

CHW Regional Common Metrics: Technical Details Appendix

As affirmed by the HEAL Healthcare Access Workgroup
 May 8, 2018

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TECHNICAL DETAILS

Please note that the Integrated Health Network is hiring a Data Analyst, who will play a key role in building out the infrastructure and support necessary to operationalize these measures in practice. As such, some sections of the Technical Details are blank.

MEASURE 1: People Reached and Services Provided
Strategic Objective: By addressing multiple and interconnected needs, CHWs break down traditional service sector silos and reach clients where they are.
Indicator: <ul style="list-style-type: none"> • Total number of clients served per month • Distribution of types of services provided per person per month, and in total • Distribution of priority areas addressed by CHWs per person per month, and in total
Reported by: All participating partners
Frequency: Quarterly
Date established: <i>Pending review of HEAL Healthcare Access Workgroup</i>
Date last reviewed: <i>N/A – Review quarterly during first year of implementation, then annually</i>
Description
Precise Definition: The total number of people served by CHWs in the previous calendar month. <ul style="list-style-type: none"> • A count of all unique people served. The average number of services provided by CHWs per person in the previous calendar month. <ul style="list-style-type: none"> • The numerator is the sum of all services provided. The denominator is the total number of unique people served. The frequency distribution of services provided in the previous calendar month. <ul style="list-style-type: none"> • A count of each type of service provided. This indicator results in x values. It may be expressed as a frequency distribution or as a set of percentages, where the numerator is the number of services provided in a given category, and the denominator is the total number of services. Changes in this indicator may be plotted over time to analyze population-level changes. The average number of priority areas addressed by CHWs per person in the previous month.

- The numerator is the sum of all priority areas addressed. The denominator is the total number of unique people served.

The frequency distribution of priority areas addressed by CHWs in the previous month.

- A count of each instance in each Priority Area. This indicator results in x values. It may be expressed as a frequency distribution or as a set of percentages, where the numerator is the number of instances in a given category, and the denominator is the total number of instances. Changes in this indicator may be plotted over time to analyze population-level changes.

Priority Areas (All)	Priority Areas (Clinical)	Services Provided
<ul style="list-style-type: none"> • Employment • Housing • Food • Child care • Children’s education • Adult education • Legal • Health insurance • Primary health care • Specialist health care • Behavioral health care • Substance abuse • Mobility • Financial assistance • Community involvement 	<ul style="list-style-type: none"> • Asthma • Diabetes • Cardiovascular disease • Cancer • Maternal health • Neonatal care • HIV/AIDS • Sexual/reproductive health 	<ul style="list-style-type: none"> • Education • Coaching • Advocacy • Task assistance • Referral • Screening • Trauma-informed practice • Motivational interviewing

Unit of Measure: Per person average; percentage

Disaggregated by: Program; Type

Rationale:

- Payers will want to understand the scope of practice CHWs engage in, and how it is changing over time or within population segments.
- Based on distributions, it will be feasible to make estimates of cost effectiveness and return on investment by leveraging existing research on social determinants of health and the impact on health outcomes and costs.

Data Collection, Compilation and Analysis

Data Collection Method: CHW documentation

Data Source(s): Patient or client records; Self-Sufficiency Matrix
Would need to create crosswalks between each tool and the indicator definitions

Frequency and Timing of Data Collection: Every month

Budget Mechanism: Cost included in existing data collection systems

Individual(s) Responsible at IHN: Data Analyst

Individual(s) Responsible for Providing Data to IHN: Specify by HEAL workgroup partner

Location of Data Storage: Electronic and hard copies to be maintained by IHN and by each HEAL workgroup partner

Questions for Analyzing Data:		
1. Are overall trends going up or down? In which programs?		
2. Which programs have the greatest increase or decrease, and why?		
3. What is the distribution of Service Types, and of Priority Areas? How are these distributions changing over time, and why?		
Data Quality Issues		
Date of Initial Data Quality Assessment: <i>TBD – for data analyst</i>		
Known Data Limitations and Significance (if any): <i>TBD – for data analyst</i>		
Actions Taken or Planned to Address Data Limitations: <i>TBD – for data analyst</i>		
Date(s) of Future Data Quality Assessments: <i>TBD – for data analyst</i>		
Procedures for Future Data Quality Assessment: <i>TBD – for data analyst</i>		
Other Notes		
Notes on Baseline/Targets:		
Comments		
Measure Values		
Date	Target	Actual
ddmmyy		

MEASURE 2: Connection to Resources		
<p>Strategic Objective: By successfully making referrals to quality services, across multiple sectors and focus areas, CHWs connect individuals to the resources needed to achieve health and socioeconomic goals.</p>		
<p>Indicator: Average number of successful per person per month resource connections</p>		
<p>Reported by: All participating partners</p>		
<p>Frequency: Quarterly</p>		
<p>Date established: <i>Pending review of HEAL Healthcare Access Workgroup</i></p>		
<p>Date last reviewed: <i>N/A – Review quarterly during first year of implementation, then annually</i></p>		
Description		
<p>Precise Definition:</p> <p>The average number of successful, quality resource connections made in the previous calendar month, per person.</p> <ul style="list-style-type: none"> • A quality resource is defined as one that is, in the CHW’s professional judgment: 1) Safe, 2) Effective, 3) Patient/Client-centered, 4) Timely, 4) Efficient, 5) Equitable • A successful resource connection is defined as one that the patient/client followed through on (i.e. appointment kept, visit conducted) <p>The numerator is the sum of all quality, successful resource connections made in the previous calendar month. The denominator is the total number of people. In addition, each data point includes the Resource Type, according to the following categories:</p> <table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • Employment • Housing • Food • Child care • Children’s education • Adult education • Legal • Health insurance </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> • Primary health care • Specialist health care • Behavioral health care • Substance abuse • Mobility • Financial assistance • Community involvement </td> </tr> </table> <p>It may be worthwhile for data collection tools that track and report on this indicator to include information on <i>unsuccessful or low quality</i> resource connections as well. In this way, success rates could be calculated and patterns pertaining to specific referral sources could be assessed.</p>	<ul style="list-style-type: none"> • Employment • Housing • Food • Child care • Children’s education • Adult education • Legal • Health insurance 	<ul style="list-style-type: none"> • Primary health care • Specialist health care • Behavioral health care • Substance abuse • Mobility • Financial assistance • Community involvement
<ul style="list-style-type: none"> • Employment • Housing • Food • Child care • Children’s education • Adult education • Legal • Health insurance 	<ul style="list-style-type: none"> • Primary health care • Specialist health care • Behavioral health care • Substance abuse • Mobility • Financial assistance • Community involvement 	
<p>Unit of Measure: Per person average</p>		
<p>Disaggregated by: Program; Resource Type</p>		
<p>Rationale:</p> <p>The Institute of Medicine has defined six domains of health care quality. While there is increasing attention to defining quality in the social service sector, it does not appear there is similar consensus on the definition of quality when it comes to social service programs in general. The six domains are defined as:</p> <ul style="list-style-type: none"> • Safe: Avoiding harm to patients from the care that is intended to help them. • Effective: Providing services based on scientific knowledge to all who could benefit and 		

<p>refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively).</p> <ul style="list-style-type: none"> • Patient-centered: Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions. • Timely: Reducing waits and sometimes harmful delays for both those who receive and those who give care. • Efficient: Avoiding waste, including waste of equipment, supplies, ideas, and energy. • Equitable: Providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status. <p>It can certainly be debated how these concepts would manifest in non-healthcare settings, what practices fit the criteria, and what systemic conditions are necessary to promote the realization of such domains. Our rationale for utilizing them as reference standards for quality referrals revolves around their applicability to payment reform, their alignment with CHW core competencies and values, and their precedent in the health care field.</p> <p>Most organizations that employ CHWs have a form of referral tracking already built in to their procedures. However, not all currently have features to track all the Resource Types in a systematic way. It would be important to ensure there is a valid crosswalk between their structures and the common set of Resource Types listed here, a shared understanding of the definitions of “quality” and “successful,” and the capacity to track according to these definitions.</p>
Data Collection, Compilation and Analysis
Data Collection Method: CHW documentation
Data Source(s): Patient or client records
Frequency and Timing of Data Collection: Every month
Budget Mechanism: Cost included in existing data collection systems
Individual(s) Responsible at IHN: Data Analyst
Individual(s) Responsible for Providing Data to IHN: Specify by HEAL workgroup partner
Location of Data Storage: Electronic and hard copies to be maintained by IHN and by each HEAL workgroup partner
<p>Questions for Analyzing Data:</p> <ol style="list-style-type: none"> 1. Are overall trends going up or down? In which programs? 2. Which programs have the greatest increase or decrease, and why? 3. What is the distribution of Resource Types? How is it changing over time, and why? 4. What do we know about the resource connections that are <i>not</i> successful?
Data Quality Issues
Date of Initial Data Quality Assessment: <i>TBD – for data analyst</i>
Known Data Limitations and Significance (if any): <i>TBD – for data analyst</i>
Actions Taken or Planned to Address Data Limitations: <i>TBD – for data analyst</i>
Date(s) of Future Data Quality Assessments: <i>TBD – for data analyst</i>
Procedures for Future Data Quality Assessment: <i>TBD – for data analyst</i>
Other Notes
Notes on Baseline/Targets:
Comments

CHW REGIONAL COMMON METRICS – FINAL RECOMMENDATIONS APPENDIX

Measure Values		
Date	Target	Actual
ddmmyy		

MEASURE 3: Self-Reported Health Status and Mental Health				
Strategic Objective: By addressing social determinants of health, CHWs contribute to improving individuals’ self-reported health status and mental health.				
Indicator: Distribution of perceived health status and perceived mental health ratings				
Reported by: All participating partners				
Frequency: Quarterly				
Date established: <i>Pending review of HEAL Healthcare Access Workgroup</i>				
Date last reviewed: <i>N/A – Review quarterly during first year of implementation, then annually</i>				
Description				
Precise Definition:				
<ol style="list-style-type: none"> 1. The percentage of respondents who rate their present health status according to the following categories: excellent, very good, good, fair, and poor. 2. The percentage of respondents who rate their present mental health according to the following categories: excellent, very good, good, fair, and poor. <p>The numerator is the number of respondents who rate their health according to each category. The denominator is the total number of respondents. This indicator results in five values for health, and five values for mental health. Changes in this indicator may be plotted over time to analyze population-level changes.</p>				
Unit of Measure: Percentage distribution				
Disaggregated by: Program				
Rationale: The Agency for Healthcare Research and Quality (AHRQ) finds that self-reported health status is associated with health care expenditures. The evidence base is drawn from the Medical Expenditure Panel Survey (MEPS), a set of large-scale surveys of individuals and families, medical providers, and employers selected from a nationally representative sample across the US. The data set extends back to 1996.				
Mean Expenditure Per Person by Perceived Health / Mental Health Status (2015)				
<i>Perceived Status</i>	<i>Mean Expenditure (All Payers)</i>		<i>Mean Expenditure (Medicaid)</i>	
	<i>Health</i>	<i>Mental Health</i>	<i>Health</i>	<i>Mental Health</i>
1 – Excellent	\$2,132	\$3,108	\$223	\$253
2 – Very Good	\$3,436	\$4,520	\$247	\$348
3 – Good	\$6,282	\$6,453	\$618	\$772
4 – Fair	\$11,963	\$11,614	\$1,867	\$2,260
5 – Poor	\$26,201	\$18,846	\$3,884	\$3,378
<p>Data may be explored via the MEPS summary tables for use, expenditures, and population at this link: https://meps.ahrq.gov/mepstrends/hc_use/ More information about MEPS may be found here: https://meps.ahrq.gov/mepsweb/about_meps/survey_back.jsp</p> <p>In the original MEPS, respondents are asked to rate their own health, in addition to the health of all members in the family. This may be too broad for purposes of the present project’s needs.</p>				
Data Collection, Compilation and Analysis				

Data Collection Method: Survey					
Data Source(s): Patient or client records					
Frequency and Timing of Data Collection: Every three months					
Budget Mechanism: Cost included in existing data collection systems					
Individual(s) Responsible at IHN: Data Analyst					
Individual(s) Responsible for Providing Data to IHN: Specify by HEAL workgroup partner					
Location of Data Storage: Electronic and hard copies to be maintained by IHN and by each HEAL workgroup partner					
Questions for Analyzing Data:					
1. Are trends in the distribution of health status values going up or down? In which programs?					
2. Which programs have the greatest increase or decrease in values, and why?					
3. What do we know about health status trends in programs where CHWs are not working?					
4. How do the quarterly data from partners compare to the annual data from MEPS?					
Data Quality Issues					
Date of Initial Data Quality Assessment: <i>TBD – for data analyst</i>					
Known Data Limitations and Significance (if any): <i>TBD – for data analyst</i>					
Actions Taken or Planned to Address Data Limitations: <i>TBD – for data analyst</i>					
Date(s) of Future Data Quality Assessments: <i>TBD – for data analyst</i>					
Procedures for Future Data Quality Assessment: <i>TBD – for data analyst</i>					
Other Notes					
Notes on Baseline/Targets:					
Comments					
Measure Values					
Date		Health		Mental Health	
	<i>Target</i>		<i>Actual</i>	<i>Target</i>	<i>Actual</i>
ddmmyy					

MEASURE 4: Socioeconomic Stability
Strategic Objective: By addressing social determinants of health, CHWs contribute to improving individuals’ socioeconomic stability.
Indicator: Self-Sufficiency Matrix score
Reported by: All participating partners; relevant outcome scales only
Frequency: Quarterly
Date established: <i>Pending review of HEAL Healthcare Access Workgroup</i>
Date last reviewed: <i>N/A – Review quarterly during first year of implementation, then annually</i>
Description
<p>Precise Definition:</p> <ol style="list-style-type: none"> 1. The percentage of respondents whose Self-Sufficiency Matrix total scale scores translate to each of the following categorical variables: Thriving, Safe, Stable, Vulnerable, In-crisis. <p>The numerator is the number of respondents whose total scale score translates to each category. The denominator is the total number of respondents. This indicator results in five values. Changes in this indicator may be plotted over time to analyze population-level changes. Depending on the number of outcome scales used by a particular organization, the total possible scale score will vary (e.g. if an organization uses 5 outcome scales, the total possible scale score is 25; if it uses 3 outcome scales, the total possible scale score is 15). As such, transforming raw total scale scores into the categorical variable will require organization-level customization.</p> 2. The percentage of respondents who progress one level in at least one domain. <p>The numerator is the number of respondents who move at least one level (e.g. In-crisis to Vulnerable, Stable to Thriving) in at least one domain (e.g. Housing, Income, Food, etc.) during the reporting period. The denominator is the total number of respondents.</p>
Unit of Measure: Percentage
Disaggregated by: Program
<p>Rationale:</p> <p>The Self-Sufficiency Matrix is a tool originally developed by the Arizona Homeless Evaluation Project in 2002. Designed to measure an individual’s social, economic, and overall well-being and stability, it has been validated by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the Department of Health and Human Services, and is recognized as a best practice by the Department of Housing and Urban Development. The Arizona Self-Sufficiency Matrix encompasses 18 domain areas, each with an outcome scale (with ratings from 1 to 5, translating to “In-crisis” to “Thriving” based on observable actions or achievements) that reflects the dynamic, progressive path toward self-sufficiency. Modifications to the scale have adapted by agencies in Colorado, Michigan, Oregon (Snohomish County), and in Kansas City. Christian Hospital and the Salvation Army are utilizing a version of the scale for their Pathways program.</p> <p>The domain areas included in the Self-Sufficiency matrix align with key social determinants of health, and reflect the concept that there is a spectrum of well-being and stability that individuals may step forward or back along over the course of their lives. Each of the domain areas is characterized by an “outcome scale,” each of which can be used independently of the others</p>

<p>depending on the mission and parameters of the agency or program. This modularity would allow different CHWs to adapt the set of outcome scales used, and still maintain a cohesive measure across the region that is inclusive of diverse CHW programs. The full set of outcome scales would align with the final definition of Priority Areas and Resource Types articulated in the Process and Outcome Measures of this CHW Regional Common Metrics.</p> <p>The Self-Sufficiency Matrix is completed by the CHW, not by the patient or client; however, it can be used in partnership with a patient or client to review progress and form a basis for discussion. In theory, existing tools like ICD-10 codes, PRAPARE, or other case management tools could inform the Self-Sufficiency Matrix, using a tailored crosswalk; or, a standard matrix could be deployed across all participating CHW programs. In addition, by collecting information on patient/client progress within each domain area or outcome scale, we would gain a foundation to calculate cost savings – for example, based on research showing the association between gaining access to stable housing and utilization of emergency health care.</p> <p>The standard Arizona Self-Sufficiency Matrix is included below, but may be modified as other organizations have done to reflect the St. Louis context.</p>
<p>Data Collection, Compilation and Analysis</p>
<p>Data Collection Method: Survey</p>
<p>Data Source(s): Patient or client records; PRAPARE; ICD-10 codes (Z55-65); Self-Sufficiency Matrix <i>Crosswalks could be created for each organization to utilize existing tools like patients/client records, PRAPARE, or ICD-10 codes, to populate a shared data collection tool based on the Arizona Self-Sufficiency Matrix. Alternatively, the Self-Sufficiency Matrix could be built into current or aligned platforms and be completed directly. Integration with existing systems may be challenging and will require careful planning and support.</i></p>
<p>Frequency and Timing of Data Collection: Every three months (i.e. quarterly)</p>
<p>Budget Mechanism: Cost included in existing data collection systems</p>
<p>Individual(s) Responsible at IHN: Data Analyst</p>
<p>Individual(s) Responsible for Providing Data to IHN: Specify by HEAL workgroup partner</p>
<p>Location of Data Storage: Electronic and hard copies to be maintained by IHN and by each HEAL workgroup partner</p>
<p>Questions for Analyzing Data:</p> <ol style="list-style-type: none"> 1. How are trends moving over time? 2. Are there differences in trends based on demographic or other variables? 3. How long, on average, does it take for a patient/client to move one “level”? Do certain outcome categories show faster or slower progress than others? 4. How do trends vary between programs?
<p>Data Quality Issues</p>
<p>Date of Initial Data Quality Assessment: <i>TBD – for data analyst</i></p>
<p>Known Data Limitations and Significance (if any): <i>TBD – for data analyst</i></p>
<p>Actions Taken or Planned to Address Data Limitations: <i>TBD – for data analyst</i></p>
<p>Date(s) of Future Data Quality Assessments: <i>TBD – for data analyst</i></p>
<p>Procedures for Future Data Quality Assessment: <i>TBD – for data analyst</i></p>
<p>Other Notes</p>

Notes on Baseline/Targets:		
Comments		
Measure Values		
Date	Target	Actual
ddmmyy		