What Evidence Supports

State Laws to Establish Community Health Worker Scope of Practice and Certification?

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention

Acknowledgments

Disclaimer

The findings and conclusions of this document are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

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Introduction

Community health workers (CHW) bridge communities and health care systems. By definition, CHWs come from or have a uniquely close understanding of the community served. The U.S. Community Guide to Preventive Services recommends interventions that engage CHWs to prevent cardiovascular disease and diabetes.[a]

States are considering policies to support the CHW workforce (Figure 1). By June 30, 2016, 24 states and the District of Columbia had laws pertaining to CHWs.[b] Sixteen of these states had laws addressing **CHW scope of practice (SoP)** or **CHW certification**, or both.[b] These types of interventions are expected to help define and establish standards for the CHW occupation and promote the integration of CHWs into health and social services (Figure 1). This report assessed the **best available evidence** aligning with state laws that address CHW SoP and CHW certification, which included studies of interventions engaging CHWs who were practicing in accordance with a state CHW SoP or certification law.

What is State CHW scope of practice (SoP)?

State CHW SoP can describe the roles that CHWs perform including cultural mediation, outreach, health education, social support, advocacy, capacity building, care coordination, provision of direct services, and research, evaluation, and assessment.[c] A state CHW SoP can also address supervision requirements for CHWs who provide health care services and define the attributes of a CHW, including a requirement for community membership to ensure the hiring of CHWs who understand the communities served. In 2016, 15 states had laws addressing CHW SoP.[b]

What is State CHW certification?

State CHW Certification can address training, assessment, and continuing education for the roles described in a state CHW SoP. A voluntary, well-designed, and well-implemented state certification process could help build a state CHW workforce with a common set of core skills, abilities, and knowledge base and training in specialty areas such as chronic disease prevention and control. The title of "Certified CHW" could signal competency to employers, payers, and credentialed members of health care teams. In 2016, eight states had laws addressing CHW certification.[b]

Figure 1. Policies to support the community health worker workforce

Source: Centers for Disease Control and Prevention. Promoting Policy and Systems Change to Expand Employment of Community Health Workers An E-Learning Training; 2016.

a. The Community Guide to Preventive Services Task Force. Cardiovascular Disease Prevention and Control: Interventions Engaging Community Health Workers; 2015. https://www.thecommunityguide.org/cvd/CHW.html, and The Community Guide to Preventive Services Task Force. Diabetes: Interventions Engaging Community Health Workers. https://www.thecommunityguide.org/findings/diabetes-interventions-engaging-community-health-workers. Accessed March 7, 2017.
b. Centers for Disease Control and Prevention. Division for Heart Disease and Stroke Prevention. A Summary of State Community Health Worker Laws; 2017.
c. Rosenthal EL, Rush CH, Allen CG, Understanding Scope and Competencies: A Contemporary Look at the United States Community Health Worker Field; 2016. Note that CHWs can perform a broad array of services, as long as they do not conflict with a licensed professional's SoP.

About This Report

Because there are no studies on the impact of state CHW laws, to support evidence-informed decisions, this report assessed early (i.e., best available) evidence. It updates a previous assessment completed by CDC's Division for Heart Disease and Stroke Prevention in 2014, which identified 14 types of interventions addressed in evidence-informed state CHW laws; at the time, most of these types of interventions had "best" or "promising" evidence.[d]

This report updates the evidence assessments for two types of interventions addressed in the previous assessment. **State CHW SoP** and **State CHW Certification** were chosen for this update because these interventions are seen as important first steps towards building a better-prepared and more sustainable CHW workforce.[e,f] As of March 2015, 16 states were addressing CHW training and certification through law, program, and partnership approaches.[g] As of June 2016, more states had addressed CHW SoP in their laws than any other workforce issue for CHWs, including certification.[b]

Best available evidence for State CHW SoP and State CHW Certification is assessed in this report for strength and quality—the method for this assessment is described on p.9. This evidence included studies published between January 1, 2011, and June 30, 2016 that analyzed interventions engaging CHWs who were practicing in accordance with a state CHW SoP or certification law.

Moving towards CHW integration into health care teams: One study in this assessment found that significantly more registered nurses in states with CHW certification (Ohio and Texas) than in states without CHW certification (California and New York) reported a belief that state certification of CHWs improves the ability of health care teams to deliver quality care.[1] This is a promising finding, as a positive view of CHW certification by health care team members suggests, potentially, that certified CHWs are more likely to be accepted by and subsequently integrated into health care teams.

1. Siemon M, Shuster G, Boursaw B. The impact of state certification of community health workers on team climate among registered nurses in the United States. *J Community Health*. 2015;;40(2):215–21.

The assessment found that, as of June 2016, State CHW SoP and State CHW Certification had "best" evidence because:

- 10 published studies observed that CHWs performing a role(s) within their legally defined SoP (in Texas, Oregon, and Massachusetts) delivered interventions that had positive health and economic outcomes for populations experiencing health disparities.
  - ◇ In five of these studies (all set in Texas), the CHWs were certified in accordance with state law.

Overall, results of this evidence assessment suggest that state CHW SoP and certification laws may provide the supportive context in which CHW interventions are successful in the health delivery system.

d. Division for Heart Disease and Stroke Prevention. *Policy Evidence Assessment Report: Community Health Worker Policy Components*. Atlanta, GA: Centers for Disease Control and Prevention; 2014.
e. Findley SE, Matos S, Hicks AL, Campbell A, Moore A, Diaz D. Building a consensus on community health workers' scope of practice: lessons From New York. *Am J Public Health*. 2012;102(10):1981–1987.
f. Centers for Disease Control and Prevention. Promoting Policy and Systems Change to Expand Employment of Community Health Workers An E-Learning Training Website. http://www.cdc.gov/dhdsp/chw_elearning/index.html. Accessed March 7, 2017.
g. Association of State and Territorial Health Officials. Certification of CHWs: Issues and Options for State Health Departments Website. http://www.astho.org/Community-Health-Workers/CHW-Certification-Presentation-Slides/. Accessed March 7, 2017.

How to Use This Report

Consider sharing this and the previous report to state and local health departments, health care providers and payers, and community and nonprofit organizations with a focus on health. When reviewing or disseminating these reports, make sure to consider their limitations:

- **The evidence about CHW SoP, certification, and other types of interventions addressed in state CHW laws did not derive from experimental study, so causality cannot be inferred.** For example, in this update, there were no studies comparing the effectiveness of CHWs with a SoP to CHWs without a SoP or certified CHWs to non-certified CHWs.
- CHW SoP, certification, and other state CHW laws were broadly defined. A state CHW law in effect at the time of a study was unique to that state, which may limit generalizability of study results.
- Even though this report focuses on laws, non-law approaches may also be effective ways for states to address CHW workforce needs. States consider other factors—legal, social, political, and fiscal—when deciding on a course of action. For example, some states have created CHW training or certification programs without first passing a law to establish program requirements;[h] no studies found in this assessment analyzed the outcomes of such programs.

Evidence Summaries

The next section of this report provides **Evidence Summaries** for State CHW SoP and State CHW Certification.

How to use an evidence summary:

Evidence summaries can help you better understand the evidence base as it relates to your individual state. Before reviewing the evidence summaries, it is helpful to research the health problems in your state. CDC offers many state health facts on its website, for example, statistics about chronic diseases such as heart disease, stroke, and diabetes.

Once you know what health problems exist in your state, think about what populations experience these problems. Say your state has a high prevalence of diabetes in the Hispanic population—then you would search the Evidence Summaries for State CHW SoP and State CHW Certification for studies of interventions that improved diabetes-related outcomes for Hispanic populations. For example, when you turn to the CHW SoP Evidence Summary and scan the fields of "Reported health-related outcomes" and "Groups studied," you find a study[i] of an intervention in which CHWs provided health education on diabetes self-management; this is a role that aligns with Texas's SoP law[j] which defines CHW roles as including community health education. You note that this study found improved glycemic control for a Hispanic population. Then, in the field, "State SoP laws linked to CHW interventions with positive health-outcomes," you find a short descriptions of Texas's law and two other state CHW SoP laws also linked to CHW interventions with positive health-related outcomes.

h. Association of State and Territorial Health Officials. Community Health Workers: Training/Certification Standards Website. http://www.astho.org/public-policy/public-health-law/scope-of-practice/chw-certification-standards/. Accessed March 7, 2017.
i. Walton JW, Snead CA, Collinsworth AW, Schmidt KL. Reducing diabetes disparities s through the implementation of a community health worker-led diabetes self-management education program. *Fam Community Health.* 2012 ;35(2):161–71.
j. TEX. ADMIN CODE 25 §§ 146.1 through 146.8 (146.9 to 146.12 repealed as of 6/24/15) (WestLaw 2015)).

Evidence Summaries

State Community Health Worker Scope of Practice

Evidence Level: **BEST**

A state can define a CHW scope of practice (SoP) by setting forth the potential settings, roles, functions, activities, and supervision requirements for CHWs.

Evidence for Potential Public Health Impact: VERY STRONG		**Evidence Quality: HIGH**	
	Effectiveness: ●●●●		Evidence Types: ●●●○
	Equity and Reach: ●●●●		Sources: ●●●○
	Efficiency: ●●●●		Evidence from Research: ●○○○
	Transferability: ●●●●		Evidence from Translation and Practice: ●●●●

Lower=●○○○ → ●●●●=Higher

Interventions delivered by CHWs performing a role within the state's legally defined SOP	• Diabetes management education,[2-3,5,7,20] cancer education,[17] or occupational health and safety training.[18] • Community needs assessment and research.[4,9,11-15] • Care coordination and patient navigation.[6,20,16] • Health screening.[6,8,19]
Reported health-related outcomes	• CHW integration and value in care teams.[6,8] • Community needs assessment.[14] • Improved cancer knowledge,[17,19] glycemic control,[5,7,20] and blood pressure[20] in patients; decreased odds of returning to the emergency room.[16] • Increased community capacity to address health issues.[18]
Groups studied	Hispanic,[5,7,17,20] low-income,[5,7] and Latino forest workers.[18]
Economic highlights	Cost-effectiveness,[7] and savings greater than costs.[16]
State SOP laws linked to CHW interventions with positive health-related outcomes	• Texas[5,6,7,8,14,16,17,20] *Texas law describes the type of activities a CHW may perform as including outreach, patient navigation and follow-up, community health education and information, informal counseling, social support, advocacy, and participation in clinical research TEX. ADMIN CODE 25 §§ 146.1 through 146.8 (WestLaw 2015)).* • Oregon[18] *Oregon law states that a CHW is someone who, among other possible functions, may assist members of the community to improve their health and increases the capacity of the community to meet the health care needs of its residents and achieve wellness (OR. REV. STAT. ANN. §§ 414.018 & 414.025 (WestLaw 2014)).* • Massachusetts[19] *Massachusetts law defines a CHW as someone who, among other possible roles, provides direct services, such as informal counseling, social support, care coordination and health screenings. (MASS. GEN. LAWS ANN. ch. 112 §§ 259 to 262 (WestLaw 2013)).*

For more on the scoring procedure, see the Methods and QuIC Tool.

Evidence base

1. Centers for Disease Control and Prevention. A Summary of State Community Health Worker Laws; 2017 [in development].

Research-based studies

2. Prezio EA, Balasubramanian BA, Shuval K, Cheng D, Kendzor DE, Culica D. Evaluation of quality improvement performance in the Community Diabetes Education (CoDE) program for uninsured Mexican Americans: results of a randomized controlled trial. *Am J Med Qual*. 2014;29(2):124.[k]
3. Prezio EA, Cheng D, Balasubramanian BA, Shuval K, Kendzor DE, Culica D. Community Diabetes Education (CoDE) for uninsured Mexican Americans: a randomized controlled trial of a culturally tailored diabetes education and management program led by a community health worker. *Diabetes Res Clin Pract.* 2013;100(1):19–-28.[l]
4. Messias DK, Parra-Medina D, Sharpe PA, Treviño L, Koskan AM, Morales-Campos D. Promotoras de Salud: roles, responsibilities, and contributions in a multisite community-based randomized controlled trial. *Hisp Health Care Int*. 2013;11(2):62–71.

Practice-based studies

5. Walton JW, Snead CA, Collinsworth AW, Schmidt KL. Reducing diabetes disparities through the implementation of a community health worker-led diabetes self-management education program. *Fam Community Health*. 2012;35(2):161–71.
6. Wennerstrom A, Hargrove L, Minor S, Kirkland AL, Shelton SR. Integrating Community Health Workers Into Primary Care to Support Behavioral Health Service Delivery: A Pilot Study. *J Ambul Care Manage*. 2015;38(3):263-72.[m]
7. Brown HS, Wilson KJ, Pagán JA, Arcari CM, Martinez M, Smith K, Reininger B. Cost-effectiveness analysis of a community health worker intervention for low-income Hispanic adults with diabetes. *Prev Chronic Dis*. 2012;9:E140.
8. Collinsworth A, Vulimiri M, Snead C, Walton J. Community health workers in primary care practice: redesigning health care delivery systems to extend and improve diabetes care in underserved populations. *Health Promot Pract*. 2014;15(2 Suppl):51S–61S.
9. Messias DK, Parra-Medina D, Sharpe PA, Treviño L, Koskan AM, Morales-Campos D. Promotoras de Salud: roles, responsibilities, and contributions in a multisite community-based randomized controlled trial. *Hisp Health Care Int*. 2013;11(2):62-71.
10. Eyster L, Bovbjerg RR. *Promising Approaches to Integrating Community Health Workers into Health Systems: Four Case Studies*. Washington, D.C.: The Urban Institute; 2013.
11. Nalty CC, Sharkey JR, Dean WR. Children's reporting of food insecurity in predominately food insecure households in Texas border colonias. *Nutr J*. 2013;12:15.
12. Umstattd Meyer MR, Walsh SM, Sharkey JR, Morgan GB, Nalty CC. Physical and social environmental characteristics of physical activity for Mexican-origin children: examining differences between school year and summer perceptions. *BMC Public Health*. 2014;14:958.
13. Nalty CC, Sharkey JR, Dean WR. Children's reporting of food insecurity in predominately food insecure households in Texas border colonias. *Nutr J*. 2013;12:15.
14. Sharkey JR, Dean WR, Nalty CC, Xu J. Convenience stores are the key food environment influence on nutrients available from household food supplies in Texas Border Colonias. *BMC Public Health*. 2013;13:45.
15. St John JA, Johnson CM, Sharkey JR, Dean WR, Arandia G. Empowerment of promotoras as promotora-researchers in the Comidas Saludables & Gente Sana en las Colonias del Sur de Tejas (Healthy Food and Healthy People in South Texas Colonias) program. *J Prim Prev*. 2013;34(1-2):41–57.
16. Enard KR, Ganelin DM. Reducing preventable emergency department utilization and costs by using community health workers as patient navigators. *J Healthc Manag*. 2013;58(6):412–27.
17. Nimmons K, Beaudoin CE, St John JA. The Outcome Evaluation of a CHW Cancer Prevention Intervention: Testing Individual and Multilevel Predictors Among Hispanics Living Along the Texas-Mexico Border. *J Cancer Educ*. 2017;32(1):183-189.
18. Bush DE, Wilmsen C, Sasaki T, Barton-Antonio D, Steege AL, Chang C. Evaluation of a pilot promotora program for Latino forest workers in southern Oregon. *Am J Ind Med*. 2014;57(7):788–799.
19. Berger S, Huang CC, Rubin CL. The Role of Community Education in Increasing Knowledge of Breast Health and Cancer: Findings from the Asian Breast Cancer Project in Boston, Massachusetts. *J Cancer Educ*. 2017;32(1):16-23.
20. Collinsworth AW, Vulimiri M, Schmidt KL, Snead CA. Effectiveness of a community health worker-led diabetes self-management education program and implications for CHW involvement in care coordination strategies. *Diabetes Educ*. 2013;39(6):792–9.
21. Bridgeman-Bunyoli A, Mitchell SR, Bin Abdullah AM, Schwoeffermann T, Phoenix T, Goughnour C, Hines-Norwood R, Wiggins N. It's in my veins: exploring the role of an Afrocentric, popular education-based training program in the empowerment of African American and African community health workers in Oregon. *J Ambul Care Manage*. 2015;38(4):297–308.
22. Siemon M, Shuster G, Boursaw B. The impact of state certification of community health workers on team climate among registered nurses in the United States. *J Community Health*. 2015;40(2):215–21.[n]

k. This study found a mixed health-related outcome: at baseline, study participants met process measures and achieved outcome measure targets more frequently though none of these differences reach statistical significance.
l. This study found a mixed health-related outcome: mean changes of HbA1c over 12 months showed a significant intervention effect. No differences between groups for secondary outcomes were found.
m. This study found a mixed reach-related outcome: reports of making referrals to outside agencies were limited, although this may be explained by CHWs' difficulty in accessing affordable resources.
n. This study found no reach-related outcome: the study found no significant differences in team climate between RNs who work in states with CHW certification programs/scope of practice laws.

State Community Health Worker Certification

Evidence Level: **BEST**

A state can establish a certification process for CHWs, by describing education, training, core competencies, reimbursement requirements, and inclusion of CHWs in certification development.

Evidence for Potential Public Health Impact: STRONG		**Evidence Quality: HIGH**	
	Effectiveness: ●●●○		Evidence Types: ●●●○
	Equity and Reach: ●●●○		Sources: ●●●○
	Efficiency: ●●●○		Evidence from Research: ○○○○
	Transferability: ○○○○		Evidence from Translation and Practice: ●●●●

Lower=○○○○ → ●●●●=Higher

Interventions delivered by state-certified CHWs

- Diabetes management education[2,4,6] or cancer education.[8]
- Needs assessment or research.[7, 11, 12,13]
- Patient navigation.[9]

Reported health-related outcomes

- Community needs assessment.[12]
- Improved cancer knowledge[8] and glycemic control in patients[4,6] and decreased odds of returning to the emergency room.[9]

Groups studied

Hispanic,[4,6,8] low-income.[4,6]

Economic highlights

Cost-effectiveness[6] and savings greater than costs.[9]

State SOP laws linked to CHW interventions with positive health-related outcomes

- Texas[4,6,8,9,12]
  In 1999, Texas enacted its first law to establish a voluntary certification program for CHWs. (TEX.HEALTH & SAFETY CODE ANN. §§ 48.001, 48.051 & 48.052 (WestLaw 2015)).

For more on the scoring procedure, see the Methods and QuIC Tool.

Evidence base

1. Centers for Disease Control and Prevention. A Summary of State Community Health Worker Laws; 2017 [in development].

Research-based studies

2. Prezio EA, Cheng D, Balasubramanian BA, Shuval K, Kendzor DE, Culica D. Community Diabetes Education (CoDE) for uninsured Mexican Americans: a randomized controlled trial of a culturally tailored diabetes education and management program led by a community health worker. *Diabetes Res Clin Pract*. 2013;100(1):19–28.[o]

Practice-based studies

3. Uriarte JA, Cummings AD, Lloyd LE. An instructional design model for culturally competent community health worker training. *Health Promot Pract*. 201415(1 Suppl):56S–63S.
4. Walton JW, Snead CA, Collinsworth AW, Schmidt KL. Reducing diabetes disparities through the implementation of a community health worker-led diabetes self-management education program. *Fam Community Health*. 2012;35(2):161–171.
5. Siemon M, Shuster G, Boursaw B. The impact of state certification of community health workers on team climate among registered nurses in the United States. *J Community Health*. 2015;40(2):215–21.[p]
6. Brown HS, Wilson KJ, Pagán JA, Arcari CM, Martinez M, Smith K, Reininger B. Cost-effectiveness analysis of a community health worker intervention for low-income Hispanic adults with diabetes. *Prev Chronic Dis*. 2012;9:E140.
7. Umstattd Meyer MR, Walsh SM, Sharkey JR, Morgan GB, Nalty CC. Physical and social environmental characteristics of physical activity for Mexican-origin children: examining differences between school year and summer perceptions. *BMC Public Health*. 2014;14:958.
8. Nimmons K, Beaudoin CE, St John JA. The outcome evaluation of a CHW cancer prevention intervention: testing individual and multilevel predictors among Hispanics living along the Texas-Mexico border. *J Cancer Educ*. 2017;32(1):183-189.
9. Enard KR, Ganelin DM. Reducing preventable emergency department utilization and costs by using community health workers as patient navigators. *J Healthc Manag*. 2013;58(6):412–27.
10. Eyster L, Bovbjerg RR. *Promising Approaches to Integrating Community Health Workers into Health Systems: Four Case Studies*. Washington, D.C.: The Urban Institute; 2013.
11. Nalty CC, Sharkey JR, Dean WR. Children's reporting of food insecurity in predominately food insecure households in Texas border colonias. *Nutr J*. 2013;12:15.
12. Sharkey JR, Dean WR, Nalty CC, Xu J. Convenience stores are the key food environment influence on nutrients available from household food supplies in Texas Border Colonias. *BMC Public Health*. 2013;13:45.
13. St John JA, Johnson CM, Sharkey JR, Dean WR, Arandia G. Empowerment of promotoras as promotora-researchers in the Comidas Saludables & Gente Sana en las Colonias del Sur de Tejas (Healthy Food and Healthy People in South Texas Colonias) program. *J Prim Prev*. 2013;34(1–2):41–57.

o. Mixed health-related outcome—mean changes of HbA1c over 12 months showed a significant intervention effect. No differences between groups for secondary outcomes were found.
p. No reach-related outcome—the study found no significant differences in team climate between RNs who work in states with CHW certification programs/scope of practice laws.

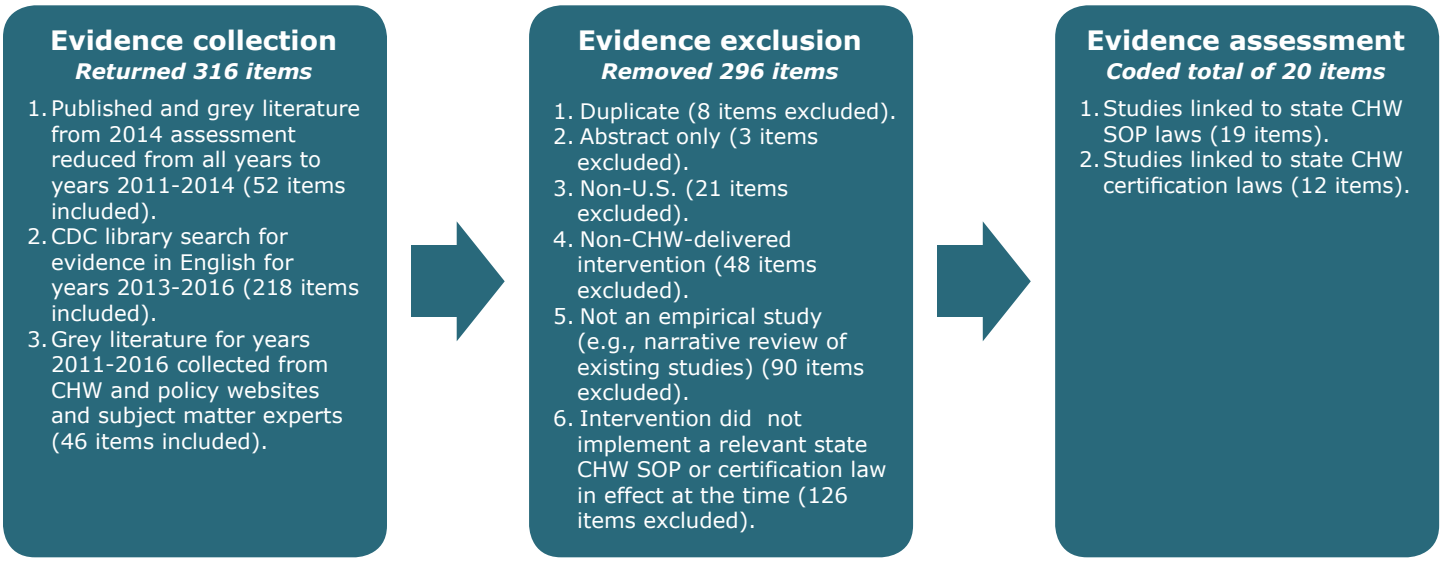
Method

Public decision makers need to know which policies are feasible and most likely to achieve the desired effect. **There are no studies of the impact of existing state CHW laws, so understanding their potential impact requires assessment of early (i.e., best available) evidence.** This report uses a novel approach to complete early evidence assessment called the Quality and Impact of Component Evidence Assessment, or QuIC.[q] For more on the QuIC method, contact CDC DHDSP.

In a QuIC assessment, "best available evidence" *refers to the written evidence base that is available at the current time and relevant to assessing a policy's potential public health impact. It documents empirical and non-empirical analyses of public health policies, programs, and activities. Using data or logic and theory, this evidence directly or indirectly links interventions of interest with actual or expected outcomes. In a QuIC assessment, evidence can include: journal articles, editorials, commentaries, and perspectives; policy briefs, statements, recommendations, and guidelines; evaluation and technical reports; conference papers and presentations; dissertations; and white papers.*

This report updates a QuIC Evidence Assessment completed in 2014, which identified 14 types of interventions addressed by components of evidence-informed state CHW laws.[r] This report updates the evidence assessment for the interventions 1) **State CHW Scope of Practice (SoP)** (now including supervision) and 2) **State CHW Certification** (core and specialty). The following search was completed to update the evidence bases from the 2014 assessment (Figure 2).

Figure 2. 2016 State CHW SoP and State CHW Certification evidence search



As Figure 2 shows, the collected evidence base of 316 items was ultimately narrowed to the 20 studies in which CHWs were practicing in accordance with a relevant state CHW SoP or certification law. Existence of a state law during a study was determined using CDC DHDSP's law assessment data up to June 30, 2016.

To assess the evidence level for a type of intervention addressed by a component of a public policy, a QuIC Evidence Assessment appraises 1) evidence for potential public health impact and 2) evidence quality. In this assessment, four trained CDC policy staff developed coding rules using the QuIC approach, and then coded the evidence bases for State CHW SoP and State CHW Certification. Next, a fifth policy staff coded a sample of 9 items of evidence for reliability. Agreement across the evidence for potential impact codes was 68%; across the quality codes, it was 75%. After disagreements were discussed, the fifth policy staff coded all 20 items of evidence, after which, agreement reached 80% for impact and 83% for quality.

q. Barbero C, Gilchrist S, Schooley MW, Chriqui JF, Luke DA, Eyler AA. 2015. Appraising the evidence for public health policies using the quality and impact of component evidence assessment. *Glob Heart*. 2015;10(1):3–11.
r. Barbero C, Gilchrist S, Chriqui JF, et al. 2016. Do state community health worker laws align with best available evidence? *J Community Health*. 2016;41(2):315–25.

Reconciliation of the remaining discrepancies was reached through discussion. Two QuIC Tools—one for State CHW SoP and one for State CHW certification—were completed using reconciled coding data (see p.11 for the QuIC Tool). To calculate the **evidence for potential public health impact level** and the **evidence quality level** for State CHW SoP and State CHW Certification, their eight criteria from the QuIC Tool were each assigned a numeric score (0–4 points; if none of its requirements were met, a criterion was assigned a score of 0 points) for the highest level reached. The four criteria scores for evidence for potential impact were summed as were the four criteria scores for evidence quality, and these numeric scores were converted into ordinal evidence levels.[s]

This procedure gave each of the evidence bases for State CHW SoP and State CHW Certification an evidence for potential public health impact level and an evidence quality level, which were used to categorize them (see Table below). Both State CHW SoP and State CHW Certification had evidence bases that scored "best." Lastly, the coders developed evidence summaries for each of these types of interventions. See p.12 for more on how an evidence summary was written.

Table. Method for categorizing overall evidence level, using evidence for potential public health impact and evidence quality levels

Evidence for Potential Public Health Impact Level	Evidence Quality Level	Evidence Level
Strong or Very Strong	High or Very High	**Best**
Weak or Moderate	High or Very High	**Promising Evidence Quality**
Strong or Very Strong	Low or Moderate	**Promising Evidence for Potential Public Health Impact**
Weak or Moderate	Low or Moderate	**Emerging**

s. The evidence for potential impact level was determined using the following conversion: 1–4 points= weak evidence; 5–8 points= moderate evidence; 9–12 points = strong evidence; and 13–16 points= very strong evidence. The evidence quality level was determined using the following conversion: 1–4 points= low quality evidence; 5–8 points= moderate quality evidence; 9–12 points = high quality evidence; and 13–16 points= very high quality evidence. For example, if the Effectiveness criterion scored "very strong" and the Equity and Reach criterion scored "very strong" and the Efficiency criterion scored "strong" and the Transferability criterion scored "strong," then 4+4+3+3=14="very strong" evidence for potential impact.

QuIC Evidence Assessment Tool

Section 1. Evidence for Potential Public Health Impact

Criterion and what it measures	**Weak Evidence** ●○○○	**Moderate Evidence** ●●○○	**Strong Evidence** ●●●○	**Very Strong Evidence** ●●●●
Effectiveness *Does it work, i.e., improve outcomes relevant to health?*	Indirect evidence for a positive expected outcome relevant to health	Direct evidence for a positive expected outcome relevant to health	Indirect evidence of mostly positive actual outcomes relevant to health	Direct evidence of mostly positive actual outcomes relevant to health
Equity and Reach *Does it work for target population(s)?*	Indirect evidence for a positive expected outcome relevant to equity and reach	Direct evidence for a positive expected outcome relevant to equity and reach	Indirect evidence of mostly positive actual outcomes relevant to equity and reach	Direct evidence of mostly positive actual outcomes relevant to equity and reach
Efficiency *Is it a good use of resources?*	Indirect evidence for a positive expected outcome relevant to efficiency	Direct evidence for a positive expected outcome relevant to efficiency	Indirect evidence of mostly positive actual outcomes relevant to efficiency	Direct evidence of mostly positive actual outcomes relevant to efficiency
Transferability *Does it work across diverse settings?*	Indirect evidence for a positive expected outcome relevant to health in two or more regions of the United States	Direct evidence for a positive expected outcome relevant to health in two or more regions of the United States	Indirect evidence of mostly positive actual outcomes relevant to health in two or more regions of the United States	Direct evidence of mostly positive actual outcomes relevant to health in two or more regions of the United States

Note: if none of its requirements are met, a criterion is assigned a score of 0 points, ○○○○

Section 2. Evidence Quality

Criterion and what it measures	**Low Quality** ●○○○	**Moderate Quality** ●●○○	**High Quality** ●●●○	**Very High Quality** ●●●●
Evidence Types *What is the most rigorous design?*	A narrative review or commentary suggests a positive outcome	A non-experimental study suggests a positive outcome	An experimental or quasi-experiment suggests a positive outcome	A systematic review suggests a positive outcome
Sources *What is the most credible source?*	A peer-reviewed journal or conference publication without conflict of interest disclosure suggests a positive outcome	A publication by a nonprofit or government organization suggests a positive outcome	A peer-reviewed journal or conference publication with conflict of interest disclosure suggests a positive outcome	A publication by a public health authority suggests a positive outcome
Evidence from Research *Relevance to controlled settings?*	A small amount of evidence from research suggests positive outcomes	A moderate amount of evidence from research suggests positive outcomes	A large amount of evidence from research suggests positive outcomes	A very large amount of evidence from research suggests positive outcomes
Evidence from Translation and Practice *Relevance to real world?*	A small amount of evidence from translation and practice suggests positive outcomes	A moderate amount of evidence from translation and practice suggests positive outcomes	A large amount of evidence from translation and practice suggests positive outcomes	A very large amount of evidence from translation and practice suggests positive outcomes

Note: if none of its requirements are met, a criterion is assigned a score of 0 points, ○○○○

Evidence Summary Template

Type of State CHW Intervention

Evidence Level: **LEVEL** *This field provides this type of intervention's evidence level which can be used to inform its priority in policymaking. Evidence level can be "best", "promising (quality)", "promising (impact)", or "emerging".*

This field describes the specific interventions that have been grouped under this type of intervention.

Evidence for Potential Public Health Impact: *LEVEL*		**Evidence Quality:** *LEVEL*	
Evidence for impact level can be Weak, Moderate, Strong, or Very Strong	Effectiveness: ●●●●	Evidence quality level can be Weak, Moderate, High, or Very High	Evidence Types: ●●●●
	Equity and Reach: ●●●●		Sources: ●●●●
	Efficiency: ●●●●		Evidence from Research: ●●●●
Lower=●●●● → ●●●●=Higher	Transferability: ●●●●		Evidence from Translation and Practice: ●●●●

Interventions delivered by CHWs	This field describes interventions delivered by certified CHWs practicing and/or CHWs practicing in accordance with a relevant state SOP law. For example, because there was a study which evaluated the outcomes of diabetes management education delivered by state-certified CHWs, "Diabetes management education" is listed in this field in the Evidence Summary for State CHW Certification.
Reported health-related outcomes	This field reports positive health-related outcomes from the intervention studies. Note that non-intervention study outcomes contributed to the evidence level, but are not described in this field and that non-positive outcomes are footnoted in the "Evidence base" list (below). Note that evidence for SoP and certification was indirect, i.e., studies did not focus specifically on SoP or certification as independent factors that explained health outcomes.
Groups studied	This field reports the groups for which intervention studies found positive health-related outcomes.
Economic highlights	This field reports any positive economic outcomes of the interventions studied such as cost-effectiveness, savings, and quality of care.
State laws linked to CHW interventions with positive health-related outcomes	This field provides the specific state law(s) that provide the authority for or facilitate the programs studied in the evidence base. For example, while Texas's SoP law (TEX. ADMIN CODE 25 §§ 146.1 through 146.8), which describes CHW SoP as including community health education, was in effect, a program that engaged CHWs to provide diabetes management education had positive outcomes. Therefore, in the State CHW SoP Evidence Summary, this field provides a short summary of Texas's law along with a citation to the study of this program.

Evidence base

Research-based studies

Here you will find references for intervention studies that took place in a research context. In these studies, researchers were able to allocate subjects into the intervention and the control groups.

Practice-based studies

Here you will find references for intervention studies that took place under real-world circumstances. In these studies, evaluators were not able to allocate subjects into the intervention and the control groups.