

Data Analytics Subgroup Phase Two Report

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This report was prepared by the Center for Health Care Strategies for the Minnesota Accountable Health Model / State Innovation Model – Minnesota project. The quality of the content is a testament to the substantive information provided by the members of the Data Analytics Subgroup (Phase 2), in addition to guidance from members of the Community Advisory Task Force, the Multi-Payer Alignment Task Force, and staff of the Minnesota Department of Health and the Department of Human Services.

Executive Summary

Minnesota has made a significant commitment to a vision of shared accountability across and among health care organizations and other service providers to improve the health of individuals and communities, increase the quality of health care, and reduce health care costs. This transformation requires a commitment to a shared vision and the willingness to work through complex issues. In that vein, the Data Analytics Subgroup, formed to advise the two Task Forces for the Minnesota Accountable Health Model – SIM project, has completed initial work on the “what, why, and how” of aligning data analytics among organizations throughout Minnesota.

The effort described in this report builds upon work conducted in 2015 to identify data analytic elements to support care models that involve shared accountability; the report of that Phase One report can be found at [The MN DHS website \(www.dhs.state.mn.us/healthreformmn\)](http://www.dhs.state.mn.us/healthreformmn). This report provides insight into what occurred between Phase One and the start of Phase Two in early 2016, and how Phase Two expanded the scope of data analytic elements recommended for alignment to include those that address social or environmental determinants of health.

The Phase Two Data Analytics Subgroup believes that the elements identified below are critical to the work of accountable entities, including the Accountable Communities for Health (ACHs) and Accountable Care Organizations (ACOs), which are bringing physical and behavioral health organizations, as well as social services organizations together to improve the individual and collective health of Minnesotans. These elements include:

- Mental health and substance use (current diagnosis or unmet need);
- Race, ethnicity, and language;
- Access to reliable transportation;
- Social services already being received;
- Housing status or situation; and
- Food insecurity.

The Subgroup unanimously supported the sharing and use of the data elements to improve population health, but there was healthy debate about how to tie the elements to current and future health reform efforts. Most of the Subgroup agreed with the idea that the State of Minnesota should include all six elements in reporting and/or payment structures for all future alternative payment and quality measurement arrangements in the state, and that all involved stakeholders should leverage contracts, legislation, and regulations (as needed) to achieve this inclusion. A few of the Subgroup members prefer a more phased and voluntary approach, involving working with industry stakeholders and subject matter experts to agree on a community standard. The Subgroup as a whole recognizes that it is important for leadership from the State of Minnesota, including but not limited to the Department of Health and Department of Health Services, stay involved to ensure policy and regulation support regardless of whether it is required or voluntary. This report should serve as a starting point for future work to identify the mechanisms for collecting, documenting and taking action on each data analytic element to ensure their future use across the spectrum of physical and behavioral health and social services in Minnesota.

Data Analytics Subgroup Background

Purpose and Charge

To better understand how data are being used by payers and providers to improve the management of populations involved in Integrated Health Partnerships in Minnesota, staff for the State of Minnesota's State Innovation Model / Accountable Health Model project (SIM MN) conducted a survey in the Spring of 2014. The survey asked payers involved in the MN SIM Multi-Payer Alignment Task Force (MPTF) about the types of data (e.g., analyzed information, raw files) shared with providers participating in Total Cost of Care (TCOC) or shared savings arrangements. In May 2014, the MPTF and the Community Advisory Task Force (CATF) participated in a joint meeting where providers shared their perspectives on the data they receive from payers. During the provider presentations, the Task Forces learned of a wide variability in familiarity among providers involved in Integrated Health Partnerships in Minnesota regarding the data available from payers. Some providers commented that they received too much data and were unable to incorporate it meaningfully into their practice, while others were unaware that they received any data from the payers. In subsequent conversations, members of the MPTF and the CATF discussed ways in which SIM MN could help create an environment for the transfer of data between organizations that engages all parties and supports momentum toward shared accountability for health outcomes and addressing the Triple Aim.

Out of these conversations the idea was born to create the Data Analytics Subgroup, an advisory group to the SIM MN Community Advisory Task Force and Multi-Payer Alignment Task Force. The Subgroup's purpose would be to advise the Task Forces through activities that include "develop recommendations and identify top-priority data analytic elements, to motivate and guide greater consistency in data sharing among organizations involved in Accountable Care Organization (ACO) models to support shared accountability for cost and health outcomes." As originally envisioned, the Subgroup's work would be conducted in two phases:

- (1) Phase One, focusing on alignment of data within the current health care environment, specifically to support the Integrated Health Partnerships and other models that involve shared accountability (e.g., ACOs), given current data availability, infrastructure, and analysis skills and staffing; and
- (2) Phase Two, which would broaden the conversation to include alignment of data analytic elements essential for future work, particularly within Accountable Communities for Health. Examples of such data analytic elements might include those that address social or environmental determinants of health such housing status, transportation needs, behavioral health, and education levels.

Reflection on Phase One Work

With assistance from the Center for Health Care Strategies, the Community Advisory and Multi-Payer Alignment Task Forces developed a charter for the Phase One Data Analytics Subgroup (DAS) and nominated members to serve on the Subgroup. Three meetings were held from November 2014 through February 2015, after which a report and recommendations on essential data analytic elements were provided to the Task Forces for review and approval. All Phase One meeting materials and the final report can be found on the SIM MN website at [the MN DHS website: www.dhs.state.mn.us/healthreformmn](http://www.dhs.state.mn.us/healthreformmn).

The Phase One Subgroup report includes five deliverables: 1) Guiding Principles to motivate and guide consistency across the data analytics shared among public and private purchasers, health plans, other payers and providers (including medical and social services); 2) Prioritized Data Components that should be consistently provided by and/or made available to payers, providers and other stakeholders involved in shared accountability arrangements; 3) Data Sources for each data element that is recommended; 4) Approach to compile Best Practices as a resource for organizations engaging in new ACO development; and, 5) An outline for a data analytics User Guide that includes descriptions of how the data analytics were developed (e.g., measurements, methodology), plus data definitions, formats, and sources.

In developing these deliverables, the Subgroup focused on recommendations for data already available for sharing between entities in the Minnesota health care system. As a result, the five “high priority elements” coincide with data often identified via provider claims submitted to health plans or derived from that information, such as contact information, health status, total cost of care, and patterns of care. However, many members of the Phase One Subgroup, particularly those representing behavioral health and community-based organizations, advocated for including, as soon as possible, social determinants of health in the recommendations of the Data Analytics Subgroup. Although the Subgroup was instructed to focus Phase One efforts on elements available to and actionable for current use of accountable care entities, several social determinants of health were highlighted in the Phase One report as key elements for Phase Two, including “culturally specific and culture-specific data, housing, ethnicity, income, employment, language, family support” and “most prevalent domains of need in the key social, environmental or behavioral determinants of health.”

The Phase One Subgroup Report was published in March 2015, and reviewed and approved by the SIM MN Task Forces. However, no specific organization was tasked with implementing the approved recommendations. After discussions at the SIM MN Task Forces highlighted an interest in making progress on Phase One elements, and according to some stakeholders even at the expense of delaying Phase Two work, SIM MN leadership approached the Administrative Uniformity Committee (AUC), which agreed to make recommendations related to the highest-priority Phase One data analytics element, contact information. The AUC chartered a Technical Advisory Group on ACO Data Analytics to recommend a more aligned way for sharing demographic and enrollment files with providers participating in accountable care arrangements. In early 2016, the AUC Executive Committee adopted those recommendations. While the AUC effectively addressed the first item in the list of high priority Phase One data analytic elements, as of the end of August 2016, there has been no additional work done by the AUC, the Task Forces or any other group regarding the remaining high priority data analytic elements identified during Phase One.

Given the challenges associated with implementation of the advice from the Phase One Subgroup regarding high priority data analytics elements, when preparing for chartering Phase Two, the Task Forces included language to require the Subgroup to suggest concrete next steps, plus name specific organizations that appear to be well positioned to take those steps, to advance the work after the Phase Two Subgroup completes its task. The Data Analytics Phase Two Charter is included in this report as Attachment 1.

Membership

As described in the Phase Two Charter, the membership of the Subgroup was intended to include representatives from providers (particularly those involved in ACH arrangements), community service providers, health plans and other payers, plus representatives from groups representing minorities (e.g., ethnic, racial, disability, sexual orientation, gender identity) as well as a mix of individuals from urban and rural settings. To ensure continuity with previous Data Analytic work, some Phase One Subgroup

continued their work with the Subgroup; new members were added to include expertise in social determinants of health. The Phase Two Subgroup members and their affiliations are listed below:

- Rod Christensen, MD, Allina (*Care System/ACO*)
- Janet Coenen, Blue Cross Blue Shield (*Health Plan/Payer*)
- Cynthia Fashaw, NAMI (*Behavioral Health*)
- Nancy Garrett, Ph.D., Hennepin County Medical Center (*Primary Care/Hospital*)
- Scott Gerdes, Zumbro Valley Health Center (*Behavioral Health*)
- Jamie Hess, PrimeWest (*Health Plan/Payer*)
- George Klauser, Lutheran Social Services of MN (*Social Services*)
- Dr. Rahul Koranne, Sub-Group Chair, Minnesota Hospital Association (*Care System/ACO*)
- Raul Noriega, People's Center (*Primary Care*)
- Ross Owen, Hennepin Health (*Care System/ACO*)
- Jennifer Paradeis, Medica Behavioral Health (*Health Plan/Payer*)
- Stephanie Radtke, Dakota County (*Community Services*)
- Kari Thurlow, LeadingAge Minnesota (*Social Services*)
- Cathy VonRueden, Essentia Health (*Care System/ACO*)
- Amy Ward, Amherst H. Wilder Foundation (*Social Services/Behavioral Health/Health Equity*)
- Diane Rydrych, Minnesota Department of Health
- Heather Petermann, Minnesota Department of Human Services

Nearly every member attended all three of the in-person Subgroup meetings and contributed substantive content and comments regarding the detailed work completed between each meeting.

Insights from the Subgroup Discussions

The following section describes a series of important ideas that arose during the Subgroup's in-depth discussions as they shaped the deliverables required under the Phase Two Subgroup Charter. As with many complex issues, the Subgroup found that certain concepts needed to be clarified in the process of addressing the original tasks as outlined in the Charter. They also identified areas that will need further attention, both in the near-term and over the long run, in order for 'alignment in data analytics to support shared accountability and improved Triple Aim outcomes' to become a reality.

Meeting Progression

The Subgroup members listed earlier in this report each made substantive contributions to this work. In addition, Dr. Rahul Koranne led the process by providing guidance on the materials, and leading each meeting to guide the discussion, encourage participation by all members, and ensure that the time was as productive as possible to achieve the goals set forth in the Phase Two Charter. Representatives from the Center for Health Care Strategies facilitated each meeting, developed meeting materials, and incorporated insights from the Subgroup discussions and comments on the 'homework' between each meeting. Throughout the process, staff from the Minnesota Department of Health Services and Department of Health provided direction to ensure that the advice from the Subgroup would provide value to the overall Minnesota Accountable Health Model and meet the specific needs of the Community Advisory Task Force and the Multi-Payer Alignment Task Force.

The Subgroup was extremely productive in a short period of time. They engaged in the work not only during three half-day in-person meetings but also by providing feedback on substantive ‘homework’ between each meeting.

Meeting #1 (January 2016):

The first meeting of the Phase 2 Subgroup included an overview of the MN Accountable Health Model and the accomplishments of the Phase 1 work. The group discussed the Phase 2 Charter and deliverables and identified outstanding questions to take back to the Task Forces, in particular the concepts that Phase Two work is not explicitly about providing real-time data on an individual patient to support direct clinical care, but may impact care at that level, and that the work is not about supporting public reporting, but insights from the work may be useful to State or private sector reporting activities. The discussion then focused on which data topics (e.g. Socio-demographic) and elements (e.g. Race and Ethnicity) should be prioritized, using a framework drawn from the Institute of Medicine’s 2014 Population Health and Public Health report as a starting point. The group began with 50 socio-demographic elements, and then brainstormed whether these 50 elements provided in the IOM report included the most important elements, which elements were missing or should be removed from the list, and which ones should be prioritized as being high priority for Minnesota.

- o **Homework (January 2016):** The brainstormed data topics and elements were put into a framework that reflected a range of considerations, including how each data analytic element could be used, who would be likely to use it, how each data analytic element is currently being used, and potential sources of the specific data analytic element.. The Subgroup was then asked to further refine the prioritization exercise and provide specific feedback on what information was needed related to each element.

Meeting #2 (March 2016):

The Subgroup began with an update from the joint meeting of the Community Advisory Task Force and the Multi-Payer Alignment Task Forces, held on February 17th, during which the questions from the Subgroup were discussed and answered to provide further guidance regarding the meaning of the Phase 2 Charter. The Subgroup discussed the finalized Phase 2 Charter deliverables in addition to a set of four guiding ‘filters’ that would help the Subgroup further refine the prioritized list of data analytic elements: each essential data analytic element should further the Triple Aim, have a feasible data source, be actionable for health care or social providers to use at the community level, and be made available to all providers. The Subgroup then used those items to create a Top 10 and Top 5 list of data analytic elements. After each member shared their input with the Subgroup, they developed a working ‘final list’ and discussed whether any critical information is still missing, and if so, where to gather it before the Subgroup’s final meeting in April.

- o **Homework (March 2016):** In follow up to the second meeting, the Subgroup asked to complete an online survey that asked them ten questions related to the top priority data analytic elements identified at the March meeting, in addition to future support of data analytics. Their input resulted in the development of the following lists: communities within Minnesota that already use one or more of the data analytic elements in their Community Health Needs Assessment (CHNAs); tools and resources to support the collection and use of data elements; data sources that include information needed to generate each of the essential data analytic elements; and, Minnesota organizations active in data collection or improvement of social determinants of health. In addition, the Subgroup was asked to: name the most important social services to focus on for the data analytic element that assesses whether an individual is already receiving support from one or more social service agencies; and identify

any Minnesota organizations, public or private, that are well positioned to administer or support this Data Analytic work into the future.

Meeting #3 (April 2016):

The third meeting of the Subgroup started with a discussion of the input received based on the homework completed since the second meeting. This included insights gathered by CHCS and DHS staff at the 2016 Health Care Homes / State Innovation Model Learning Days Conference from surveys and a ranking exercise conducted at that gathering of hundreds of health and healthcare organizations from across Minnesota. The Subgroup then focused on what was needed to ensure that the work on data analytics for social determinants of health would continue even after the Data Analytics Subgroup and SIM efforts conclude. Specifically, the Subgroup identified the importance of standardizing the data analytic elements, ensuring broad access to the data analytic elements to support population health improvement, recognizing the contributions of groups who had input into the Data Analytics Subgroup process, and innovative CHNAs. The Subgroup also provided additional input on groups that might be able to carry the Data Analytics work forward, as well as what that might look like.

Overview of Subgroup Observations and Advice

The Phase 2 Subgroup agreed on a set of essential data analytic elements that are highest priority to ensure that all providers across Minnesota – in health care and in community social services – have access to information on social determinants of health to improve individual and population health.

Population Health is a Reflection of Individual Health

As a foundation, the Subgroup first established the understanding that population health will not improve without the ability to understand and address the health-related needs of subpopulations (e.g., members of a particular race or ethnicity, people who are vulnerable because of housing or food instability) and, in turn, the specific circumstances of vulnerable individuals in these subpopulations. In other words, gaining access to region-level data analytics about various social determinants of health may be useful from a policy or program planning standpoint; however, to drive actions that improve population health, information about disparities among subgroups is needed, in addition to information about the health-related needs of individuals. This individual and subgroup level of information should be available to health care and community social service providers to inform their work with communities and community members. This clarification of the original Phase 2 Charter for the Subgroup was brought to the Task Forces, who agreed with the observation that the essential data analytic elements to address social determinants of health may also impact health care and social services provided at the individual level.

While access to this essential information is no guarantee that health care and social service providers will be able to meet all of the health-related needs of individuals (or, on a broader scale, needs across the population), without this essential information it is extremely difficult if not impossible for providers and individuals to substantially improve population health. How can one address an unidentified need? How can one ensure that the health care or social services currently being provided are as appropriate and effective as possible, based on the individual's unique characteristics or circumstances? Having information about these six essential data analytic elements will improve the ability to provide and coordinate services in ways that actually result in better health – at the individual and population levels. Minnesota cannot sufficiently improve population health without also addressing individual health.

Essential Data Analytic Elements

The Subgroup identified six data analytic elements related to social determinants of health that are essential for Minnesota. These data analytic elements will inform higher level policy and program planning, while also supporting all providers in their informed decision-making regarding care and services for individuals in every community. The essential data analytic elements are:

- Mental health and substance use (current diagnosis or unmet need)
- Race, ethnicity, and language
- Access to reliable transportation
- Social services already being received
- Housing status or situation
- Food insecurity

For each of these essential elements, the Subgroup considered the following issues: how it can be used; existing data sources; where the analytic element is already being used in any Community Health Needs Assessments; associated tools or resources to support the collection and use of the data analytic element; and other considerations. The essential data analytic elements are not necessarily listed in priority order.

Issues Particular to Mental Health and Substance Use

The Subgroup debated whether mental health and substance use should be on the list of essential data analytic elements. Foremost was the issue of whether this category is actually a social determinant at all, as it is certainly part of the “health” and health care-related needs to which social determinants contribute. Nonetheless, even as a health or health care issue, the existence of mental health needs and/or substance use for individuals and within a community can contribute to and exacerbate other health problems. Given the importance of addressing mental health and substance use issues, and the fact that behavioral health was not included as a high priority data analytic element in the Phase One work, the Phase Two Subgroup agreed to put it on the list. This topic is a pressing need in communities across the entire state – from a health care standpoint and because of the ripple effect that unmet behavioral health needs have on a wide range of other individual and community health-related issues such as employment, stable housing, violence, healthy lifestyle choices, and so on. In addition, because of the enormity of the challenge of sharing data regarding mental health and substance use status, this one topic might overshadow the other essential data analytic elements. Although it is listed first in this report, the Subgroup does not want this topic to overshadow the importance of implementation attention going to the other five essential data analytic elements too. All of the essential data analytic elements in this report are important and should be addressed.

Standardized Approach for Each Data Analytic Element

When considering each of the topics associated with the six essential elements, the Subgroup determined that standardization is required. The purpose of standardization is to reduce: duplication of effort, burden on individuals (consumers, patients and providers), and conflicting information. It can also increase the likelihood that the actions taken will reflect leading edge evidence of best practices. For next steps in this work, the six essential elements need further assessment to define the best approach that should be consistently taken in three basic areas:

- *Approach to collecting the data for the specific analytic element.* This includes identifying the best place, organization and/or service provider type to collect the information. It also includes defining the particular data that should be collected and describing how that information could be gathered. In some cases, it may be recognizing the way in which all or some of the needed data are already being collected (e.g., to support programmatic goals for social services that are provided

to subpopulations). If the data are not already consistently collected in any standard way and must come directly from individuals (e.g., race, ethnicity, primary language), should that data be gathered using a short survey instrument, or during a discussion using a standard question or two (e.g., for housing situation or food insecurity), or through some other means? For each of the essential data analytic elements, there are existing definitions, surveys, intake questions and other resources that can inform decisions about the best approach to use regarding the approach (who, what, when, where and how) to gathering the needed data.

- *Approach to documenting the data collected for the specific analytic element.* This includes capturing the collected data in a standard format so that it can be aggregated for subpopulation and population-level analyses, in addition to shared across health care and community service providers. What are the data fields that need to be documented and in what form(s), such as paper, EHR, and/or online system(s)? There are existing systems that can be used to support and inform decisions about the best approaches to standardizing the documentation processes. This will also involve ensuring that the standard approach includes appropriate privacy and security assurances.
- *Approach to taking action based on the insight offered by the specific analytic element.* This includes identifying and sharing information among providers regarding available support services, information resources and ideas for taking informed action to help address the identified health need. For each of the essential data analytic elements, there are existing resources and evidence-based interventions; however, the Subgroup recognizes that problems due to gaps in the ‘system infrastructure’ (e.g., access to reliable transportation) will be challenging to address. Even though it may not solve the problem, ensuring access to information about resources that are currently available would be an important step forward.

Second Tier Data Analytic Elements

The Subgroup also identified a list of important yet ‘second tier’ data analytic elements for which the group had questions regarding issues such as the feasibility of data collection. Four important ‘second tier’ data analytic elements identified by the Subgroup for further consideration sometime in the future are: social isolation; country of origin or citizenship (to ensure broad inclusion of all members of the community, regardless of documentation status); sexual orientation and gender identity; and Adverse Childhood Experiences (ACEs) for children and/or indications of abuse and neglect for people of any age

Importance of Defining then Taking the Next Steps

From the outset, the Subgroup approached their charge with a commitment to ensuring that their advice drives future planning and actions that result in the actual implementation of the sharing and use of data analytic elements that address the social determinants of health. The Subgroup’s advice to the Task Forces about this point could not be more direct.

This report identifies many of the issues to consider regarding the overall goals and implementation of the use of the essential data analytic elements; however, it does not define the specific next steps for each data analytic element because the path forward for each essential element may differ depending on the goal. For example:

- To avoid asking individuals to repeatedly provide needed information about their particular circumstances, there may need to be one or more central points identified where the core factual information about individuals, as it relates to the essential data analytic elements, should be or is already being gathered. That integrates with the idea of a data repository or exchange approach through which multiple partners (i.e., providers of health care and community based services)

could then securely access the needed data analytic elements. Key issues to meet that goal include determining where that ‘front door’ or point of data access might be, addressing data security and privacy, and identifying the most effective yet parsimonious way to collect the core information.

- To ensure accountability for making progress on these essential areas of social determinants of health, identifying appropriate measurement approaches may be an important next step. Either developing or identifying one or more metrics for each of these data analytic elements and then sharing the results with providers and the public.
- To improve the relevance and effectiveness of health care services provided to populations affected by the essential social determinants listed in this report, it will be important to address what should be done within an intake or screening process in hospitals and health care clinics, community service providers or other organizations. Key issues include ensuring that health care and community service providers are aware of available resources (housing, food, mental health, substance use, etc.) to which they can refer a patient or client who has an identified need.

Throughout the consideration of various goals, the Subgroup recognized the need for role clarity, as certain organizations are better positioned to collect and share information that is necessary for one or more of the essential data analytic elements. Others may not have the skills or resources to address the social determinant-related need once it has been identified. It is not realistic to expect a care coordinator or other provider in a primary care clinic, for example, to understand all of the nuances of housing instability, so it may be best to encourage primary care clinics to consistently use one screening question to help them identify whether a housing need may exist for an individual, then to connect that individual to an organization that has housing information and resources.

To ensure consistent collection and use of the essential data analytic elements within the health care sector and for other community service providers and affected organizations, the Subgroup noted the importance of aligned incentives. A number of the Subgroup members strongly advocate for requiring the collection and use of the essential data analytic element information as part of any alternative payment arrangement (e.g., leveraging contracts, regulation and legislation, as needed). The logic is that tying this work into the evolution of value-based payment arrangements would increase the likelihood that eventually the collection, sharing and use of these six essential data analytic elements would be standard operating practice in providing health care and other health-related services to community members across the state.

Considerations and Approach to Each Deliverable

The expected deliverables of the Data Analytics Subgroup are described in the Subgroup charter, but the Task Forces provided leeway in the deliverable specifications to allow the Subgroup to exert ownership over the products in process, form and content. As a result, conversations among Subgroup members and the facilitation team served to further refine what could and would be delivered through this report. The process for arriving at the deliverables as contained in this report are described below.

Essential Data Analytic Elements related to Social Determinants of Health

Prior to the first meeting of the Data Analytics Subgroup, CHCS conducted a review of select resources that reported on social determinants of health and their impact on health care utilization and cost. From this preliminary research, the Institute of Medicine’s 2014 report on “Capturing Social and Behavioral

Domains and Measures in Electronic Health Records” (available at [the National Academy Press website: http://nap.edu/18951](http://nap.edu/18951)) was identified as a representative list of data analytic elements which could form the basis for identification of a Minnesota-specific approach to collecting this data.

Using the list of elements identified, in January 2016 the Subgroup deliberated on which elements should be prioritized for Minnesota, based on the considerations that each element must: further the Triple Aim, have a feasible data source, be actionable for health care or social providers to use at the community level, and be made available to all providers. These filters were used to add and subtract from the IOM list of 19 candidate elements, eventually arriving at a list of 12 elements for further review. At the second meeting of the Subgroup in March 2016, Subgroup members further narrowed the list to the six essential elements listed earlier in this document. Homework following the meeting allowed members to provide further context and details around each element. Final input and approval was gathered at the final meeting in April.

‘Use Cases’ That Demonstrate the Value Proposition for Data Analytic Elements

To illustrate the value and perceived impact that can be achieved by having shared access to the six essential data analytic elements, the Subgroup identified the several Use Cases, or story-based value propositions, drawn from the eHealth Roadmap work as there is clear alignment across these projects. The Use Cases provide a helpful way to see how the essential data analytic elements actually play out in the lives of ‘real’ individuals, moving the discussion from a conceptual thought exercise into a practical consideration of how addressing these issues will make a positive difference in the lives of Minnesotans.

Each Use Case illustrates a complex but realistic scenario that involves overlapping roles and responsibilities across sectors and organizations, and touches on a variety of social determinants of health. The situations described in the Use Cases illustrate ways in which real people are at risk of ‘falling through the cracks,’ even if they receive one or more health care and community services. Without sufficiently addressing the social determinants of health, those services are ineffective in achieving a good outcome. That adversely affects the health of the individual and the population, while increasing costs. Five Use Cases that illustrate the importance and likely impact of the essential data analytic elements addressed in this report are listed in Attachment 2.

Possible Organizations to Help with Administration and Support

To support the continued work on this topic, the Subgroup identified a starter list of several organizations that appear to be well positioned to guide or participate in future planning and/or administration of the collection and use of the six essential data analytic elements described in this report. The potential role or ‘ask’ of each of these groups will differ depending on the identified next steps as discussed above. The organizations listed below could add needed value in a number of ways in the process: strong advocates and supporters, funders, data collectors, conveners of others to achieve consensus about specific coordinated actions needed, organizations that develop or identify the best practice standards, and so on. Subgroup members had a wide range of reasons why they named particular organizations.

Listed in alphabetical order, these groups include but are not limited to:

1. African American Health and Wellness Group
2. Altair ACO
3. Amherst H. Wilder Foundation
4. American Public Health Services Association (APHSA)
5. BlueCross BlueShield

Information: [SIM MN Website](http://www.mn.gov/sim), www.mn.gov/sim

Contact: [SIM MN Email](mailto:sim@state.mn.us), sim@state.mn.us

6. HealthPartners
7. Mayo
8. Medica Behavioral Health
9. Minnesota Community Measurement
10. Minnesota Hospital Association
11. Hennepin Health
12. State of Minnesota (DOH and DHS)
13. Southern Prairie
14. Voices for Racial Justice

In recommending a process for moving forward on these essential data analytic elements, the SIM MN Task Forces could recommend one or more of these organizations to work together to achieve buy-in from the health care and social services community to move forward with further clarifying next steps (see examples on page 12) and to achieve agreement on where aligned activity is needed. For example, next steps could involve any number of items, including but not limited to:

- Developing standards for collecting needed information or using the data analytic elements that would be used within clinics or other service organizations;
- Assessing the types of information that is currently being collected by various types of organizations and identifying the most appropriate and accurate source of factual data;
- Identifying or developing the resources to build the essential data analytic elements into Community Health Needs Assessments across the state, then encouraging more effective community partnerships around the use of that information;
- Building relationships across the sectors to better understand the relevant data is already gathered and/or used by each partner;
- Expanding health information exchange (HIE) to include the essential data analytic elements for social determinants of health, so that the most appropriate organization(s) will collect the needed information to which multiple providers (health care, social and community service) would have access as needed; and,
- Developing or identifying ways that the essential data analytic elements could be expressed as metrics to inform progress across and within communities.

The Subgroup specifically noted that while the traditional health care oriented organizations on the list above are often selected for leadership on data collection and use, they currently lack sufficient representation from social service and community agencies needed to effectively carry forward the work on data analytic elements addressing social determinants of health. In addition, any coordination involving data sources and sharing of information needed for the essential data analytic elements will require funding, and will likely necessitate consultation with DHS and MDH on legislative or regulatory efforts to advance these alignment efforts.

Innovative Initiatives That Use the Identified Data Analytic Elements

In accordance with the Charter, the Subgroup identified several population health evaluation projects, including formal Community Health Needs Assessments, that currently include one or more of the

essential data analytic elements related to social determinants. The existence of these essential data analytic elements in one or more evaluation and reporting efforts is proof that the information is already being collected in some manner, and one or more communities find the information valuable. Starting with these current reports may be a cost-effective way to begin the discussion about how best to take a standard approach to collecting, documenting and taking action based on the information, as described earlier in this report. For the list of the identified CHNAs and other reports that include each data analytic element, see Attachment 3: Details of Essential Data Analytic Elements.

In addition, the Subgroup noted the intersection of this report and the new federal Accountable Health Communities (AHC) model program. The AHC model aims to identify and address health-related social needs in at least these areas: housing instability and quality; food insecurity; transportation needs; utility needs; and interpersonal violence. The first three of these align with the essential data analytic elements, and the last two may also be addressed within the data analytic element defined by the Subgroup as “social services already being received.” Because of this clear connection, any implementation associated with the essential data analytic elements in this report should be coordinated with efforts of any organization in Minnesota that is awarded an AHCM grant. The grant funds are to be used to form consortiums responsible for creating needed bridges to implement the AHC model, rather than to provide direct health care or social services. Applications for AHCM grants were due to the Centers for Medicare and Medicaid Services (CMS) in May 2016 and the grants are expected to be awarded in the Fall.

Conclusion and Next Steps

The Phase Two Data Analytics Subgroup believes that the elements identified in this report are critical to the work of entities such as Accountable Care Organizations, Accountable Communities for Health (ACHs), and Accountable Health Communities that will be funded by CMS. Each are bringing together health care and social service organizations to improve the individual and collective health of Minnesotans.

Recognizing the importance of these elements to improving population health, and to tie them to current and future reform efforts, the Subgroup recommends the goal of including all six elements in reporting and/or payment structures for future alternative payment arrangements in Minnesota, with stakeholders leveraging contracts, legislation, and regulations (as needed) to achieve this inclusion. This report serves as a starting point for identifying implementation priorities and related mechanisms for collecting, documenting and taking action on each data analytic element to ensure their future use across the full spectrum of health care and social services in Minnesota.

Attachments

Attachment 1: Data Analytics Subgroup Charter: Phase Two Detail

Purpose of the Data Analytics Subgroup:

In two phases, develop recommendations, and identify top-priority data analytic elements, to motivate and guide greater consistency in data sharing among organizations involved in Accountable Care Organization (ACO) and Accountable Communities for Health (ACH) models to support shared accountability for cost and health outcomes.

What the effort to promote consistency in approaches to Data Analytics is not:

- Not about providing real-time data about an individual patient to support the direct clinical care of that individual patient, although the work may impact care at that level.
- Not about establishing data analytics or quality measures for public reporting, but insights may be useful to State or private sector reporting activities.

The two phases of the Data Analytics Subgroup work:

- **Phase One:** Subgroup will address what can be done now, given current data availability, infrastructure, and analysis skills and staffing. The current context for providers and their patients in an ACO arrangement will be the driving consideration.
- **Phase Two:** Subgroup will focus on identifying high priority data analytic elements associated with top priority social determinants of health, and developing guiding principles for the identification, possible related data collection, and consistent sharing of these data analytic elements within shared accountability and/or Total Cost of Care (TCOC) arrangements.

Phase Two Detail:

Charge to the Data Analytics Subgroup:

- Identify data analytic elements that would be essential for effectively sharing accountability for improving individual and population health status, but are not feasible in the current environment. Phase Two is to include consideration of data analytic elements that may be required to pave a path to the future in health care arrangements (e.g., involving fully operational Accountable Communities for Health [ACHs] and a broader set of partners and services within ACO models more generally). These data analytic elements likely include but are not limited to demographic elements such as race, ethnicity, language, disability and LGBT status, in addition to data addressing social determinants of health such as housing, employment and education.

Process for the Data Analytics Work in Phase Two:

- Phase Two will address a limited number of priority areas, which will vary from Phase One areas.
- Phase Two will build on the data analytic categories associated with social determinants of health that were identified in Phase One, such as: culturally specific and culture-specific data, housing, ethnicity, income, employment, language, family support, and identification of the areas of highest need in these key social determinants of health

Information: [SIM MN Website](http://www.mn.gov/sim), www.mn.gov/sim

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- To the extent possible, Phase Two leverage and/or build upon current or prior community engagement efforts by partners/participating organizations to help determine which specific data analytic elements are most important for Minnesota. This may include key informant interviews or surveys to gather guiding information directly from community members, and could also provide an opportunity to build support in the community for the collection and sharing of these types of data.
- Phase Two activities will be informed by evidence based research conducted by the Department of Human Services, the Minnesota Department of Health and other organizations in Minnesota and across the nation that have made efforts to catalogue and understand social determinants of health. Activities will start from the foundation of recent literature reviews or meta-analyses of the evidence base for the impact of social determinants and other sociodemographic factors on health outcomes.
- Utilizing knowledge gathered through the above mentioned activities, a set of high priority data analytic elements will be identified.

Composition and Timeline for Phase Two Data Analytics Subgroup Meetings:

- In Phase Two, the Subgroup will be intentionally diverse and include representatives from providers (particularly those involved in ACH arrangements), community service providers, health plans and other payers, plus representatives from groups representing minorities (e.g., ethnic, racial, disability, LGBT) as well as a mix of individuals from urban and rural settings. Membership will be drawn from the Phase One Subgroup to ensure continuity with previous Data Analytic work, and augmented with new members who have expertise in social determinants of health. Support for the Subgroup, in the form of meeting organization and facilitation, will come from State SIM staff at both DHS and MDH, with the contracted support of CHCS.
- Phase Two work will begin in early 2016, following discussion at the September and November meetings of the Community Advisory and Multi-Payer Alignment Task Forces. Phase Two work will be completed by the end of Summer 2016, to allow for both Task Forces to engage in any needed discussion, prior to the end of SIM grant funding, regarding potential implementation issues or considerations.

Important Considerations for the Phase 2 Work:

- Learning from current activities and research related to the impact of social determinants on population health improvement, and integrating this into the Subgroup work to avoid reinventing the wheel
- Identifying structures (if they exist) that support improvement in health care and community services quality and cost, and in the process involve the collection of data which may be helpful to assessing social determinants of health
- Finding examples of innovative Community Health Needs Assessments that are collecting or using data that address one or more social determinants of health
- Expanding the definition of “provider” to include social service workers, housing specialists, etc. to capture the services of those who have a significant impact on individual and population health

- Identify data and other assets that draw from Minnesota’s existing health, social service and public health resources
- Ensuring that the Data Analytics work respects the impact on people (consumer, patient, client), e.g. do not set up a process that asks a person the same questions many times in the quest for data

Attachment 2: Use Cases for the Essential Data Analytic Elements

Use Case #1 - Janet (Mental Health and Substance Use)

Janet is a 45-year-old female with a long history of mental health and substance use, starting at the age of 15. She experienced sexual and physical abuse from her mother beginning when she was 2 years old, which continued for a number of years. Throughout school she was bullied and never felt like she fit in; she had few friends growing up. She discovered the use of mind-altering substances in her early teens and reports that using them was the first time she felt good in her whole life. This led to her first Substance Use Disorder (SUD) treatment at the age of 15. After completing that treatment, she left home and was homeless for a number of years. Throughout these years she had multiple hospitalizations for suicide ideation, several crisis residential placements for self-harm behavior, and at one point was using over 20 different medications with a list of 8 different diagnoses. Janet was unable to care for herself, was on a few different mental health commitments in her 20s and 30s, and was undergoing a number of additional SUD treatments. *Despite the treatment, she continued to feel worse; the interventions were focused on her symptoms and not the root cause of many of the struggles. The use of substances was the one thing that continued to make her feel good.*

Around the age of 40, Janet was finally connected with a therapist with whom she was able to build rapport, and together they began to work through the deep-rooted trauma from her childhood. She worked to forgive her mother. The therapist got her connected with a care coordinator at a harm reduction SUD facility model who was able to work on getting her into long term housing, found an Adult Rehabilitative Mental Health Services (ARMHS) worker, connected with a psychiatrist who specialized in addictionology and was able to get her down to two medications initially and eventually none. This approach also worked to have all her providers on the same team versus all over the Twin Cities with little to no coordination. Her list of diagnoses over time was reduced to just one, after the work with her therapist and new psychiatrist, and she has continued to learn how to manage her tough emotions with healthy behaviors. Janet last reported to her care coordinator in July that she had gone three years without an inpatient or crisis residential admission; and that she continues to maintain housing independently; and she has a job. She has also been able to stay off all medications and is managing her symptoms through homeopathic remedies after determining that she had allergies to many of her previous medications.

Use Case #2 - Anderson Family (Social Services Already Being Received)

Mr. Anderson is admitted to a local hospital with a medical history and symptoms of suspected Tuberculosis (TB). Tests are performed that confirm this diagnosis, and forms are faxed to the local public health (LPH) agency designated PHN. The PHN asks the hospital ICP to send all of Mr. Anderson's forms and test records via fax. Mr. Anderson is educated on TB treatment, and told that he will undergo six-twelve months of direct observational therapy (DOT). In the meantime, the PHN has learned that there are three family members at home - a wife, young son, and a daughter at college who comes home for the weekends. Arrangements are made to have them all tested for and educated about TB. The processes for all of this are slow and inefficient, since contact between care providers and social service agencies are nearly all happening using paper, fax machines, and phone calls. There is no electronic system set up to automatically alert all involved parties of relevant updates and keep them on the same page. A good example is the following:

The family includes a college age child, Audrey, who stays at her Wisconsin college during the week, but commutes home on the weekends. The PHN notifies MDH and completes an 'Inter-jurisdictional Transfer'

form with Audrey's contact information. This form is faxed to MDH, who then faxes it to the Wisconsin Department of Health, so that they can contact Audrey and make arrangements for screening. The Wisconsin PHN visited Audrey in her dorm and conducted two TST screenings nine weeks apart. Both the first and second test results were negative.

After six weeks and multiple phone calls, the PHN received confirmation from the lab that Mr. Anderson's form of TB was active. The PHN made a copy of the lab report and provided it to Mr. Anderson. The PHN notifies the clinic and hospital of the need for post exposure testing. Following three negative sputum tests, and multiple phone calls, the PHN received verbal confirmation from the lab that Mr. Anderson is no longer deemed infectious. The PHN administers another TST to Mrs. Anderson and Marcus. Two days later, both TSTs are read as negative and Marcus's window-period prophylaxis medication is discontinued. The PHN receives a report from the WI Department of Health to indicate that Audrey's second TST is negative, as well. No further screening is necessary. Home isolation and home visits are discontinued.

Use Case #3 - David (Social Services Already Being Received / Mental Health and Substance Use)

David is a 50-year-old veteran who receives routine medical care from the Veterans Health Administration (VA). He is also under care with a non-VA psychiatrist for post-traumatic stress disorder (PTSD) and issues with social integration. David is compliant with the antidepressant medication prescribed by this psychiatrist. He also attends psychotherapy sessions every other week. In the past, David was diagnosed with alcohol dependence and abuse of opioids. He attended 12-step programs and reported he is now sober. *David believes that release of information about any psychiatric treatment or prior substance use would result in loss of employment. He specifically declined to sign consent forms to release information to other providers. He paid for psychiatric treatment out-of-pocket. Providers at the VA are unaware of his psychiatric treatment and substance abuse history.*

David visited the VA clinic due to chronic pain in his right shoulder blade that radiated down his right arm. His primary care provider (PCP) suspected a herniation of a cervical disc and David was referred to an orthopedist for diagnosis and treatment. The orthopedist saw David and x-rays confirmed the cervical disc herniation. *The orthopedist prescribed high-dose steroids, an opioid for temporary relief of chronic pain and an exercise program. The orthopedist sent an electronic consultation summary report to David's PCP. Neither the PCP nor the orthopedist knew of David's prior drug and alcohol history. David did not inform the psychiatrist of the opioid prescription, nor did he make his physicians aware that he had relapsed and was drinking again.*

David subsequently presented at the local hospital emergency department (ED) complaining of acute abdominal pain, nausea and fever. *The ED physician is unable to access his health information from the VA or the psychiatrist. Although the initial diagnosis was acute appendicitis, lab tests showed pancreatitis.* Lab tests also showed presence of alcohol and opioids. David was admitted for treatment of pancreatitis and was detoxed from alcohol as part of the acute care. During the course of hospital treatment, David revealed the name of his psychiatrist and that he had a prescription for an antidepressant. Although his opioid prescription was suspended during inpatient treatment, *David did not acknowledge his past opioid dependence.*

In planning for discharge, the hospital team recommended that David receive continuing care in an outpatient program for alcohol dependence. David signed a granular release for his hospital medical records and discharge plan to be shared with a treatment provider before his appointment, and an appointment with the treatment provider was confirmed. Upon discharge, a summary of care (discharge) document including medication list (prescribed before and during the hospital stay),

ordered outpatient services, and suggested providers was given to David to share with his other providers.

Use Case #4 - Maria (Race, Ethnicity, Language / Housing Status / Reliable Transportation)

Maria is an 87-year-old Hispanic widow who lives alone. English is her second language. Her daughter, Anna, lives nearby and visits her every few days to do shopping and housework for her. Maria has developed early-stage dementia, and has chronic rheumatoid arthritis. She no longer drives. Maria receives meals on wheels once a day, but Anna increasingly has assumed the responsibility for bringing meals to her mother. Anna is Maria's health care agent but the health care directive is outdated and inaccessible by all health and care providers. Maria was found by neighbors twice late at night walking outside her house in January dressed only in a bathrobe. They brought her inside and called Anna. Maria's Primary Care Provider (PCP) recommends contacting the Senior LinkAge Line to explore options.

Anna discusses this latest development with Maria, and Maria agrees that Anna should contact The Area Agency on Aging (AAA), via the Senior LinkAge Line, for a long-term care consultation of her health care options. But before the meeting with the AAA can occur, Maria falls on the icy sidewalk and breaks her hip. *Maria is hospitalized and receives a hip replacement. After several days, and with assistance of the hospital discharge planner Maria is transferred to the skilled nursing facility (SNF) chosen by Anna. Maria had a 12-day stay covered by Medicare, during which she received physical rehabilitation.*

Prior to Maria's departure from the hospital, the AAA staff join Maria and Anna, to discuss assisted living options. Maria decides to move into an assisted living location that offers rehabilitative therapies as well as services for people with dementia. Following discharge from the SNF, the home care representative meets with SNF to review the SNF discharge summary and create a care plan for use while at assisted living. Anna takes time off work to coordinate Maria's change in address and services. Maria moves into assisted living, and continues her physical therapy. She utilizes home care services to support her activities of daily living to maintain the recovery she has accomplished to date.

Use Case #5 - Mike (Mental Health and Substance Use / Housing Status / Food Insecurity)

Mike is 57 years old and has been receiving long-term disability for emotional issues and has significant physical issues that he deals with daily. When living with his father, Mike was able to take care of his own diabetes, and control his mental health issues with medication. *When his father passed away, the house had to be sold and Mike had nowhere to go. Without a support system, Mike had a hard time controlling his diabetes and depression. For three months, Mike was in an abusive living arrangement where he was bullied and forced to sign over his disability check. He left the place and contacted a local social service agency. The social service agency contacted adult protection and the police. The case review found him not to meet the vulnerable adult criteria and therefore did not require an assigned guardian.*

The social service agency connected Mike with a local food shelf. The food shelf provided Mike enough food for the month; however, much of that food was not diabetes friendly. Due to frequent lightheadedness, Mike does not feel safe while working. The social service agency assisted in enrolling Mike in an employment program and found part-time work. But although he found temporary living arrangements, Mike's financial situation (barely above poverty level) disqualifies him from many programs.

Mike was hospitalized due to out of control diabetes. The hospital enrolls Mike in MinnesotaCare. He was given medications and discharged. He was often dizzy and fell, but assumed that was due to the new

medications. A couple weeks later, he fell in the street due to a medical event. During the second hospital stay, the hospital social worker connected with Mike's case worker at the social service agency. He was treated and released to his apartment with little follow up. He was placed on the waiting list for case management and the Community Alternatives for Disabled Individuals (CADI) waiver, which would qualify him for additional CADI services. The social service agency helped Mike move to a less isolated apartment and regularly accompanied him to the food shelf but he continued to battle depression, diabetes and medical issues related to his fall. Despite his ongoing involvement with the social service agency, Mike had five visits to the emergency room in the last three years, two of which resulted in hospitalizations.

Attachment 3: Details of Essential Data Analytic Elements

ELEMENT:	Mental Health and Substance Use (Current Diagnosis or Unmet Need)
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● Crucial to understand issues of compliance and non-compliance ● Gives providers important information about issues affecting the patient’s health ● Significant impact on total cost of care
Data Sources:	<ul style="list-style-type: none"> ● BRFSS ● SAMHSA ● BRFSS ● Counties (data limited to service recipients covered by counties) ● Minnesota Department of Human Services ● Medicare ● Managed Care Organizations (encounter data) ● Commercial Insurance data ● Pharmacy Benefit Managers (claims data) ● Indian Health Service ● Veterans Administration ● Healthcare providers ● MHIS, IHP, BHH, SSIS ● MN Community Measurement ● EMRs
Used in a CHNA now?	<ul style="list-style-type: none"> ● Allina Health ● Rochester - Olmsted County ● Many of the FQHC served communities ● Essentia communities ● Dakota ● Olmsted County 2013 Community Needs Assessment
Tools or resources:	<ul style="list-style-type: none"> ● EMR systems ● Crisis line ● Standardized intakes in hospitals ● BH assessment tools such as PHQ9 and Screening Brief Intervention Referral for Treatment (SBIRT) ● Local social service agencies ● Counties ● Minnesota Hospital Association ● MN Department of Human Services ● Community Mental Health Centers/CCBHCs ● Federally Qualified Health Centers ● primary and specialty physician services ● private behavioral health clinicians ● United Way ● Area Agencies on Aging ● MN Community Measurement ● ACOs ● MHIS ● IHP ● BHH ● SSIS

ELEMENT:	Race, Ethnicity, and Language
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● Helps identify need for culturally appropriate services ● Helps identify workforce needs ● Elimination of disparities
Data Sources:	<ul style="list-style-type: none"> ● City and county census ● Intake information for social services ● DHS ● Minnesota Community Measurement ● US Census/American Community Survey; SHAPE; BRFSS survey results ● Health care providers; EMRs; MNMCM data
Used in a CHNA now?	<ul style="list-style-type: none"> ● Social Services ● Allina Health ● Rochester - Olmsted County ● NE MN Bridges to Health Survey ● Dakota ● Olmsted County 2013 Community Needs Assessment
Tools or resources:	<ul style="list-style-type: none"> ● City census ● EMR system ● Standardized intakes in hospitals ● SHAPE (Hennepin County) ● BRFSS ● Census and intercensal data such as American Community Survey ● Minnesota Compass ● Department of Health ● MHA

ELEMENT:	Access to Reliable Transportation
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● Increases compliance rates that are impacted by transportation ● Often linked to housing status
Data Sources:	<ul style="list-style-type: none"> ● MVTA ● US Census/American Community Survey; SHAPE; BRFSS survey results
Used in a CHNA now?	<ul style="list-style-type: none"> ● Social Services ● Allina Health ● HCMC ● Dakota
Tools or resources:	<ul style="list-style-type: none"> ● Census ● Standardized intakes in hospitals ● Met Council in metro only ● American Community Survey; ● Administration on Aging; ● County Level Data; ● SHAPE (Hennepin County) ● Minnesota Compass ● Long-term care facilities for dual-eligible populations ● HCMC's way

ELEMENT:	Social Services Already Being Received
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● It's likely that the person has already been assessed by county or state social workers; this could be valuable information to providers ● Can help with coordination between members of the care team and identification of gaps in care ● Avoidance of duplication of services, communication to patient, etc.
Data Sources:	<ul style="list-style-type: none"> ● City, county, state records ● Legal Services (Legal Aid) ● BRFSS ● Tribal Nations ● Counties (data limited to service recipients covered by counties) ● Minnesota Department of Human Services ● Administration on Children and Families (Federal) ● Office of Refugee Resettlement (ORR- Federal) ● Managed Care Organizations (encounter data for limited social services) ● Commercial Insurance data on social benefits ● Indian Health Service (limited social service data) ● Veterans Administration
Used in a CHNA now?	<ul style="list-style-type: none"> ● Social Services ● Allina Health ● Rochester - Olmsted County ● HCMC
Tools or resources:	<ul style="list-style-type: none"> ● County records ● Local social service agencies ● MN Department of Human Services ● United Way ● Area Agencies on Aging ● Long-term care facilities for dual-eligible populations ● SSIS County system ● HCMC's way

ELEMENT:	Housing Status or Situation
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● Housing status can be an indicator of other social determinants (e.g. mental health needs) ● Maslow’s hierarchy of needs; the effectiveness of any healthcare intervention is compromised if there is housing insecurity ● Creates a need for Individualized and creative treatment plans ● Indicator of ability or lack thereof to comply with treatment plans
Data Sources:	<ul style="list-style-type: none"> ● Census info ● EMR systems ● Community agencies ● US Census/American Community Survey; SHAPE; BRFSS survey results ● Department of Health ● HMIS
Used in a CHNA now?	<ul style="list-style-type: none"> ● Social Services ● Allina Health ● Rochester - Olmsted County ● HCMC ● Dakota ● Olmsted County 2013 Community Needs Assessment
Tools or resources:	<ul style="list-style-type: none"> ● City census; county reports ● MN Legal Aide; community health boards ● Standardized intakes in hospitals ● Hennepin/HCMC proxy measure ● American Community Survey (US Census Bureau) ● HMIS ● Triannual Homelessness Survey ● Minnesota Compass ● Long-term care facilities for dual-eligible populations ● HMIS system ● HCMC’s way

ELEMENT:	Food Insecurity
Value Proposition: How it can be used	<ul style="list-style-type: none"> ● Provides baseline socioeconomic information that will affect health in general ● Maslow’s hierarchy of needs; the effectiveness of any healthcare intervention is compromised if there is food insecurity
Data Sources:	<ul style="list-style-type: none"> ● Food shelves ● SNAP ● USDA ● Area Deprivation Index ● Food Insecurity Index ● Food Desert Maps (variety of sources available) ● City, county records
Used in a CHNA now?	<ul style="list-style-type: none"> ● HCMC
Tools or resources:	<ul style="list-style-type: none"> ● County or city information ● Standardized intakes in hospitals ● Local social service agencies ● Food banks ● MN Department of Human Services ● United Way ● Area Agencies on Aging