



Strengthening Clinical to Community Connections: *A Cross-Sector Movement to Improve Health Outcomes to Advance Health Equity*

Minority Health Conference: Uniting Practice and Partnerships to Achieve Health Equity | York, NE

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ASTHO's Three Pillars of Population Health: *How We Move the Needle*



Landscape of Initiatives to Improve Health Outcomes

- Community Models to Improve Health Outcomes
- Examples of Transportation and Food Insecurity Supports
- Needs of Community-Based Organizations, and
- Public Health Assets to Support Effective Cross-Sector Work

Community Models: BUILD Health Challenge



- BUILD distributes awards to multi-sector, community-driven partnerships that work to reduce health disparities by addressing system-based or social inequities
- For example, the St. Louis team – a collaborative of hospitals, health systems, and the City of St. Louis Department of Health – is seeking to improve transportation access for new mothers in order to support access to medical care, employment, and social services, focusing on two high-need zip codes.
- The collaborative is using BUILD funds to:
 - Hold maternal health community listening sessions,
 - Develop common goals and advocate for policy change among the transportation industry, and
 - Review neighborhood-level data to map disparities and impact of policy change.

Community Models: Live Well Sioux Falls

- Live Well Sioux Falls is a community-based initiative designed to help improve the health and well-being of Sioux Falls residents by collaborating on projects to address health needs.
- Their 2019 community health needs assessment identified these priorities: Access to care, Behavioral Health Needs and Chronic Disease. They put a very holistic frame on what these mean
 - » access= affordability, patient navigation, Long-term care services, transportation
 - » behavioral health=cost, stigma, prescription drugs, alcohol and binge drinking
 - » chronic disease prevention=jobs/housing/income, nutrition and access to fruits and vegetables, physical activity and tobacco needs.



Community Models: Intermountain Healthcare

- Intermountain Healthcare's board charged the organization with improving health outcomes by moving upstream.
- Through the Utah Alliance for The Determinants of Health, Intermountain is funding two demonstration programs for three years targeting Medicaid beneficiaries in counties with lower than average life expectancy, high behavioral health needs, and high emergency department usage for non-emergency needs, with the state health department and Medicaid agency as partners.
- Intermountain serves as the anchor institution and will provide community health worker interventions to assist with service navigation, creation of individualized social care and treatment plans, and linkages to community resources.



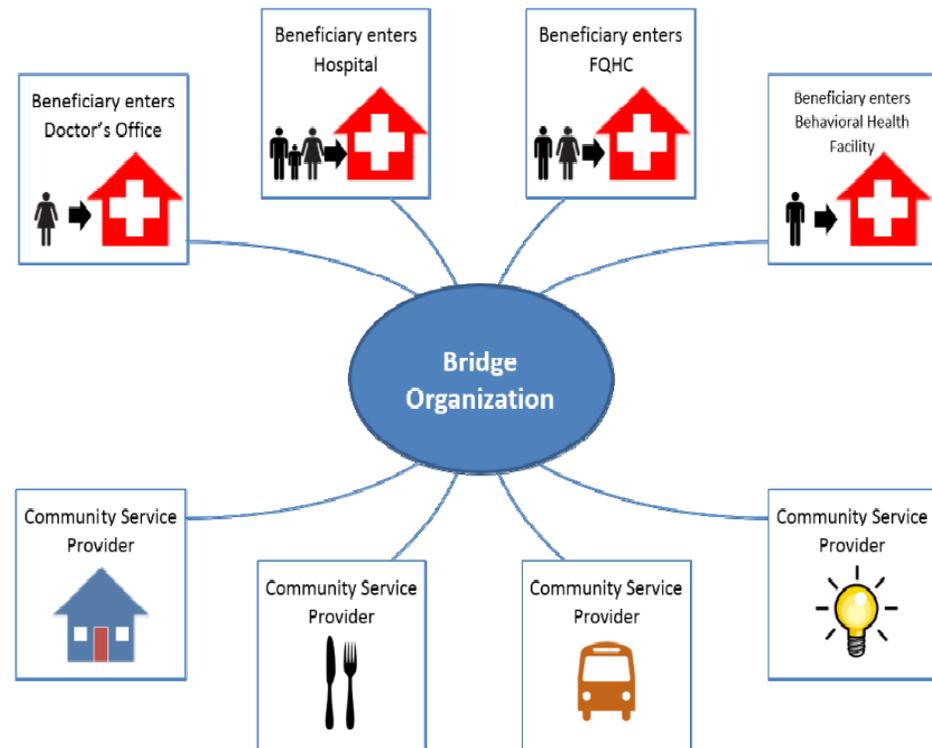
Community Models: ReThink Health, Pueblo County, CO

- ReThink Health began working with the Pueblo Triple Aim Corporation (PTAC) in Pueblo County, CO, in 2011. The county had among the worst health outcomes in the state and questioned how it was investing their resources.
- Using the Dynamics Model, ReThink Health helped the coalition's leaders gather and interpret data and create an integrative map of the local health system.
- This process revealed the connections between different parts of the system and uncovered valuable insights about health care in Pueblo.
- The leadership team learned that a modest upfront investment of about 1% of total healthcare spending in Pueblo could net huge dividends: hundreds of millions of dollars for short- and long-term programs to improve health, while leaving funds for other priorities such as education and housing.



Community Models: Accountable Health Communities

The Accountable Health Communities (AHC) model is a five-year CMMI model that tests whether systematically identifying and addressing the health-related social needs of community-dwelling Medicare and Medicaid beneficiaries impacts healthcare quality, utilization, and costs.



Health-Related Social Needs

Core Needs

- Housing Instability
- Utility Needs
- Food Insecurity
- Interpersonal Violence
- Transportation

Supplemental Needs

- Family and Social Supports
- Education
- Employment and Income
- Health Behaviors

AHC Bridge Organizations

State	Assistance Track
Connecticut	Yale-New Haven Hospital
Georgia	Tift County Hosp. Authority
Illinois	Alexian Brothers Network
Indiana	Community Health Network Foundation
Minnesota	Allina Health System
New Jersey	Hackensack University
New York	St. Josephs Hosp. Health Ctr.
Tennessee	Mountain States Health Alliance
Texas	UT Health Sciences Center
Texas	CHRISTUS Santa Rosa
West Virginia	Partners in Health, Inc.

State	Alignment Track
Arizona	Dignity Health dba St. Joseph's Hospital & Medical
Colorado	Denver Regional Council of Governments
Colorado	Rocky Mountain HMO
Connecticut	Danbury Hospital
Hawaii	United Healthcare Service Inc.
Kentucky	University of Kentucky Research Foundation
Maryland	Baltimore City Health Department
Michigan	Health Net of West Michigan
Mississippi	Delta Health Alliance, Inc.
New Jersey	Camden Coalition of Healthcare Providers
New Mexico	Presbyterian Healthcare Services
New York	The New York and Presbyterian Hospital
Ohio	The Health Collaborative
Ohio	United Way of Greater Cleveland
Oklahoma	MyHealth Access Network, Inc.
Oregon	Oregon Health & Science University
Pennsylvania	Reading Hospital
Rhode Island	Care New England Health System
Texas	Parkland Center for Clinical Innovation
Virginia	VHQC dba Health Quality Innovators

Transportation Partnership

- Lyft and CareMore Health (of Massachusetts) partnered to create non-emergency transportation services.
- Lyft is now fully integrated into CareMore operations with about 95 percent of curb-to-curb rides dispatched to Lyft.
 - Reduced transportation wait times by 45 percent.
 - Ride costs dropped by 39 percent.
 - Patient satisfaction rate is 97 percent.

Examples of Food Insecurity Supports

- SNAP/WIC Enrollment Navigation
- Subsidized CSAs
- Purchasing Incentives
- Healthy Food Provision at Food Pantries
- Food Delivery
- Medically Tailored Meals

Fruit and Vegetable Prescription Program: Pediatric Populations

Researchers analyzed a clinic-based fruit and vegetable prescription program dataset for low-income families, collected between 2013-2015, and calculated changes in food security.

- 72 percent of households participating in the fruit and vegetable prescription program increased their food security score over the course of the program.

Fruit and Vegetable Prescription Program: New York City

- The program offers medical advice and counseling on healthy eating, combined with the provision of food resources.
- The program was implemented in Lincoln Medical Center and Harlem Hospital Center and aligned with improved outcomes found in federally qualified health center data across 12 states.
- Patients receive a food prescription from their doctor (equal to \$1/day for each patient and each family member), which can be redeemed for fresh fruits and vegetables at participating farmers markets.
 - 40 percent of participating patients decreased their body mass index.
 - 70 percent of patients reported an increase in knowledge about the importance of fruits and vegetables in their families' diets.

Meal Delivery Program: Community Servings

- Community Servings is a nonprofit food and nutrition program that provides 675,000 medically tailored meals each year to individuals and families in Massachusetts and Rhode Island.
- Individuals are enrolled through an authorizing clinician, who had determined that there was a nutritional risk.
- Medically tailored meals cost an average of \$350 per month per person. Individuals receiving medically tailored meals had average medical costs of \$843 per month, compared to an average cost of \$1,413 for the comparison group.

Meal Delivery Program: Dual-Eligible Populations

- Research findings indicate that home delivery of medically tailored and non-tailored food both reduce the use of selected healthcare services and medical spending in a sample of adults dually eligible for Medicare and Medicaid.
- Compared to a nonparticipant group, participants receiving home meal delivery had fewer emergency department visits.
- Participants in the medically tailored meal program also had fewer inpatient admissions and lower medical spending.

Medically Tailored Nutrition and Health Costs

- Project Angel Heart partnered with the Center for Improving Value in Health Care, which administers the Colorado All Payer Claims Database, to analyze clients' medical costs before, during, and after receiving home-delivered, medically tailored meals.
- Hospital readmissions across diseases and insurance providers dropped by 13 percent during the meal delivery program.
- Clients with primary diagnosis of congestive heart failure, chronic obstructive pulmonary disease, or diabetes saw a reduction of total medical costs while receiving meals of \$416-736 per month.
- Average total medical costs for people with these diagnoses reduced by 24 percent.
- Average inpatient cost reductions ranged from \$111-555 per member, per month among clients with congestive heart failure, chronic obstructive pulmonary disease, diabetes, or end-stage renal disease

Adding It All Up

Addressing Social Determinants of Health in a Health System - *Recommendations*

Four recommendations for health plans to adopt when addressing their beneficiaries' social determinants of health:

1. Invest in systematic and standardized social determinant of health data collection and analytics to catalyze greater effectiveness in program design and implementation;
2. Develop, implement, evaluate, and disseminate evidence-based pilot community interventions with predefined scaling strategies;
3. Align with value-based payment transformation and sponsor programs to improve alignment across resources; and
4. Introduce behavioral economic design into consumer incentives, for example

Citation: Heisler M, Navathe A, DeSalvo K, Volpp KGM (2018). "The Role of U.S. Health Plans in Identifying and Addressing Social Determinants of Health: Rationale and Recommendations." *Population Health Management*, Vol. 00, No. 00. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/30513072>

Community Based Organizations Needs in Population Health Initiatives

- Data Infrastructure
- Negotiating preparation

Data Capacity

- Well-funded health IT systems and community based organization and social service providers often do not have the same data capacity in terms of infrastructure, resources, and staff.
- DASH (Data Across Sectors for Health) aims to create a body of knowledge and advance this emerging field by identifying and sharing opportunities, barriers, lessons learned, promising practices, and indicators of progress for sharing data and information across and beyond traditional health sectors.
- Pieces Technology, Inc. is developing free software for community-based organizations in order to support interoperable case management systems with hospitals and health plans

Negotiating Preparation Support: Return on Investment Calculator

- The Commonwealth Fund developed an ROI calculator, designed to assist community-based organizations and their medical partners in creating mutually advantageous financial arrangements for funding the delivery of social services to high-need, high-cost populations.
- These complex care populations are likely to benefit most from a holistic model of care that addresses the social determinants of health.
- This financial tool will calculate the return on investment (ROI) from integrating social services with medical care.
 - The calculator will compare how the financial returns and risks could be divided between the cross-sectional partners (social service and medical) under a variety of payment arrangements and levels.
 - First, the user must populate initial screens with the inputs including target population, utilization, costs, and other key variables required for the tool to generate results.
 - <http://tools.commonwealthfund.org/roi-calculator>

Public Health Assets for Effective Cross Sector Work

- Collect and Provide Data
- Provide and Support Evidence-Based Services

State and Territorial Health Agency (S/THA) Data Sources

State Health
Improvement Plan

Surveillance Data

Health
Information
Exchanges (HIEs)

Health
Opportunity
Indices (HOIs)

Health
Professional
Shortage Areas
(HPSAs)

Other: Vital
records, Needs
Assessments and
Surveys

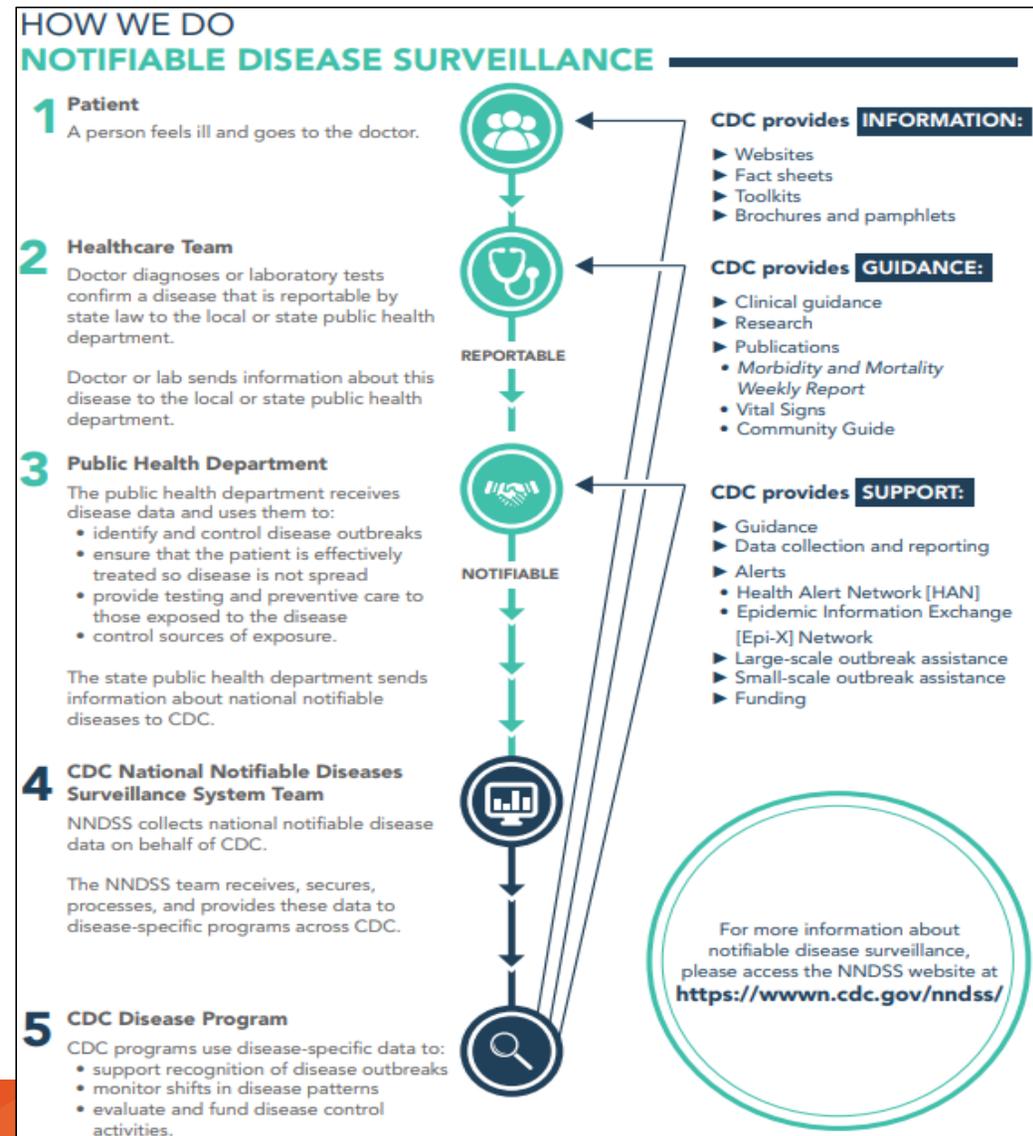
State Health Improvement Plans (SHIPs)

- SHIPs are multi-year (often five-year) health agency-wide initiatives that seek to produce a comprehensive picture of a state's top health burdens and to serve as a guide to improve the health of the state's residents.
- The plan identifies specific population health priorities, informed by the health needs of the community, often through a state health assessment.
- The plan also identifies associated evidence-based strategies, measurable outcomes, and statewide health assets and resources needed to address the priority areas.

Disease Surveillance Data Collection and Reporting

- **Reportable Disease Cases:** Mandatory reporting of reportable disease cases that varies by state laws and regulations.
- **Notifiable Disease Cases:** Voluntarily reporting of notifiable disease cases, based on CDC's list of notifiable diseases.

Source: CDC. How We Do Notifiable Disease Surveillance. 2018.
Available at: <https://www.cdc.gov/nndss/>



CDC: National Notifiable Conditions (2019)

■ Infectious Diseases

- Includes 80 infectious diseases.
- Examples include: STIs, HIV, Hepatitis A, B and C, Tuberculosis and Zika.

■ Non-Infectious Diseases

- Cancer, carbon monoxide poisoning, Lead (elevated blood lead levels), pesticide-related illness, and silicosis.

■ Outbreaks

- Foodborne disease outbreaks and waterborne disease outbreaks.



120

120 diseases under surveillance

- infectious diseases
- sexually transmitted diseases
- noninfectious conditions
- bioterrorism agents



3K

About 3,000 public health departments send disease data to 57 state and territorial public health departments, who send data to CDC

Source: CDC. 2019 National Notifiable Conditions. Available at: <https://www.cdc.gov/nndss/conditions/notifiable/2019/>

Health Information Exchanges (HIEs)

- State oversight of HIEs vary
- 29% of S/THAs report that the chief information officer (or equivalent) for the S/THA held primary responsibility for decisions regarding HIE or HIT issues. States may have several HIEs within a state.
 - NEHII (Nebraska's statewide health information exchange provider) has partnered with Nebraska Department of Health and Human Services-Public Health to provide an option to hospitals and providers in Nebraska seeking to submit syndromic surveillance, laboratory and immunization data.
- HIEs can play an important role in care coordination and assisting in making provider referrals.

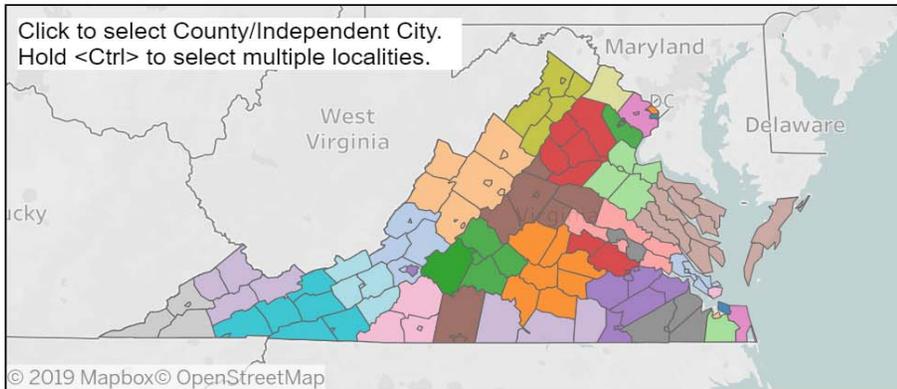
Health Opportunity Indices (HOIs)

A HOI is an online mapping tool of social determinants of health that allow users to view the specific factors that impact health within a state.

Virginia Health Opportunity Index:

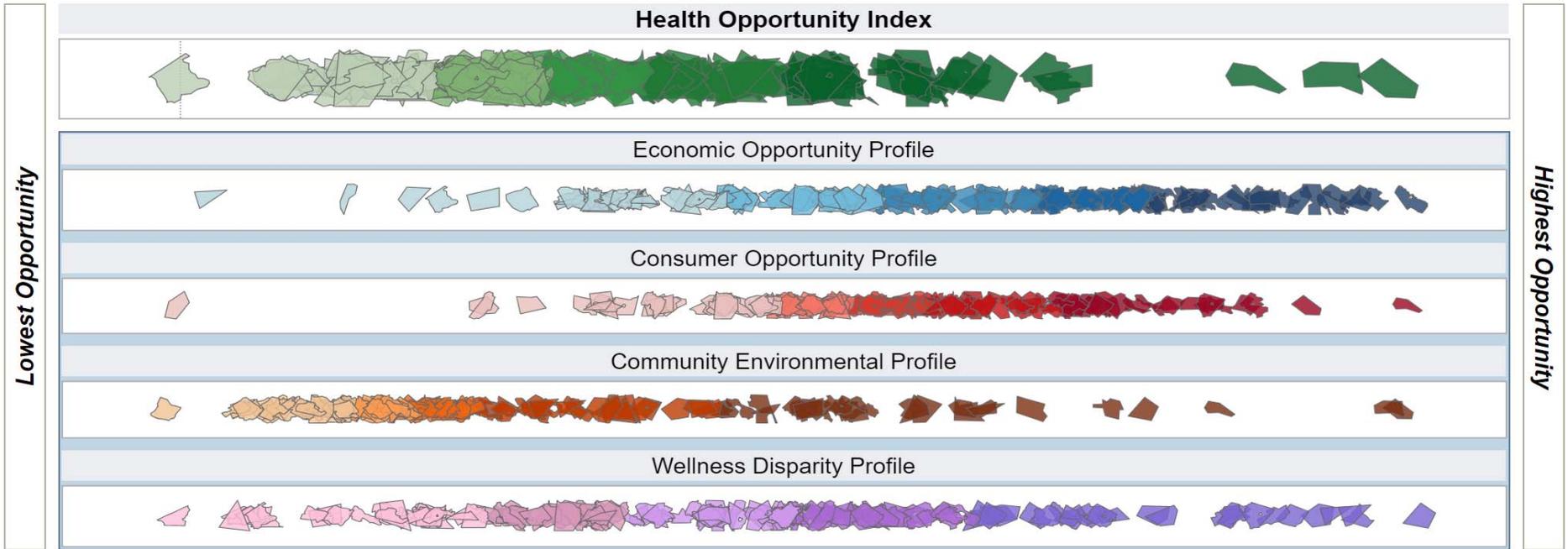
- The VA Office of Health Equity (Virginia Department of Health) created the Virginia Health Opportunity Index to demonstrate which social determinants of health impact the state and its communities.
- The HOI includes:
 - An overall statewide composite measure of social determinants of health.
 - 13 SDOH indicators such as Air Quality, Population Weighted Density, Affordability, Food Accessibility, Income distribution, employment access, access to care, etc.
 - Dashboards for Counties, Health Districts, and Legislative Districts.

Source: Virginia Department of Health. Health Opportunity Index. Available at: <https://bit.ly/2lzLbSG>.



Rank (of 134)
Median of Selected Counties

Local Health District	
(All)	
Health Opportunity Index	
67	
Economic Opportunity Profile	Consumer Opportunity Profile
67	68
Community Environmental Profile	Wellness Disparity Profile
68	67



Health Professional Shortage Areas

- Health Professional Shortage Areas (HPSAs): Designations that indicate health care provider shortages in primary care, dental health, and mental health.
 - These shortages may be geographic, population, or facility-based.
 - Auto-HPSAs: FQHCs, FQHC Look-A-Likes, Indian Health Facilities, etc.
 - Application for a HPSA designation are overseen by State Primary Care Offices.
- The Health Services and Resource Administration maintains a HPSA database including all primary care, dental care, and mental health providers.

Sources:

- HRSA. Primary Care Offices. Available at: <https://bhwh.hrsa.gov/shortage-designation/hpsa/primary-care-offices>
- HRSA. Shortage Areas. Available at: <https://data.hrsa.gov/tools/shortage-area/hpsa-find>

Evidence-Based Health Services

S/THAs can share information about **evidence-based interventions and programs** including existing evidence-resources:

- [The 6|18 Initiative](#)
- [The Community Guide](#)
- [United States Preventive Services Task Force](#)

Examples include:

- Community Health Workers
- Home-Based Asthma Multi-Trigger, Multicomponent Environmental Interventions – Children and Adolescents with Asthma
- Cardiovascular Disease: Mobile Health (mHealth) Interventions for Treatment Adherence among Newly Diagnosed Patients

Root of CHW Effectiveness Lies in their Community-Connectedness

“[CHWs are] frontline public health workers who are **trusted members of and/or have an unusually close understanding of the community they serve**. This trusting relationship enables CHWs to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery.

CHWs also build individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy.” - **APHA Definition (nationally accepted)**

The CHW Core Consensus (C3) Project describes the core skills of CHWs as:

1. Communication skills
2. Inter-personal and relationship-building skills
3. Services coordination and navigation
4. Capacity building
5. Advocacy
6. Education and facilitation
7. Individual and community assessments
8. Outreach
9. Professional skills and conduct
10. Evaluation and research
11. Knowledge base

Community Health Workers - CPSTF recommends CHWs for:

- Cardiovascular Disease Prevention
strong evidence of effectiveness in improving blood pressure and cholesterol when community health workers are engaged in a team-based care model. Cost-effective
- Diabetes Prevention
sufficient evidence of effectiveness in improving blood glucose level control and weight-related outcomes among people at increased risk for type 2 diabetes. Cost-effective
- Diabetes Management
strong evidence of effectiveness in improving blood glucose level and lipid control and reducing health care use among patients who have type 2 diabetes. Cost-effective

Value Proposition for CHWs

State/Study	CHW Intervention	Cost savings
<p>Nevada Division of Public and Behavioral Health CHW Pilot Program Initiative https://bit.ly/2sBdtDu</p>	<p>CHWs embedded in managed care organization to assist with patient education, referrals, and insurance enrollment.</p>	<p>The three CHWs worked with members for 30-60 days, leading to a 1.81 ROI stemming from reduced numbers of acute (re-)admissions and ED visits and reduced prescription costs per member per month</p>
<p>New York: Bronx-Lebanon Hospital Center https://bit.ly/2swo8zt</p>	<p>CHWs integrated into the PCMH to provide care management and supportive services (e.g. home visiting and service navigation)</p>	<p>Pilot showed net 2:1 ROI from reduced hospitalizations and ED visits and increased primary care revenue</p>
<p>Arkansas: Tri-County Rural Health Network Community Center https://bit.ly/2swo8zt</p>	<p>CHWs provided navigation from nursing home care to home- and community-based care in three counties</p>	<p>Arkansas Medicaid saved \$2.6 million over three years.</p>

Value Proposition for CHWs

State/Study	CHW Intervention	Cost savings
Washington: The Healthy Homes Project, Seattle and King County https://bit.ly/2sMe1FU	CHWs visited homes of low-income children with asthma to provide education to children and their caregivers.	CHW home visits led to 1.9:1 ROI and reduced hospitalizations compared to standard care.
New Mexico: CHWs in Medicaid Managed Care https://bit.ly/2swphaf	CHWs provided 6 months of advocacy, patient education, and social support to high-utilizing Medicaid enrollees	448 received intervention: total cost of care was \$2,044,465 less post-intervention compared to pre-intervention, with a total program cost of \$521,343.
Pennsylvania: Individualized Management for Patient-Centered Targets (IMPACT) Model in Philadelphia	CHWs provided six months of CHW support to individuals with two or more chronic health conditions in low-income zip codes.	Fewer total days in the hospital at 6 months (155 days vs 345 days) and 9 months (300 days vs 471 days).

Value Proposition for CHWs

CMMI Health Care Innovation Awards Evaluation (<https://bit.ly/2FDGK4N>)

- "Of six types of innovation components that we evaluated (i.e., used health IT, used community health workers, medical home intervention, focus on behavioral health, used telemedicine, workflow/process redesign intervention), **only innovations using community health workers (CHWs) were found to lower total costs (by \$138 per beneficiary per quarter).**"
- Clinicians also reported spending between **30-50% less time arranging and coordinating social services and referrals.**

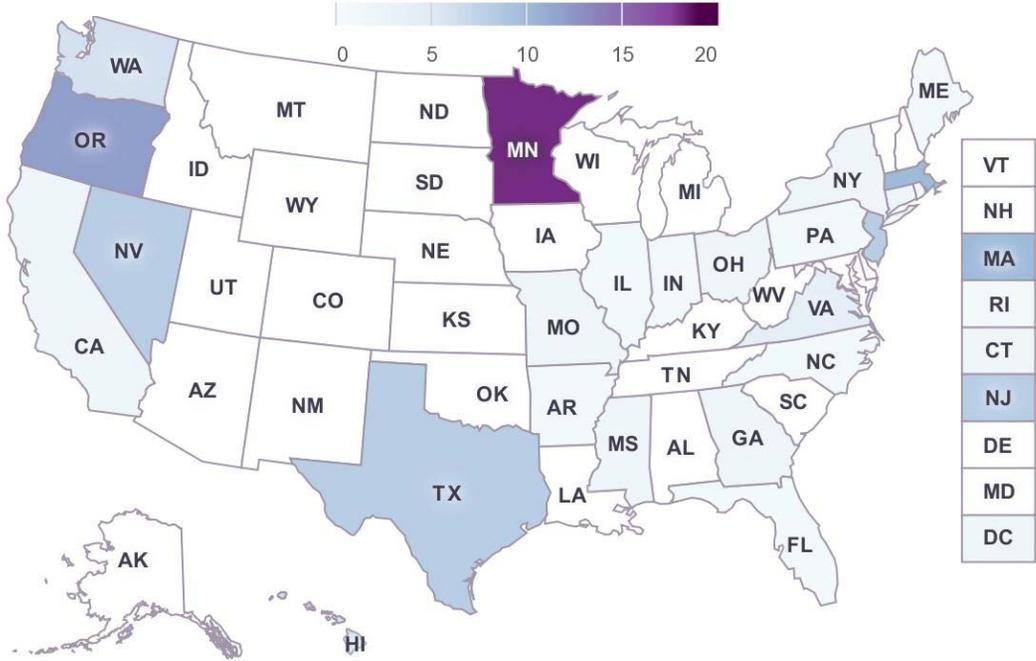
General areas of state health agency support for CHW workforce development



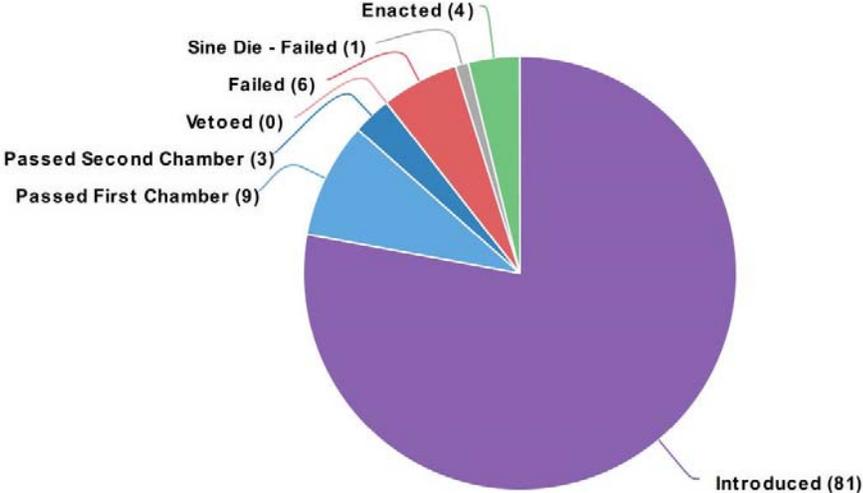
Geoffrey Wilkinson, "State Health Department Support for Community Health Worker Workforce Development and Engagement," available at <http://www.astho.org/Health-Systems-Transformation/Documents/State-Health-Department-Support-for-CHWs-Toolkit-Version/>

CHW Legislation this Session

Results Count Per Legislature



Status Breakdown

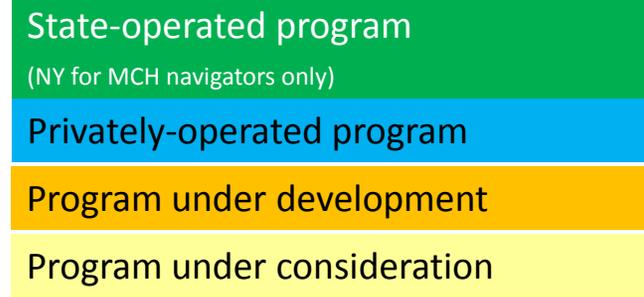
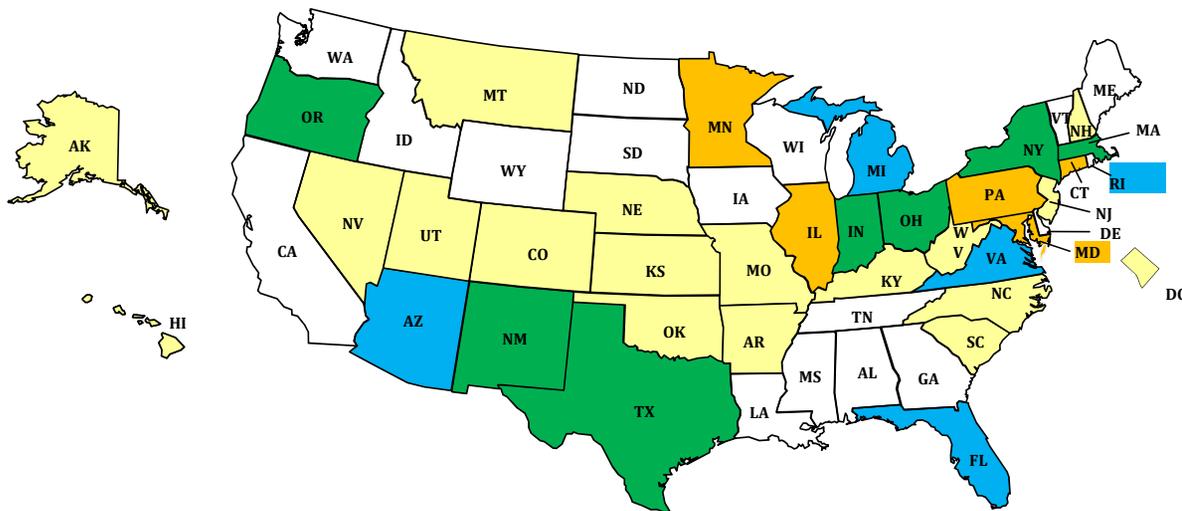


Themes: Certification, reimbursement, CHW provision of services through telemedicine

Bills passed through both chambers: All commemorate CHWs or appropriate funding for CHW programs.



Ever-changing picture: Wide variety of state approaches to CHW certification...



Updated April 2019

No evidence-based best practice for determining where to house the program.

Will vary based on state context, resources, politics, etc.

...BUT one consistent element: CHW leadership on certification boards

“Nothing about us without us” – CHW inclusion is critical.

Arizona	Maryland	Massachusetts	New Mexico
AZ CHW Association (AzCHOW) first piloted a certification process. Department of Health Services (DHS) managed a registry (passive function).	SB 163 passed in 2018 and directed the Department of Health (DOH) to adopt initial regulations for CHW certification, with additional regulations based on recommendations of a CHW Advisory Committee.	Department of Public Health (DPH) Division of Health Professions and Licensure has administrative responsibility. DPH Board of Certification of CHWs has certifying authority.	Department of Health has administrative responsibility. Board of Certification of CHWs has certifying authority.
HB 2324 passed in 2018 and directed DHS to implement a certification program and establish a CHW Advisory Council			
Majority of 9-member CHW Advisory Council must be CHWs.	At least nine of the 19 members of the CHW Advisory Committee must be CHWs.	Board includes Department of Public Health Commissioner plus ten governor appointees; at least four must be CHWs.	Board includes the secretary of health and eight additional members, a minimum of three of which must be CHWs.

APHA Policy Statement: *Support for Community Health Worker Leadership in Determining Workforce Standards for Training and Credentialing*

...Encourages state governments and any other entities drafting new policies regarding CHW training standards and credentialing to **include in the policies the creation of a governing board in which at least half of the members are CHWs.** This board should, to the extent possible, minimize barriers to participation and ensure a representation of CHWs that is diverse in terms of language preference, disability status, volunteer versus paid status, source of training, and CHW roles.

Available at: <https://bit.ly/2uv9RBY>

