types with each having a specific percentage of influence: Health Behaviors (30.0%), Clinical Care (20.0%), Social and Economic Factors (40.0%), and Physical Environment (10.0%). A fifth set of factors often included in health rankings, genetics and biology, is not included in the CHR.

The CHR examine a variety of indicators that affect health-related measures such as the rate of deaths before age 75, high school graduation rates, unemployment, limited access to healthy foods, air and water quality, income, rates of smoking, obesity, and teen births (Figure 4). The rankings compare the health conditions in nearly every county in the U.S. and show that much of what affects health occurs beyond the doctor’s office or hospital.
Using tools such as the CHR can show CAHs the health status of residents in their counties on issues such as alcohol abuse, access to care, and obesity. If the county has a low ranking on a selected indicator, this may suggest the need for collaboration among community organizations to improve a specific population. For example, hospitals and other organizations in counties that rank lower on the Health Behaviors indices could work with local food organizations such as a Farmer’s Market to improve the awareness of residents about the need for healthy diets and availability of fresh foods in the area.

Given the many factors affecting the longevity of life, health care organizations may ask “do we fully understand the upstream, midstream, and downstream factors affecting health care and population health management in our service area?” The following factors suggest that CAHs must look beyond the typical array of hospital services to achieve meaningful population health management.

**UPSTREAM, MIDSTREAM, AND DOWNSTREAM HEALTH FACTORS AND STRATEGIES**

In a *Health Affairs* article linking upstream factors to downstream strategies, Gehlert, et al., argued that three types of factors or determinants exist, and the strategies to address those determinants can affect the health care continuum and overall community health.\(^\text{14}\) *Upstream factors* include social, physical, economic, and environmental categories, and therefore may be the most fundamental determinants of health.\(^\text{15}\) These categories include a range of interrelated issues such as education, employment, occupation and working conditions, income, housing, and area of residence (Figure 5). Equally influential are the additional upstream factors including governmental policies (local, state, and federal levels) that affect the many related issues. In the U.S., various levels of government, including branches or divisions, operate somewhat independently of each other. Many decisions are made with little or no input from CAHs and patients but still have an impact on the health of communities.

According to the Center for Disease Control and Prevention, upstream strategies are intended to address policies and systems aimed at overcoming health disparities and reducing the burden of preventable diseases. These strategies can include safe neighborhood programs, involvement by schools, healthy foods initiatives, and physical activity programs.\(^\text{16}\) While these factors and strategies are usually not under the direct control of CAHs, they can affect the demands for health care. This situation illustrates the need for CAHs to be a major component in an overall community health program and to encourage organizations to initiate these programs.

*Midstream factors* flow from upstream factors and are seen in psychosocial processes (stress, hostility, depression) as well as health behaviors (diet, nutrition, preventative health care). Midstream strategies could focus on promoting positive health behaviors and attitudes among individuals, such as creating workplace wellness programs that provide incentives to individuals to adopt positive health behaviors. In the CHR framework, midstream factors would include the category of Health Behaviors.
Downstream factors are confronted by CAHs and rural hospitals daily because their patients represent the culmination of sustained and/or longer-term adverse mental health (i.e., depression, anxiety) and/or harmful physical behaviors (i.e., smoking, drinking). In addition, all three factors, upstream, midstream, and downstream, are affected by cultural influences. For example, people differ in community and support networks ranging from family and school to religious affiliations, all of which influence mental well-being, healthy behaviors, and eventually, mortality and morbidity. Downstream factors correspond to the Health Outcomes (morbidity and mortality) section of the CHR.

By examining various determinants of health, CAHs are able to identify potential challenges to the health of their communities, including factors beyond their control. In combination with data collected from CHNAs and tools such as the County Health Rankings, CAHs create better, more comprehensive PHM approaches. Many of the potential health care issues will stem from changes in the demographics of many rural areas, such as aging of the population and workforce, high unemployment, increasing Medicaid dependency, and others. Providing health care in these rural settings poses multiple challenges, which will be compounded by changes in the reimbursement model. Several demographic trends, and their implications for rural health care, are discussed next.
RURAL HEALTH CARE TRENDS IN ILLINOIS

The United States has 1,330 CAHs with 51 operating in the state of Illinois. CAHs are located in 44 of the state’s 102 counties, with three-quarters of the 44 counties classified as nonmetropolitan (rural).

Several demographic trends affect health care in more rural areas and subsequently may influence population health management approaches. First, the population sizes of most nonmetropolitan counties are relatively small. In Illinois, 26 counties have fewer than 15,000 residents and many have fewer than 10,000 residents. Low population densities limit the ability of health care providers and facilities to provide selected specialty services because of the financial costs associated with these services. However, when several organizations collaborate to share resources and expenses, they can provide higher quality services and monitor health care outcomes more effectively.

Second, employment data show that the same industries in nonmetropolitan counties often pay less than those in metropolitan areas. In addition, the opportunities for certain high-paying occupations are limited in nonmetropolitan areas because of small population sizes. Combined with higher unemployment rates, these trends can lead to higher percentages of residents qualifying for federal programs such as Medicaid, SNAP, and other subsidies.

The ACA extends health insurance to an additional 32 million people nationwide according to the U.S. Congressional Budget Office—16 million to be covered by Medicaid, in part by increasing eligibility for all adults to 138.0% of the federal poverty level (FPL), and 16 million to be covered by private health insurance. Nationwide, 94.0% of people are expected to have some form of health coverage because of ACA provisions.

Approximately 2.8 million Illinois residents (22.0% of the total population) were enrolled in Medicaid in 2011. Figure 6 shows a comparison of the population size of counties and Medicaid enrollments. Characteristics of the Medicaid expansion in Illinois include the following:

- Currently, 700,000 uninsured adults will be eligible for Medicaid if the state expands its program. Of these, 522,000 will be newly eligible and 178,000 are eligible for the program under current rules but are not enrolled.
By 2014, more than one million Illinois residents who are currently uninsured will receive health care coverage.

By 2014, approximately 550,000 to 800,000 additional people will be covered under the restructured Medicaid program at a cost between $4 billion and $6 billion.22

A correlation exists between Medicaid enrollment and population size. It is clear that small nonmetropolitan counties, particularly in southern Illinois, have especially high concentrations of Medicaid populations; these counties will be substantially affected by ACA provisions that increase access to health care services. If these individuals have health insurance, some of the cost-burden on the hospitals may be reduced because the individuals will rely less on emergency department (ED) visits and are less likely to be eligible for reduced hospital fees. Also important is that even though the overall population in Illinois has increased by only 1.8% during the past five years, the Medicaid population has increased by 30.0% (Figure 7).

Illinois has a higher percentage of Medicaid enrollments than the average of either the U.S. or the 12 Midwest Census states and ranks 18th among all states. An expansion of Medicaid, as proposed by the ACA, is likely to increase the financial strain on CAHs (Figure 8). Again, nonmetropolitan (rural) and metropolitan counties outside of the Chicago region (downstate metro) differ in these comparisons. The average Medicaid cost per enrollee is higher in Illinois counties with a CAH ($5,700) than the average of all nonmetropolitan counties in Illinois ($4,713), but lower than the average for downstate metro counties in Illinois ($6,092).23 This discrepancy may partially reflect differences in availability of health care facilities, especially if the elderly locate in areas with more accessible health care and use these services. However, more research is needed on this issue.

In nonmetropolitan Illinois, 22.3% of the population was enrolled in Medicaid in 2011 compared with 18.9% in downstate metro counties.24 While the cost per enrollee is higher in counties with a CAH, the participation rate for Medicaid is slightly lower (21.9%). It may be that those on Medicaid did not have sufficient resources to have a healthy lifestyle and/or were not able to participate in preventative treatments.

Third is the age distribution of the nonmetropolitan population. For instance, in Illinois counties with a

**FIGURE 7. ILLINOIS TOTAL MEDICAID ENROLLMENT AS A PERCENTAGE OF TOTAL POPULATION**

*Estimate based on 2010 Census
CAH, 17.2% of the residents are 65 years of age and older compared with 15.5% in downstate metro counties.\textsuperscript{25} For residents with limited mobility, it is important that they can access services reasonably close to their homes. The proportion of elderly residents in these areas is likely to increase substantially in the next decade as the Baby Boom generation reaches retirement age. This trend will make it essential for these areas to attract young families to replenish the workforce.\textsuperscript{1}

Access to high quality health care is also key to attracting younger residents. Especially important are pre- and post-natal care and pediatric services. Effective population health management will include providing access to these services in a timely and cost-effective way. CAHs working with other community organizations will enhance the number of resources and ability to share data through collaboration.

A fourth trend challenging CAHs and other health care organizations is the aging of medical and health care personnel in nonmetropolitan areas. In 2012, 22.8% of Illinois health care employees were 55 years or older and 4.8% were over 65 years of age.\textsuperscript{26} The possible limited availability of health care personnel in the future will make collaboration and resource sharing more important in managing population health.

In addition to providing critical health care services, CAHs provide substantial employment opportunities for nonmetropolitan residents. For instance, CAHs in Illinois employed more than 9,500 people in 2010-2011,\textsuperscript{27} many of whom must be replaced when they retire. The aging personnel issue is not unique to the health care industry and nonmetropolitan Illinois counties in general have higher proportions of individuals at or near retirement age while the young professional age cohort is smaller in number.\textsuperscript{28} This means that all industries and business sectors in nonmetropolitan Illinois, including the health care sector, could lose experienced personnel without necessarily finding qualified replacements. Retirements will definitely affect population health management practices and will require organizations delivering health care services to meet growing demands, possibly with fewer staff and resources.
HEALTH OUTCOME AND HEALTH BEHAVIOR RANKINGS IN ILLINOIS

The next section examines Health Outcome and Health Behavior rankings in Illinois counties based on the previously discussed County Health Rankings. Again, special attention is paid to nonmetropolitan counties (rural) and metropolitan counties outside of the Chicago region (downstate metro). Median (midpoint) rankings are used to describe groups of counties, such as all counties with a CAH. To describe individual counties, such as one county in the St. Louis metropolitan area, the county’s rank compared with others such as the highest 20.0% or lowest 20.0% is presented. These comparisons provide insights into regions with unique population health issues.

In terms of Health Outcomes (morbidity and mortality), counties with high or low rankings are found in both nonmetropolitan and downstate metro areas and these differences among counties are especially useful for PHM discussions (Figure 9). The median nonmetropolitan county in Illinois ranked in the middle of all Illinois counties. The median downstate metro county, conversely, ranked in the top 20.0% of all Illinois counties. Nonmetropolitan counties typically ranked slightly worse than downstate metro counties on morbidity indices, although median rankings for both groups were in the middle range of all counties. Downstate metro counties ranked better (high 20.0%) than nonmetropolitan counties (low 20.0%) in mortality measures. By contrast, nonmetropolitan counties with a CAH ranked better than nonmetropolitan counties overall. This suggests that while nonmetropolitan counties in Illinois typically had worse mortality rankings than downstate metro counties, the differences were less in counties with CAHs. The previous ICAHN issue paper on Quality of Care demonstrated that CAHs have fewer patients and cases which may affect the statistics covering mortality. As with all quality indices, Health Outcomes measures can be affected by the presence of delivery systems in the area.

Clinical Care is an upstream Health Factor which is important in PHM discussions because it includes access and quality of care issues. Therefore, it provides a comparison of health care services as shown below:

<table>
<thead>
<tr>
<th>ACCESS</th>
<th>QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>» Uninsured (percent of population &lt; 65 without health insurance);</td>
<td>» Preventable hospital stays (rate per 1,000 Medicare enrollees);</td>
</tr>
<tr>
<td>» Ratio of population to primary care physicians; and</td>
<td>» Diabetic screening (percent of persons with diabetes that receive HbA1c screening); and</td>
</tr>
<tr>
<td>» Ratio of population to dentists.</td>
<td>» Mammography screening (percent of females that receive screening).</td>
</tr>
</tbody>
</table>


*The counties were ranked from best score to worst so that 1.0 is best. Thus, a lower score reflects better conditions.*
A comparison of the Clinical Care index by county in Illinois does not reveal clear and definite patterns, although certain eastern and south central counties ranked worse on this index (Figure 10). Downstate metro centers such as Champaign, Rock Island, Peoria, Springfield, and Illinois cities in the St. Louis area may rank better because they have larger health care organizations with specialized services. This could suggest that for PHM to succeed in smaller counties, the services provided by medical centers in the surrounding larger areas must be integrated into local delivery systems. The median ranking for nonmetropolitan counties on the Clinical Care index was in the lowest 20.0% compared with the highest 20.0% for downstate metro counties possibly because the downstate metro counties are larger and have more health care facilities.

However, the median CAH county ranked better on the Clinical Care index than did nonmetropolitan counties overall. Although, in general, nonmetropolitan counties had lower Clinical Care rankings than downstate metro counties, the difference was less for nonmetropolitan counties with CAHs. If fewer providers are an issue in nonmetropolitan counties, then finding effective methods of managing population health through preventative programs is even more important.

CAHs and other rural community organizations are undoubtedly facing challenges in pursuing population health management approaches including negative demographic trends, potential increases in Medicaid patients, possible revenue ramifications, and other issues. Despite these challenges, Illinois CAHs are moving forward with innovative PHM programs and initiatives in their service areas. In addition to the new CAH revenue model pilot project underway in Illinois, several case studies of promising practices have been identified. As described in the next section, these practices can help hospital administrators and policymakers identify approaches to consider. The programs can be modified and tailored to the needs of specific regions, yet provide interesting PHM approaches to pursue in Illinois and other states.
PROMISING PRACTICES

Fortunately, CAHs do not have to design completely new programs to achieve small- and large-scale population health management successes because effective models already exist. CAHs in Illinois are improving community wellness by creating PHM strategies using data analyses from the CHNAs and other assessments. Several PHM approaches in Illinois were identified at the panel discussion in April 2013 and are described in this section. They include an employee wellness program, hospital outreach into the K-12 education system, using health indicators to influence community wellness programming, and addressing access to care issues by identifying and enrolling eligible patients in financial support programs.

STARTING IN YOUR OWN BACKYARD, MASON DISTRICT HOSPITAL

Mason District Hospital (MDH) has served the health care needs of Mason and south Fulton counties for half a century. A 20-bed CAH, Mason District Hospital serves more than 18,000 people in the rural west-central region of Illinois. MDH used a “start in your own backyard” approach to PHM with an employee-wellness initiative titled, Integrated Health Advocacy Program (IHAP).*

Harry Wolin, CEO and Administrator of MDH, noted that defining PHM is a challenge, as is the payment model for making people healthier. However, because health administrators, both urban and rural, attempt to manage the health of the populations served, Wolin said “Leadership is key; hospital staff can start with small victories and be the health leaders by starting with their own wellness. This sets up the big wins that will happen within the broader community.”

Five years ago, the IHAP program began as an idea based on experiences in several other wellness programs, with an emphasis on how small a wellness group could be to make it work, both financially and logistically. According to Wolin, health care is the largest component of employee benefit costs and:

- 80.0% of health care dollars are used by 20.0% of benefit plan participants;
- The largest amount of health care dollars are spent by those with multiple chronic illnesses or about 5.0% of people; and
- This 5.0% spends half of the health care dollars and incurs the largest claims each year.

With these figures in mind, MDH asked “if we can’t figure out how to manage the health of our employees and the cost of health care, how can we expect anyone else to?” Of the 225 hospital employees, 110 are enrolled in the hospital’s health insurance program. Using these employees as the test population, the approach was designed to capture the savings from a small group with the most chronic diseases.

“Leadership is key; hospital staff can start with small victories and be the health leaders by starting with their own wellness. This sets up big wins that will happen within the broader community.”

—HARRY WOLIN, CEO, MASON DISTRICT HOSPITAL
The first step in plan development was an assessment of the health status for all participants in the program plus a review of claims data for the prior three years. The results of the health assessment and review of claims data allowed each employee and adult dependents to be stratified into one of three tiers in the program (Figure 11).

**FIGURE 11. STRATIFIED LEVELS OF HEALTH FOR IHAP**

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1</td>
<td>Typical participant with no major health issues. Individuals required to actively engage in health/wellness activities during the year. These include documented exercise in the hospital’s gym, participation at a park district exercise class, attendance at a hospital sponsored Employee Assistance Program (EAP) wellness seminar, documented attendance at an organized weight loss program, and others.</td>
</tr>
<tr>
<td>Tier 2</td>
<td>Middle participant (not at chronic disease level) has the same requirements as a Tier 1, as well as access to a telephone health coach. This group is not penalized for health issues, but is penalized for not participating in exercise and wellness programs, or managing disease.</td>
</tr>
<tr>
<td>Tier 3</td>
<td>Pareto group (multiple chronic diseases) assigned to a Health Advocacy Team consisting of a nurse practitioner (NP), registered nurse (RN), and medical social worker (MSW), who work as a team to develop a consolidated care plan with multiple physicians/specialists (Figure 12). The care plan is shared and agreed to by the patient and their primary care physician (PCP). There is a heavy emphasis on the behavioral components of the treatment plan. Participants meet with the team regularly and are expected to take an active role in their treatment.</td>
</tr>
</tbody>
</table>

Everyone who participates in the IHAP receives a 15.0% reduction in premiums and complete preventative care to include risk-appropriate screenings (i.e., breast and/or prostate cancer screening) at no cost to the patients. Participants are required to complete at least one wellness activity every quarter (signing in at the hospital’s gym, taking a class at the park district, as examples).

In the case of MDH, eight employees were identified with multiple chronic conditions and a care coordination plan was developed to provide one-on-one patient education, monitoring, and outcome identification. These employees received a significant reduction in their employee benefits costs by participating in the program that required:

1. Health risk assessment;
2. Personal health plan development;
2. Enrollment with a primary care provider;
4. Personal health plan compliance; and
5. Achieving self-defined health outcomes. A multidisciplinary team educated the individuals on how to manage their own health care.

For MDH, as with many CAHs, rural areas often have little or no access to fitness facilities, healthy foods, health coaches, and other health promoting amenities. MDH decided that for the program to succeed at the hospital, and subsequently in the community, MDH had to build a fitness center, hire a trainer and nutritionist, create a community...
garden, and open other facilities to the community for a small fee to help maintain the programs. These programs included diet courses, healthy cooking classes, growing a community garden to address nutritional needs, and fitness center memberships.

One especially important outcome of the IHAP according to Wolin was that employees saw a reduction in health care premiums because they became healthier in terms of less or improved chronic disease conditions and fewer doctor or hospital visits. After two years, the hospital has had a reduction in health care costs of $45,000/year per person. Thus, the eight employees saved the organization approximately $360,000 annually.

Another important outcome of the successful wellness programs was the development of a model that can be implemented in community businesses that are self-insured. Using the wellness teams established at the hospital (coaches, nutritionists, and others) MDH can provide the IHAP throughout the community. The program generates an additional revenue stream for the hospital because businesses pay the IHAP for services provided such as nutritionists, gym memberships, and health coaches. This allows businesses to save money by reducing sick days, lowering premiums, and increasing productivity.

Wolin admits that, "While getting local people healthier costs the hospital money immediately, a healthier community means a better community. Doctors also have room for other patients that need help so they still see the same number of patients.”

Finally, Wolin emphasized that a key component missing from other programs researched while assessing the feasibility of a wellness program at MDH, was addressing behavioral and mental health to make sure participants are mentally ready for changes. MDH established an employee assistance program to address this issue, and the Tier 3 group relies heavily on behavioral health assistance to change behaviors and increase the possibility of sustainable change. The MDH approach addresses the whole person, which has helped patients’ outcomes to remain steady or improve over time.

Wolin’s guidance to others considering a similar program is, "Don’t wait to start implementing a wellness program or PHM approach until the Affordable Care Act or other legislative action requires it. Changing behaviors is enormously difficult and collecting and analyzing data while measuring outcomes is harder to do on a time line.” Wolin adds that while “small things can happen at the hospital level, big changes cannot happen without community buy-in, resources, and motivation.” The IHAP allowed MDH to move from isolated success at the hospital through reduction of employee premiums and healthier employees, to collective success as the IHAP is being administered by MDH and used by local businesses. In addition, the program is achieving PHM as defined by Hyde through, 1) improving the medical outcomes, 2) reducing the per capita costs, and 3) capturing the savings from the value created in 1 and 2.
Salem Township Hospital (STH) located in Salem, Illinois (Marion County) has 22 beds, 213 staff and personnel, and more than 1,000 admissions in 2012. Marion County has a higher obese adult population and a higher number of children in poverty than the state of Illinois, and both of these statistics are predictors of obesity in children.

With an overall increasing number of obese and severely obese people in the United States due to sedentary lifestyle and often poor nutrition, Stephanie Hilton-Siebert, CEO of STH notes that "Rural hospitals are treating a generation of obese individuals and it is important to use preventative measures as early as possible." With these concerns in mind, Hilton-Siebert created a community health program designed for children in the K-12 education system and their parents or guardians. One of the health indices available for children is their Body Mass Index (BMI), which is the measure that Hilton-Siebert is focusing on for the proposed program.

STH has a wellness program for employees similar to that of Mason District Hospital. The program stratifies employees and focuses on the top 10.0% of high risk employees for the most intensive lifestyle coaching and assistance. A comparable approach was proposed for stratifying children by their BMI into three categories: healthy BMI, obese, and grossly obese. A letter was sent to parents of the children that described the program and offered the option of having their child participate. According to Hilton-Siebert, "What better way to motivate parents than to focus on their children? This makes parents and students accountable and encourages a more healthy home life as well."

STH provides an athletic trainer to the high school in Salem and when the obesity reduction program is initiated, the school will have access to the hospital’s dietician and participants will be enrolled in a monitored exercise program. Hilton-Siebert admits that children, as well as adults, often are more willing to change their actions if incentives are offered. As a part of the proposed program, a rewards based system will be offered: participants can earn points based on activities performed and goals met which will be recorded. With the points earned, participants could purchase health related prizes such as a bike, jump rope, healthy restaurant gift cards, and more.

While the program has yet to start, the schools and other organizations in the community are encouraged by its possibilities. The overall goal of the program is a decrease in BMI for participants. Additional desired outcomes include positive changes for those in the grossly obese or obese categories, an increase in activity levels for all participants, more accountability and empowerment, and increased parental involvement and even participation. STH also expects involvement and support from other community organizations such as the public health department, park district, and local businesses, in order to sustain the program. “Ultimately, if children and parents own their individual health and healthy lifestyles, we have succeeded in one aspect of population health management. This program is not an end goal; rather it is the beginning of a partnership with other community organizations and the hospital,” according to Hilton-Siebert.

“What better way to motivate parents than to focus on their children? This makes parents and students accountable, and encourages a more healthy home life as well.”

—STEPHANIE HILTON-SIEBERT, CEO, SALEM TOWNSHIP HOSPITAL

Illinois currently has an obesity rate of 27.1% and if rates continue on current path, by 2030 that rate will climb to 53.7%.

—TRUST FOR AMERICA’S HEALTH, “F AS IN FAT: HOW OBESITY THREATENS AMERICA’S FUTURE 2012.”

The CDC sets obesity ranges determined by calculating weight and height or the “body mass index” (BMI). An adult who has a BMI between 25 and 29.9 is considered overweight and a BMI of 30 or higher is considered obese.
COMMUNITY INDICATORS AND OUTREACH, KISHHEALTH SYSTEM, DEKALB COUNTY, ILLINOIS

KishHealth System (KHS) operates two hospitals, Kishwaukee Hospital (KH) in DeKalb, Illinois, and Valley West Hospital (VWH), a critical access hospital in Sandwich, Illinois. KHS is a relatively small system but in addition to the two hospitals it operates a hospice, home health care agency, a physician’s group, and several other specialty clinics throughout DeKalb County. As KHS considered the mandatory three-year update of its CHNA, and the community benefit plan (CBP) usually associated with the update, the staff recognized that collaboration was necessary to leverage resources in identifying and addressing community needs.

The KHS staff approached the DeKalb County Health Department, which would need similar county health data and information for its mandated “Illinois Project for Local Assessment of Needs” (IPLAN). IPLAN is a community health assessment and planning process conducted every five years by local public health jurisdictions in Illinois. The completion of IPLAN fulfills most of the requirements for local health department certification. Dawn Roznowski, Community Engagement Advisor for KH and VWH stated, “It seemed redundant for each of us, KishHealth System and the county health department, to complete separate planning processes and plans when we needed much of the same information to understand our service area.”

In 2012, KH and VWH conducted their community health needs assessment which helped determine their community benefit plans. Engaging community members in their health management was considered essential and this was done in part through an online survey, in both English and Spanish, which could be accessed on the hospitals’ websites and through hospital and partner links. It was also publicized through several press releases.

In addition, the Community Needs Index (CNI) created by Dignity Health which shows the severity of health disparity for every zip code in the United States and demonstrates the links between community need, access to care, and preventable hospitalizations, was used to identify communities with the highest needs and to inform health outreach efforts.

A steering committee was formed that included representatives from KH, VWH, DeKalb County Health Department, and Pioneering Healthier Communities (PHC). The PHC is an initiative where partner organizations throughout DeKalb County work together to create policies and environments that motivate people to eat healthy and be physically active every day. The initiative consists of the following entities in DeKalb County.

» Kishwaukee Family YMCA
» KishHealth System
» DeKalb County Health Department
» DeKalb County Community Foundation
» Sycamore Park District
» DeKalb Park District
» Northern Illinois University
» Sycamore Community School District #427
» DeKalb Community School District #42

“It seemed redundant for each of us, KishHealth System and the county health department, to complete separate planning processes and plans when we needed much of the same information to understand our service area.”

–DAWN ROZNOWSKI, COMMUNITY ENGAGEMENT ADVISOR, KH AND VWH

Several other organizations were also engaged in the assessment process including local governments, Northern Illinois University, school districts, community colleges, Kishwaukee YMCA, the mental health board, community foundations, clinics, and physician groups.
With feedback from the surveys and inputs from the steering committee and the KHS Community Benefit Team, three initiative statements were created that all organizations operated by KHS could use to address population health management and collective impact. The following statements are included in each organization’s CHNA:

1. KHS will collaborate with diverse organizations in the community to identify a common vision and plan to create a collective impact on the overall health of the community.

2. KHS is committed to improving access to health care services, with emphasis on a coordinate patient-centered approach, measuring patient and population health status within the health care delivery service areas.

3. KHS will focus on wellness and prevention, with special emphasis on the most preventable health conditions and lifestyle behaviors impacting the health of individuals and the community through health promotion activities, policy development and environmental change.

Priorities were also established including: Access to Care, Cancer, Cardiovascular Disease, Diabetes, Health Care Affordability, Mental Health, Older Adult Health, and others. The most important aspect of the CNHA and CBP is that KHS is creating community wellness programming based on the health priorities and is measuring the outcomes of those efforts. Below is an example for addressing the priority of Older Adult Health:

The Community Wellness Department leads the development of the community health needs assessment and the community benefit plan. The Internal Community Benefit Team provides assistance to the annual community benefit plan and monitors progress towards goals. A major goal of the Community Wellness Department is to determine how the hospital reaches the people that currently, or will, access health care before they must use the emergency room or the hospital unnecessarily. In other words, the KHS encourages “intervention” through population health management. This approach may include, similar to Mason District Hospital, health coaching, referral services, the exploration of a wellness facility on-site open to the public, and an employee wellness program, free screenings, and others.

**GOAL**
Promote healthier diet choices and food preparation through education and instruction.

**ACTION ITEM**
Expand partnership with Fox Valley Older Adult Services to promote fitness, fall prevention screening, and diabetes screenings.

**MEASURABLE OUTCOME**
Provide programs to identified Fox Valley Older Adult Service areas to address cancer, diabetes, obesity, respiratory disease or mental issue.

**NO PATIENT LEFT BEHIND, BENEFIT ENROLLMENT, CADENCE HEALTH, WINFIELD, ILLINOIS**

Cadence Health (CH) represents Central DuPage Hospital (CDH) in Winfield, Illinois, and Delnor Hospital (DH) in Geneva, Illinois. While Cadence is a larger health system and represents more urban hospitals, it is involved in a collaborative demonstration project that could be replicated by other hospitals, whether urban or rural. The pilot project titled “Engage DuPage” involves Cadence Health, the DuPage County Health Department (DCHD), the DuPage Federation on Human Services Reform (the Federation), and the DuPage Health Coalition (DHC).

Like many hospitals, the emergency department (ED) at CDH admits patients who are uninsured or underinsured. Many of these patients become charity care cases for hospitals and underinsured patients can incur extensive costs due to ED visits and treatment. With this in mind, the primary goal of “Engage DuPage” is to improve the health status of self-pay ED patients at Central DuPage Hospital.

This goal is achieved by using a Community Access Specialist (CAS) to identify eligibility of patients for benefit programs such as Medicaid, SNAP, and other...
Benefit Enrollment:
75.0% of people want in-person assistance to understand benefit programs, insurance options, and enrollment requirements.

—ENROLL AMERICA RESEARCH, NOVEMBER 2012.

governmental subsidies. The specialist, assigned by the DuPage County Health Department, works at the Central DuPage Hospital ED for 32 hours each week (days/time correspond to heavy self-pay emergency department traffic). This specialist then identifies candidates from the four target populations listed below— ED patients who:

1. Have low incomes and are likely to be eligible for health and/or community programs, or who will become eligible via Medicaid expansion;

2. Have a primary diagnosis indicating mental health, substance abuse, or oral health issues;

3. Have a diagnosis that indicates they may be automatically eligible for specific benefits; and/or

4. Are frequent emergency department users.

The specialist can assess the current situation and needs of each patient, and arrange for follow-up discussions in an appropriate setting. Additionally, they can refer candidates to case managers from DCHD who follow-up with candidates at the DCHD or in the candidate’s home to complete the enrollment process. In more complex cases, they may be referred to the Federation which manages several enrollment programs in conjunction with the Illinois Department of Human Services. Because the process can be overwhelming for patients, especially those suffering with mental or behavioral issues, the specialist and case managers work together until the process is complete. Specialists have offices at the hospital and attended several training programs to prepare for their interaction with patients including:

» Engage DuPage Project orientation

» Affordable Care Act (ACA) training from Illinois Maternal and Child Health Institute

» CareLogic/EMR training

» Epic/EMR training

» Crisis Prevention Institute training

» Benefiting Basics training from the DuPage Federation on Human Services Reform

» Emergency Room Cultural Awareness

» ACA Certified Assister training from the State of Illinois

According to Tammy Pressley, Director of Community, Government and Public Affairs, Cadence Health, the initial outcome measure or expected result for the project will be the conversion rate from uninsured patients to patients enrolled in the appropriate benefit program(s) for their situation. The goal is to enroll at least 1,500 persons in an appropriate program through the Project. This measure assumes 4,800 client interviews (96/week for 50 weeks), 1,900 applications (40.0%) and 1,500 successful conversions to benefit eligibility. In addition, CDH will see an increase in revenues for services rendered because of the improvement in the charity care processes involving self-pay ED patients (for example, successful enrollment in a financial assistance program as opposed to translating into Bad Debt), and demonstrate the value of collaboration between Cadence Health and community partners. Eventually, the conversion of patients to eligible programs will reduce the number of avoidable ED visits among self-pay patients enrolled through the Project.

The pilot project began on July 1, 2013 and will run for 12 months. The budget for the project is $150,000 funded by DHC and Cadence Health. Eighteen members on the Leadership Steering Committee meet monthly to guide implementation and provide workgroup support as needed with two primary workgroups devoted to operational/administrative issues and clinical/patient issues. The
project launched officially on August 12, 2013 with “Engage DuPage” staff on site at CDH. Metrics are collected on the conversion rate, avoidable ED visits, an increase the percentage of complete, adjudicated charity care applications, increases in revenue for Cadence Health, and other measures.

One challenge that surfaced in the first three months of the program was the ability of CDH emergency department staff to address/refer self-pay patients during off-hours when a specialist was not available. Another challenge was gaining buy-in from the emergency department staff because they often concentrate on treating the immediate need of patients, not necessarily insurance benefits. This may be an even larger challenge in rural areas where ED staff are sometimes contractual or provided by a staffing agency.

Finally, working with patients to take ownership of their health is difficult. Pressley states that “Education is key- patients and staff must see how insured status or receiving needed wrap-around benefits will improve the health status of the populations served and how that is really in the end what everyone wants.” This program could be instituted in any hospital, and in a smaller hospital the start-up costs may be less due to the smaller number of patients. However, the results and outcomes could have a large impact on the hospital’s bottom-line and on the health of patients.
RECOMMENDATIONS

The purpose of this issue paper is to explore population health management approaches currently underway in Illinois CAHs and other health care organizations. In addition, by examining determinants of health which influence hospital outreach strategies, CAHs can understand the issues more completely and have more impact on their rural communities. CAHs are also exploring alternative revenue streams and payment models in order to be more responsive to a challenging environment. Based on the research and promising practices, several recommendations surfaced.

RECOMMENDATION 1: START IN YOUR OWN BACKYARD

Nearly every promising practice participant agreed that a reasonable way to begin PHM is to engage employees and staff in the health care organizations. Taking this approach not only allows the hospital to test various initiatives before launching them publicly, it also shows the public the importance of healthy living. If the hospital wants to promote healthy lifestyles, then its employees can be the best advocates. In addition, certain strategies may add revenue streams to the hospital if they can be used in the larger community, such as the community wellness program, a new fitness center, or a health coach.

RECOMMENDATION 2: TAKE HEALTH PROMOTION ACTIVITIES BEYOND THE CONFINES OF THE HOSPITAL

While addressing the health needs of the employees and staff at the CAH is extremely important, it is equally important for the CAH to be a leader in the community. Addressing population health needs community wide could mean an easier transition from fee-for-service to population - or outcome-based payments. As communities are tasked by Healthy People 2020 to improve the overall health by “creating social and physical environments that promote good health for all,” CAHs may find it a challenge to move from prevention programs aimed at hospital services to community-based prevention programs. However, many CAHs are active in their communities working with schools (Salem Township Hospital), local food programs (Morrison Community Hospital, Community Garden), and other outreach efforts. The more involved a CAH is with community health activities, the easier the transition will be to community prevention strategies and population health management.

RECOMMENDATION 3: CONSIDER A REGIONAL APPROACH TO ASSESSMENT AND PLANNING

Communities are unique in health needs, employment opportunities, demographics, and other characteristics. Nevertheless, they can benefit from a regional approach to community health need assessments and health care strategic planning. Taking a regional view is especially important in rural areas with limited population bases to support community wellness programs, population health management, and other health-related activities. A regional approach to PHM and CHNA has an added benefit of allowing organizations with different missions but with a common purpose of improving the region, to use the broader jurisdiction as a neutral place. However, this approach should be tempered with quality county and community level data, planning, and participation to avoid losing smaller jurisdictions in reporting and planning at the regional level.
RECOMMENDATION 4: PUBLIC HEALTH IS REALLY THE PUBLIC’S HEALTH

One of the major components of health care in any county is the public health department. With shrinking budgets, it is more important to leverage resources whenever possible, including eliminating or reducing redundancy in data collection, surveys, and planning processes. While each hospital must create a CHNA, much of the information collected can be used by a CAH, a county health department, and other organizations. Public health departments provide services or have expertise in several areas that CAHs address such as mental health and substance abuse access and elderly population needs.

RECOMMENDATION 5: STRIVE FOR THE TRIPLE AIM AND COLLECTIVE IMPACT

While all hospitals are aware of the Triple Aim, it is important to incorporate it in all hospital activities. CHNAs and subsequent strategies should address ways to lower costs, increase patient satisfaction, and achieve better health outcomes. In order achieve better health outcomes, CAHs must understand a range of community determinants of health and broaden the role and impact of other community-based organizations. In addition, while isolated successes are important to hospitals, collective impact through community collaboration will ultimately create the significant and documentable changes in communities.

RECOMMENDATION 6: IDENTIFY UPSTREAM, MIDSTREAM, AND DOWNSTREAM STRATEGIES, ENGAGE PARTNERS

Obesity, mental health, and substance abuse are among the most common issues encountered by rural health care providers. The CHNAs also identified wellness education and promotion as a priority in many rural areas. Because these issues are prevalent in rural areas, population health management requires identifying the upstream, midstream, and downstream strategies that can address the issues and establish measurable outcomes to identify whether the strategies are working. Such an approach does not diminish the impact of the CHNA; it means that attacking the issues identified in the CHNA from several levels can have a larger impact. Understanding the determinants of health also helps to identify other partners in population health management and CAHs can engage these partners in strategic planning initiatives.
ACKNOWLEDGEMENTS

This issue paper and the larger ICAHN project benefited from many collaborative efforts. Pat Schou, Executive Director, ICAHN, provided guidance throughout the project. Mary Ring, Policy Advisor, ICAHN, helped with publication preparation for all three issue papers. Andy Blanke, Northern Illinois University, assisted with the data analyses and Brian Walk prepared the final copy for publication.

We thank the participants of the Population Health Management panel who were instrumental in shaping this issue paper. In addition, John Gale, University of Maine and member of the Flex Monitoring Team, and Steve Hyde, Stroudwater Associates participated in the panel discussion and subsequent follow-up.

Lastly, we thank Harry Wolin, CEO, Mason District Hospital, Stephanie Hilton-Siebert, CEO, Salem Township Hospital, Tammy Pressley, Director, Community, Government and Public Affairs, Cadence Health, and Dawn Roznowski, Community Engagement Advisor for KishHealth System for sharing their promising practices.

VISION COMMITTEE MEMBERS

Ada Bair, CEO ............................................................. MEMORIAL HOSPITAL, CARTHAGE
Steve Hayes, CEO .......................................................... MEMORIAL HOSPITAL, CHESTER
Tom Hudgins, CEO ....................................................... PINCKNEYVILLE COMMUNITY HOSPITAL
Lynn Klein, CEO ............................................................. MENDOTA COMMUNITY HOSPITAL
Anna Laible, CEO .......................................................... ADVOCATE EUREKA HOSPITAL
Nancy Newby, CEO ....................................................... WASHINGTON COUNTY HOSPITAL
Mark Rossi, CEO .......................................................... HOPEDALE MEDICAL COMPLEX
Bob Sellers, CEO .......................................................... CLAY COUNTY HOSPITAL
Stephanie Hilton-Siebert, CEO ..................................... SALEM TOWNSHIP HOSPITAL
Greg Starnes, CEO ......................................................... FAYETTE COUNTY HOSPITAL
Harry Wolin, CEO .......................................................... MASON DISTRICT HOSPITAL

As always, the findings and conclusions presented in this report are those of the authors/project team alone and do not necessarily reflect the views, opinions, or policies of the officers and/or trustees of Northern Illinois University. For more information, please contact Melissa Henriksen, mhenriksen@niu.edu or 815-753-0323.
ENDNOTES


Metropolitan areas are defined by the U.S. Office of Management and Budget. For more information see: http://www.census.gov/population/metro/.


U.S. Census Bureau, Quarterly Workforce Indicators, (QWI), Second Quarter, 2012.


APPENDIX: RESOURCE LIST


2. Salem Township Hospital, Salem, Illinois. Stephanie Hilton-Siebert, CEO. Community Outreach in K-12 Education System.


5. Morrison Community Hospital Community Garden, Morrison Community Hospital Foundation, Morrison, Illinois. Local Healthy Foods and Community Outreach.

6. Illinois Framework for Health and Human Services. The Illinois Framework is leveraging multiple federal investments to create a more efficient and comprehensive approach to service delivery. Comprised of planning, governance and stakeholder engagement projects, the Framework’s goal is to develop a sustainable foundation of interoperable systems and information sharing across seven state agencies to enable Illinois to provide greater coordination in client services. More information is available in the Administration for Children and Families’ Interoperability Toolkit.

7. Illinois Hospitals Research and Educational Foundation (IHREF) is a non-profit subsidiary of IHA, whose primary purpose is to provide educational opportunities for those in the health care industry as well as to obtain grants for research into certain health care issues.

8. The Illinois Public Health Institute (IPHI) facilitates statewide information sharing on successful and emerging population health initiatives. In 2012, IPHI hosted a symposium on improving the nutrition and safety of local food supplies. In June 2013, IPHI hosted a summit on the relationship between community development and public health. The institute hosts training and informational sessions year-round and will facilitate a Public Health Performance Improvement Conference in August 2013.

9. Planning for Healthy Places with Health Impact Assessments (HIAs). Developed by the American Planning Association and the National Association of County & City Health Officials, sponsored by the Centers for Disease Control and Prevention, this online course explains the value of conducting an HIA and the steps involved. Throughout the course, examples of health impact assessments are discussed and “how-to” guide is available. This course is available for free and was updated in 2011.
10. Regional Health Needs Assessment Project, Ohio’s Critical Access Hospitals, Doctors Hospital-Nelsonville, OhioHealth Orelle Jackson, System Director Community Health and Wellness, Ojackson@ohiohealth.com. The state of Ohio is trying to ensure that consistent and high quality health needs assessments are conducted every three years through the broader regional health needs assessments (RHNA). The project is funded by Ohio Department of Health’s Rural Hospital Flex Program and prepared by Ohio University’s Voinovich School of Leadership and Public Affairs in partnership with the University of Toledo’s Area Health Education Center Program. In essence, the 34 Ohio CAHs are divided into four regions and the CAHs within each region collaborate to complete a RHNA that in turn helps each CAH complete its individual CHNA with a better understanding of regional health needs.

11. Community Indicators Consortium (CIC). The CIC is an active, open learning network and global community of practice among persons interested or engaged in the field of indicators development and application. The website offers resources such as webinars on indicators, promising practices, and other research.

12. Healthy Communities Institute (HCI). The HCI has designed a system and strategies to help local public health departments, hospitals and community coalition’s measure community health, share best practices, identify new funding sources and drive improved community health. The HCN is a customizable web-based information system designed to provide access to high-quality data, health indicator tracking, best practice sharing community development, and decision support in order to help improve the health and sustainability of communities.

13. Community Need Index (CNI). The CNI identifies the severity of health disparity for every zip code in the U.S. and demonstrates the link between community need, access to care, and preventable hospitalizations. The ability to pinpoint neighborhoods with significant barriers to health care access is an important advancement for public health advocates and care providers. And because the CNI considers multiple factors that limit health care access, the tool may be more accurate than existing needs assessment methods.

14. NorthPointe Health and Wellness Campus is a comprehensive health facility including not only preventative care but helping the community maintain a healthy lifestyle. There are more than two miles of walking and jogging trails that wind their way through 122 acres of restored rolling prairies. On the first floor are immediate care services, the community health education room, and seven-lane lap pool. The second floor contains the NorthPointe Clinic with nearly 30 physicians, as well as a state-of-the-art fitness room.

15. County Health Rankings and Roadmaps. The Robert Wood Johnson Foundation compiles health rankings data for all counties in the U.S. This data can be used to evaluate the overall health of communities with regards to mortality and morbidity, social and economic environment, health behaviors, and access to clinical care. Data is available by specific indices and sub-indices so that communities can identify subject areas for improving population health. Over time, data from the county health rankings may also be useful in measuring the outcomes of public health initiatives. The Johnson Foundation also includes case studies describing programs that have succeeded in improving population health. Case studies can be browsed by topic of intervention, such as diet and exercise, access to care, family and social support, and environmental quality.
16. Mason County, Washington (population 61,000) used 2012 county health rankings data from the Robert Wood Johnson Foundation to identify low educational attainment as an obstacle to improved health outcomes in its rural communities. In Mason County, 81.0% of high school students graduate but only 44.0% pursue higher education while local employers struggle to find suitable employees. The county founded Mason Matters, a partnership of seven local school districts and the state education department to encourage the pursuit of post-secondary education. Activities of the partnership included a Career and College Readiness curriculum that teaches students about the benefits of post-secondary education beginning in 4th grade, as well as building a database that uses student attendance records to alert educators of students at risk of becoming drop-outs.

17. The U.S. Department of Health and Human Services hosts a Healthy People 2020 initiative tracking progress toward national health goals. The Healthy People website includes a Sharing Library that highlights promising practices in population health management across the nation. Case studies provided in the Sharing Library cover a broad range of subjects including information technology, respiratory illness, violence prevention, and physical activity.

18. The city of Tooele, Utah (population 32,000) was recognized by the University of Washington's Social Development Research Group for its use of a Community that Cares (CTC) program to prevent youth alcohol and substance abuse. CTC is a program used in multiple communities where population health leaders use survey data to identify populations likely and unlikely to abuse substances and then form partnerships to address at-risk populations. The city of Tooele initially had an alcohol consumption rate among 10th graders that was 5 percentage points higher than the state average. Since adopting CTC and forming partnerships between the city mayor, police department, and school districts, the city’s underage alcohol consumption rate has been consistent with that of Utah overall.

19. The University of Minnesota’s Rural Health Research Center (RHRC) studies issues facing rural and critical access hospitals in the Midwest. RHRC offers a series of 5-7 page policy briefs designed to improve the management of rural hospitals. Topics covered include recommended measures of quality for critical access hospitals, transitioning patients out of inpatient care, and meaningful use of IT.

20. The National Rural Health Association (NRHA) is an organization committed to building the capacity of organizations promoting population health in rural communities. NRHA hosts webinars on issues related to CAHs and has covered topics including the recruitment of physicians in nonmetropolitan areas, how the Affordable Care Act affects CAHs, and tactics for maintaining positive relations with a hospital’s board and CEO.

21. The U.S. Department of Veteran’s Affairs provides a Rural Veteran Outreach Toolkit designed to assist rural communities in improving quality of life for military veterans. The toolkit was designed to familiarize community health leaders with the services offered by Veterans’ Affairs for rural areas and provide strategies for building relationships with state/local veterans and aging groups.

22. The U.S. Department of Health and Human Services has a Rural Assistance Center (RAC) that directs health organizations in rural communities to available state and federal financial resources. RAC lists available health-related grant opportunities by state and subject area. Example subject areas that health organizations can browse for funding opportunities include adult education, telehealth, agriculture, and child welfare. Guides to applying for funding are also included on RAC’s site.
23. The Heartland Alliance is a non-profit organization committed to reducing poverty in the Midwest. The Alliance provides fact sheets that clearly and concisely summarize the state of poverty and its impact on population health in states, regions, and metropolitan counties. Also offered are several research reports that give regional context to local health efforts. The alliance has several reports on issues in Illinois and including topics on uninsured populations, hunger in children and seniors, and substance abuse.

24. The International City/County Management Association (ICMA) facilitates information sharing among local governments across many subject areas including public health. The website includes member-submitted case studies about initiatives in population health management and although most of them are submitted by larger cities, some of them come from communities with populations below 50,000. Members are also able to ask and answer questions about implementing health initiatives, covering topics as specific as constructing a lap pool in a senior center or recruiting repeat food donors.

25. The city of Gladstone, Missouri (population 26,000) hosts a city-wide weight loss challenge that began in 2010. The challenge includes a walking competition where citizens in teams such as neighborhood, workplace, and church groups are encouraged to each take at least 7,000 steps a day and track their activity on the city's website. To support the walking challenge, the city of Gladstone partnered with a junior college to build new walking trails from campus to residential areas and grocery stores. Team leaders are also able to track their groups' consumption of fruits and vegetables on the same site. Winners of the competition are awarded prizes from local businesses at farmer's markets. This program was nominated in 2012 for a Program Excellence Award from the International City/County Management Association.

26. Saint Elizabeth’s Medical Center, Wabash, Minnesota. Saint Elizabeth’s Worksite Health Promotion Project. Saint Elizabeth’s Medical Center launched its first rendition of its comprehensive worksite health promotion program in 2003. Objectives outlined the need to create a culture of wellness, address high utilization claims, and serve as an example to its community. Initially, wellness campaigns encouraged employee participation in activities that promoted more physical activity and improved nutrition. Small successes and increasing participation led to the formation of a more robust wellness initiative that includes: an on-site family wellness center; biometric screening/health risk assessment; clinical consultation/coaching; tobacco cessation and nicotine replacement products; LEARN Healthy Lifestyle series; Medication Therapy Management; chronic disease management programs; healthy cafeteria options; and an abundant of wellness education, activities, and resources.
ILLINOIS CRITICAL ACCESS HOSPITALS:
Managing Healthy Communities in Rural Illinois

October 2013

by Melissa Henriksen & Norman Walzer

Center for Governmental Studies
Northern Illinois University
DeKalb, IL 60115