Background

Historically, health and health outcome improvement efforts have focused on the health care system, such as increasing access to care and transforming the health care delivery and payment systems. Broader approaches that address social, economic, and environmental factors that influence health are needed, and recently there has been increased recognition of the importance of these factors to health. Social determinants of health are conditions in the environments in which people were born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. The County Health Rankings & Roadmaps estimates that factors that impact health and wellness occur approximately 80 percent outside of clinical care. Milwaukee County, for example, ranks 71 out of 72 counties in Wisconsin for overall health status, but ranks 51 out of 72 counties for clinical care. This demonstrates that health care, alone, is not enough. Some estimate more than 95 percent of the trillion dollars spent on health care in the United States each year funds direct medical services, even though 60 percent of preventable deaths are rooted in modifiable behaviors and exposures that occur in the community.

Social determinants of health are conditions in the environments in which people were born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. These include factors such as education, housing, transportation, agriculture, and environment.

In our current system, patients’ health-related social needs frequently remain undetected and unaddressed. Efforts are emerging to integrate social and environmental needs into the health care system and match patient needs with community resources.

The Wisconsin State Health Innovation Plan (SHIP), funded by the Center for Medicare & Medicaid Innovation State Innovation Models Initiative, identified a strategic focus area of health care innovation as improved connections for people between clinic and community and social resources. Connecting people to community and social resources through organizational processes and information systems could help people meet their health, health care, and life needs. Stakeholders identified that using the touch point of health care/clinical care to connect people to appropriate community and social resources is vital to addressing their needs across the social determinants of health. Additionally, linking and coordinating care electronically between providers will add an additional layer of coordination and connectivity enabling providers to produce better outcomes with patients. The identified best practices for creating linkages between clinical and community settings include:

- Expanding screening and referral through any health, community, or social service entry point; and
- Linking and coordinating clinical settings and community resources.

Most health care systems have not developed the infrastructure for comprehensive, systematic screening and referral protocols or relationships with the array of community service providers that would be required to address patients’ health-related social needs. While these health care systems have Electronic Health Records (EHR), other health-related resources may not. A 2013 survey completed by the Wisconsin Department of Health Services (DHS) identified that 60 percent of responding Local Health Departments and Tribal Health Clinics have no EHR system, and 60 percent of those without a system have no plans to implement one. Technology, including EHRs and other tools, can be a platform to connect patients and health care providers to community resources to enable bidirectional information exchange for service coordination.

Process

Current improvement projects, including chronic disease management activities, have been challenged to achieve their full outcome potential. One main barrier identified is the lack of bidirectional information flow and coordination of patient care between health care delivery sites and community organizations. To better understand the current state of clinic and community linkages in Milwaukee County, MetaStar facilitated a landscape assessment, funded by the DHS Centers for Disease Control and Prevention (CDC) Chronic Disease grant. Phone and face-to-face interviews were completed with the following organizations or projects:
Technology was assessed using web searches and publicly available information. The purpose of the technology assessment was to identify current software tools that may aid in information flow across health care and community settings. A formal request for information was not conducted, but may be necessary to complete a thorough comparative analysis as this work advances.

**Current Landscape**

**Health Beyond Clinic Settings**

A person’s health is impacted by more than what happens in the health care setting, and all stakeholders interviewed acknowledged that we need to account for a broader range of factors, such as housing and food security, to achieve health and wellness.

One physician recognized that to support true well-being, all clinical, social, and community services need to work together. Several groups pointed to the County Health Rankings model, which describes that at least 80 percent of health outcomes are influenced by factors outside of health care. Nearly all health care organizations interviewed described the formation of workgroups or teams to develop strategies for population health. Pilot projects are being implemented with a few health care organizations to evaluate the impact on the social determinants of health such as screening pediatric patients at wellness visits for food security.

The goal of the interviews was to identify the current state and processes used between clinics and communities. To address this, questions were asked in the following four areas:

1. Current activities implemented or planned to be implemented to improve clinic and community services and resources
2. Technology being used to improve information flow between clinic and social resources
3. Gaps or challenges faced within this focus area
4. Successes and best practices seen to date including other organizations or stakeholders that should be interviewed

In an effort to gather as much information as possible regarding the current state, attempts were made to schedule interviews with multiple organizations and stakeholder groups. Some organizations were unable to complete interviews due to scheduling conflicts, and several never responded to the requests. A total of 13 interviews were completed, three of which were done in person. The remaining were conducted over the phone. Gaps between the current state and future state were evaluated.
Care Coordination

Most organizations interviewed are working toward improving care coordination between health care settings and community resources. Projects are currently being implemented in primary care, community settings, and emergency rooms to improve care coordination. A model is being explored in Dane and Milwaukee Counties in which community health workers or other professionals, such as health educators or social workers, assess patients and identify appropriate care plans or pathways. In other states, such as Ohio, payers are reimbursing based on outcomes achieved by implementing these pathways.

All health care delivery organizations and networks interviewed mentioned care coordination projects being implemented or the creation of care coordination staff positions. In many cases, care coordinators are referring their patients to community resources of which they are already aware. At least one stakeholder group is working with care coordinators to schedule primary care visits during emergency room encounters. The level of care coordination being provided varies in intensity and is typically based on the needs of the patients.

Many stakeholders referenced patient navigation or population health committees that are working to develop strategies to improve health outcomes by impacting factors outside of the health care system. Adoption of technology to support information sharing in care coordination varies widely, with no strong best practice emerging. Health care organizations identified value in having community resource referral information within the EHR. At least one stakeholder indicated current EHR technology does not meet their needs for tracking care coordination and community and resource referrals.

Screening and Assessment

The use of screening tools to identify patient social needs varies across the current initiatives. Care coordinators are screening and assessing patients as part of their work in several organizations. One organization is screening for seven social needs at all patient visits, including food security, housing, jobs, education, child care, transportation, and mental health, while another is screening for food security alone.

Screening tools, in some cases, are standardized, such as two standard screening questions for food security that have been designed and validated by the United States Department of Agriculture (USDA) and encouraged by the American Academy of Pediatrics, while other screening tools were created within the organization leading the initiative. Those performing the screening vary from care coordinators or providers to patients themselves.

Resource Inventory

An inventory of resources was identified as an important component of linking health care delivery sites to social and community resources. The most cited current resource inventory was United Way’s 2-1-1. The use of 2-1-1 by clinicians and patients varies. Patients are being referred, in some organizations, to 2-1-1, and/or care coordinators are using the inventory to identify resources and refer patients. One organization does provide patient feedback to 2-1-1 to improve services or identify service gaps. Many stakeholders referenced a need for behavioral health and housing resources.

One health system’s experience showed that referrals to resources by a care coordinator can result in up to 60 percent of patients indicating they plan to or have gone to a resource to which they were referred. Approximately 40 percent of patients provide feedback on the
resource itself. (This can depend on the numbers of encounters the patient has had with the care navigator.)

Projects are being proposed to move 2-1-1 from an information resource to a more robust triage tool that would include telephonic patient education and warm hand-offs to other community or clinical resources. Work is already underway to expand the capacity of 2-1-1 through a new technology partner.

One stakeholder group noted that staff experiences are integral to identifying community resources for referrals. Staff identify community resources through previous work experience, including working in the community, and by staying apprised of new resources that become available. Several stakeholders mentioned maintaining knowledge of availability of community resources is important, but time-consuming.

Community Approaches

One stakeholder group interviewed is currently testing a health resource center model. Attributes of a health resource center are being gathered. Examples include a resource center embedded in a church, a school, or a neighborhood center. By connecting the clinic to the community directly, it is anticipated that underserved patients will have increased access to health care. In turn, patients will have a direct link to the community resources available in their neighborhood.

Unmet needs related to food security are being assessed through a multi-stakeholder coalition in southeastern Wisconsin. Multiple health systems are participating by assessing their pediatric patients with a two-question screening tool. Some systems provide electronic data back to the local community organization. Health systems were assessed at the beginning of the initiative to learn how they screened patients for food security needs. The assessment showed very few health care organizations screen. The biggest barriers to screening were uncertainty about how to sensitively ask questions and a lack of resources to share in the event of a positive screen. The coalition saw a big increase in screening when the American Academy of Pediatrics released a statement saying that all pediatricians should be screening their patients with the USDA-approved questions. The Wisconsin chapter supported this by sending out a notice to their members and identifying the coalition as a resource in January 2016.

Technology

Most groups doing any tracking between the clinic and community setting are doing so with paper tools. One health care organization mentioned documenting directly into the electronic health record was possible if the physician chose to do so, but quickly noted that EHRs are not well set up to do this level of tracking. The Wisconsin Statewide Health Information Network (WISHIN) was identified by one stakeholder group as a potential platform to track care coordination across multiple health care providers.

Five software tools were identified during the landscape assessment. General information was gathered from web searches for each vendor. Information that was publicly accessible is highlighted below and segmented by health care provider tools and community and patient tools. Information has not been verified by the technology vendors, but serves to demonstrate that various tools are available in the market today.

MyHealthDirect - http://myhealthdirect.com/

MyHealthDirect is a platform for referral management and online scheduling that is currently being implemented in Milwaukee County with emergency departments and federally-qualified health centers.

Health Care Tools

- Coordinate care by consolidating referral activities into a single platform with real-time scheduling.
- Automate scheduling workflows with business rules and enable providers to define appointment criteria.
• Simplify access for people across the healthcare system with the right provider match for online engagement.
• Visualize trends and drive behavioral change to optimize capacity, outcomes, and practice performance with actionable analytics.

Community and Patient Tools

MyHealthDirect provides a consumer self-scheduling solution that has the ability to access provider appointments. Patients can book appointments any time and from anywhere using a mobile device, desktop computer, or tablet. Searches can be personalized allowing consumers to find care close to home, at a specific time, or for a specific problem.

NowPow - http://www.nowpow.com/

NowPow connects health care to self-care by connecting people to high quality community resources from stress management to smoking cessation, fitness classes to family planning. NowPow strives to empower communities with knowledge and has been implemented in both Chicago and New York City as a community-wide model, with a project being explored in St. Paul, Minnesota.

Health Care Tools

NowPow creates customized community resource e-prescriptions that extend, complement, and complete care plans. Their technology includes seamless EHR integration, including Epic, so providers can automatically generate and deliver customized e-prescriptions at the point of care. While NowPow has an enormous inventory of resources, e-prescriptions are personalized to the patient based on address, conditions, age, gender, and language spoken to create customized service referrals.

Community and Patient Tools

Patient engagement tools are embedded throughout the technology to nudge patients and keep self-care top of mind, increasing the likelihood of action. Any individual that extends care past the provider’s office can use this tool to easily access self-care plans and customize them to meet the needs of their patients. Mobile-enabled applications empower patients and community health workers to create self-care plans and search for services in non-clinical settings.

In the referral tracker tool, service providers update referral information, allowing care professionals to monitor patient activity and report referral success rates.

Epic - https://www.epic.com/Software

Epic’s population health management functionality (Healthy Planet) aims to consolidate information across systems to take the best care of your community.

Health Care Tools

• Bring in data from any vendor source, including claims, revenue, and other EHRs.
• Create a single longitudinal plan of care accessible to patients, providers, care managers, and affiliates.
• Communicate with other EHRs and allow external providers to review and resolve care gaps through a web-based care management portal.
• Engage the patient by providing access to key health data, self-service capabilities, and health and wellness reminders through an EHR-agnostic patient portal.
• Implement and support your program with business intelligence scientists.
• Get a deeper understanding of costs to better manage resources.

Community and Patient Tools

Patients have personal and family health information at their fingertips. They can message their doctors, attend e-visits, complete questionnaires, schedule appointments, and be more involved in managing their health.

Epic software can be extended to independent practices and hospitals through Community Connect. Community providers can be kept in the loop with an integrated portal that lets them stay up-to-date with their patients, submit referrals, order labs and imaging, schedule visits, and more.

Health Leads Reach - http://www.healthleadsreach.org/

Health Leads Reach is a purpose-built, cloud-based solution enabling health systems to manage and track the success of their social needs programs. Health Leads’ tools and/or services are currently being used in various health systems across Wisconsin. Other organizations mentioned exploring their approach and technology in the future.

Health Care Tools

Health Leads Reach is comprised of several integrated components:

• Screen patients – Case management feature guides patients and providers from screening to intake to action plan.
• Find resources – Search thousands of nearby community resources, using intelligent filters to quickly identify the best resources for your patient.
• Analyze performance – With more than 50 standard on-demand reports, providers can make more effective and dynamic treatment decisions for their patients.
• Track progress – Case managers and patients to track progress through a plan of care. Integrated communications allow text or email right in the program.
• Access anywhere – Available through an internet connection, through any web browser, on any device.
• Keep it secure – Software has passed numerous independent IT security audits and is trusted by some of the country’s leading healthcare providers.

Community and Patient Tools

Case managers and patients can track progress through a plan of care within Health Leads Reach. Integrated communications allow texting and email within the program.

Healthify - https://www.healthify.us/

Healthify is a software tool for care managers, community health workers, and social workers to coordinate referrals with community-based organizations. Healthify is a software provider to health plans, hospitals, and provider networks working in low-income communities. The platform can be used by care teams to make quick and accurate referrals for patients who need additional help from social services.

Health Care Tools

Healthify identifies five services to help any organization manage the social determinates of health. Users on the Healthify Community Resource Platform can search, filter, and refer to community organizations, social services and government benefits. Integration services are offered to make the user’s experience seamless.

The Healthify Referral Platform is an advanced tool for care teams to refer patients in need of social services to community organizations. Users can verify completed referrals by communicating directly with participating community services. Referral information is stored on the patient dashboard. Trends in community needs can be used to see the most common needs and service gaps in any community through an analytics dashboard.

An assessment platform can be used by care teams to determine psychosocial risk levels. An algorithm can automatically recommend services to address those needs. Multiple assessments can be hosted in Healthify to fit all patient population’s health needs.

Community and Patient Tools

Community organizations can share their resources with the health care community and individuals through Healthify’s Community Resource Platform. Feedback can be provided to community organizations about the resources from the users. Currently, the database has more than 125,000 resources in 25 states. Patient-centered tools are also available including profiles, referral tracking, and texting.
Gaps

Throughout the 13 interviews with stakeholder groups, multiple gaps were identified and are summarized below.

Collective Future State is Not Clear

Most organizations referenced some work they are doing to extend their influence on patient health beyond traditional health care walls. Information flow between all organizations working to improve the health of a patient (including community and social resources) was recognized as an important future need. Additionally, referrals to community and social resources from the health care community were seen as an opportunity by all interviewed. However, the future state or vision of linking community and social resources to clinical settings was not well defined. Most groups had a different view of collective future state, and no clear best practice or “established finish line” was identified.

Lack of Alignment

Many individual health care delivery sites are implementing programs, but a community-wide approach to linking community and social resources with clinical delivery sites was not discovered. Getting health care systems to align their priorities across competing organizations to partner with community and social resource organizations has been a challenge. In most cases, organizations were working on projects and initiatives focused on improving their own care and optimizing their economic incentives. One organization stated that it is difficult to stay neutral and work as a “community” to solve this problem given all the consolidation and formation of exclusive networks.

No Coordination of Care Coordinators

Additionally, there appeared to be an increasing number of care coordinators working with patients. Clinical delivery sites and payers may both have care coordinators, and confusion results from duplication of care coordination/case management efforts. There are varying models for care coordination. The role of the care manager from within a health system compared to a payer is not clearly understood by all parties involved. Additionally, qualifications and certifications for care managers varies among organizations. Having no formal process to share information between care coordinators working with the same patient was identified as a gap in several interviews.

Unclear and Competing Priorities

All of the health care associations and networks interviewed identified an interest in linking to community resources, but also identified that collaborative, strategic priorities in this area are not yet defined. All three networks have convened teams to discuss ways to advance efforts with population health. One is working on more advanced efforts including community and technology interventions. At this time, community and clinic linkages was not identified as a top strategic priority for the other two health care networks. All organizations interviewed, however, did mention that they saw this as an important future need.

Community organizations also cited having difficulty getting health care organizations to see social resource needs as a priority. Having to “convince” others that this is important can be very challenging since there are currently no formal penalties or incentives. The organizations have to want to do this work or see a long-term value. One organization interviewed stated competing priorities were a barrier, even among clinics already conducting needs assessments.

Limited Resource Inventories

Delivery sites are using 2-1-1, in most cases, as the source of community/social resources, but it is traditionally up to the individual delivery site or care coordinator to know and refer the resources. Determination of specific referrals (from the clinical side) is often dependent on who is going to pay for the service, and this knowledge seems to reside with the individual clinician, care coordinator, or patient navigator. Gaps were shared with regard to the current resource inventory including unreliable or outdated information and inadequate resources to meet patient needs, as in the case of mental health providers and housing.

It was also stated that current inventories can be difficult to navigate and lack workflow to streamline community referrals for care navigators. This has been time-consuming and resource-intensive for these staff trying to identify resources for patients. Additionally, feedback about the resources is only provided approximately 40 percent of the time, and therefore, care navigators aren’t always confident about the resources they are finding. As a result, they tend to refer patients to resources with which they are familiar and have spent time researching. This may limit the number of resources within the inventory that are being offered.
Maintaining and updating a resource inventory is expensive and time-consuming, and several stakeholders cited a lack of consensus on who is accountable for keeping inventories up-to-date. It was also noted that there is a lack of trust and frustration with current inventories on the part of health care providers. Two organizations mentioned working to expand the capacity of a community resource inventory and one discussed providing more bidirectional communication with the inventory.

Reimbursement and Sustainable Models

Health care delivery and payment models are in a state of change. Organizations have multiple competing priorities to get ready for the future, but are concerned about declining reimbursement as we move to value-based payment. Therefore, many organizations are working to optimize their own initiatives and individual economic incentives. Not having a current method to reimburse both health care organizations and community and social resources limits an organization's ability to expand efforts in this area. It was also noted that the upfront return on investment is not clear. Health care organizations are asking if these services are billable or will save costs for the health care system. Expend energy and resources on efforts that yield minimal-to-no return is a challenge. One clinic indicated it is best to have salaried staff perform many of the care management functions, however, this requires upfront and sustainable capital. Although this was explored during SHIP, only one current project referenced having a method of reimbursement for community work.

Information Exchange and Technology

Health information exchange (HIE) is taking shape in Wisconsin, but not all health care organizations have the same level of commitment to making statewide HIE work. There is not consensus on whether current technology and HIE efforts can advance information flow between community and social resources and clinical delivery sites. Expanding current HIE efforts was discussed and could be used, at a minimum, to identify patients, their addresses, their primary care physician, their managed care organization, care managers, and current care plans. On the other hand, current EHR technology and HIE functionality were described as insufficient to effectively track patient activities outside of the health care setting. Lack of interoperability between EHR and tracking tools in the community was identified as a challenge.

For most projects mentioned, any tracking being done is completed via paper. Health care organizations stated that nothing was built into their EHR to refer or order community and social resources. There was no consensus on whether or not current technology will meet future needs in this area.

A further gap exists within information exchange to close the referral loop from clinics to the community resources and back to the clinics. Health care practitioners indicated that they refer patients to community resources and do not know if the patient utilized that service until the patient's next appointment. They also do not have follow-up or contact with the community service. Currently, information flow is dependent on the patient sharing the information with all involved.

Lack of Common Measures

No common way to measure progress in this area was found. Current measures do not account for underlying social determinants across settings. Therefore, it is difficult to know what or who is truly impacted by information flow across community and clinical settings. If both outcomes and incentives are to be impacted by improved health and well-being, we need a way by which to measure progress and success.

Recommendations

Assessing the current environment in Milwaukee County for linkages between community and social resources to clinical delivery sites provided a strong understanding of current activities and where gaps exist. It is clear that this work is in its infancy. Therefore, recommendations, based on the information gathered, outline initial steps here to assist communities, organizations, and the state of Wisconsin in advancing these efforts.
Establish a Collective Vision or Aim

A common vision or aim for successful clinic and community linkages should be established within targeted communities. It is not surprising that the work in this area is fragmented without a shared view of future state. A common vision would provide a targeted direction for stakeholders to work toward, while enabling organizations to tailor their strategies based on their own needs. Development of the vision should be assigned to an independent group that can gather broad input, including a patient perspective, and achieve consensus across various stakeholder groups. To sustainably advance this work, engagement would be needed from public health departments, payers, providers, employers, patients, and community organizations.

Technology Assessment

Further work should be done to complete a comprehensive comparative analysis of the current technology available to support information sharing between the clinical delivery sites, public health, and community resources. This will help health care organizations explore tools that will best meet their needs. Existing tools and solutions in Wisconsin, such as WISHIN, Azara Drvs, and the Community Pathways/HUB project, should be evaluated, as well as new technology. However, consideration should be given to how non-health care organizations (i.e., community and social resources) can utilize the technology and share information with the health care settings involved.

Ongoing Information Collection

A process for continuing to identify activities and needs should be implemented. Staying current with local Wisconsin and national activities and best practices will keep Wisconsin stakeholders knowledgeable about opportunities to improve provider/community linkages. Assessments currently being used to evaluate community needs (i.e., hospital community health assessments) should be coordinated with other community assessments, such as those administered by public health, to create one picture of community needs. Since this work is fairly new, models and projects being implemented in other states should be explored to identify learnings and best practices. Current activities should continue, such as those in Green County and the West Allis and Milwaukee communities, which are focused on improving cardiovascular disease outcomes through the Association of State and Territorial Health Officials (ASTHO) Million Hearts Learning Collaborative. The information gathered from this process should be tailored and disseminated to a
variety of stakeholders to advance these efforts in communities and statewide. In the future, this information could enable stakeholders in communities to identify partners and expand their efforts.

**Payment Models**

The SHIP payment models workgroup identified that while shared savings and global payments both hold promise, well-designed pay-for-performance and care coordination payments would accomplish the objectives of improving health and healthcare outcomes. It was recommended that these approaches be integrated into overarching shared savings and global payment reforms and implemented by private and public payers alike. In the design of these payments, financial support to other resources outside of the healthcare system should be considered. Work is needed to gather information around community payment models that are successful and how financial resources can be shared. Lack of financial support is a barrier both for engagement and sustainability of these efforts. In addition, without clear and consistent payment methods for the community, we will continue to see lack of coordination and duplication of effort.

**Resource Inventory**

Work has begun to advance an existing resource inventory. However, further exploration of ways to better maintain and update inventories is necessary to assure usefulness and gain the trust of health care providers. Identifying and maintaining a single, centralized inventory should be considered. A process for updates and feedback to the inventory should be created, and ways to streamline resources for care managers should be explored. In addition, ways to create simple referrals to resources with information tracking between community and social resources and clinical delivery sites should be advanced.

**Conclusion**

A landscape assessment, which consisted of interviews with stakeholders and online research, identified momentum and a strong understanding that health and well-being matter. We found that expanding the care continuum to include community and social resources is not currently a top priority for most health care organizations. While pilots and projects are underway, no community-wide effort is currently being implemented. Health care organizations are advancing their efforts in health and well-being by using care coordinators, but communication and coordination across resources and organizations are lacking. There is an understanding that health is greatly impacted by factors outside of the clinic walls, but little is being done to address the whole patient to achieve health and wellness objectives. Information flow is, in most cases, happening only if the patient chooses to share the information with all involved. Also, consensus on what technology is needed to improve the information flow does not exist. Expansion of current resource inventories could accelerate clinic and community linkages. Stakeholders noted various views of the problem and potential solutions. Defining the business case for these efforts and sustainable payment models will be necessary. Connections between the clinical setting and community resources exist in pockets throughout Wisconsin and other parts of the country. It is critical to learn from these pilots and spread them across communities in a coordinated effort involving all stakeholder groups to achieve the desired improvement in health outcomes for Wisconsin residents.

**References**