Evidence-based Practice Center Technical Brief Protocol

Project Title: ***Impact of Community Health Worker Certification on Workforce and Service Delivery for Asthma and Other Selected Chronic Diseases***

I. Background and Objectives for the Technical Brief

According to the American Public Health Association's Community Health Worker Section, a Community Health Workers (CHW) "is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served… [enabling them] 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."[1] CHWs are deployed by state and local health departments, healthcare systems, and health organizations to serve as cultural mediators between communities and health and social service systems. They provide culturally appropriate health education and information and informal counseling and social support. They also link individuals and families to needed resources and advocate for individual and community needs.[2]

Despite their demonstrated effectiveness in reducing disparities across a range of chronic and acute conditions, several factors have hindered their full integration in healthcare settings, which may threaten their optimal utilization. It has been suggested that CHW certification or credentialing, a process that is present or currently underway in a number of states,[3] may increase the diffusion of the use of CHWs in health care systems by standardizing the delivery of CHW services.[5-7] However, doing so is not without controversy, and there has been considerable debate about the benefits and drawbacks of CHW certification. On the one hand, certification could legitimize the role of CHWs and ensure consistency in the quality of care provided, confer opportunities for educational and career advancement, improve employment stability, assure that CHWs have a standard skillset and knowledge base, and increase funding for services.[5, 8-11] On the other hand, there are important risks to CHW certification.[8] First, the cost of certification could prove to be prohibitive for future and existing CHWs. Second, the institutionalization of CHWs through certification or licensure processes may undermine the grassroots orientation that underpins the CHW model. Third, certification may lead to the creation of hierarchies among CHWs such that uncertified CHWs are at a disadvantage, compared to their certified counterparts, in terms of employment. Fourth, it is unclear whether patients or community members ascribe any level of importance to CHWs being certified.[8]

Examining the extent to which differences in asthma self-management and health outcomes, as well as other conditions, may emerge as a function of CHW certification is a timely area of inquiry. Thus, the overarching goal of this project is to assess the current state of evidence of the processes, risks, benefits, and implications of CHW certification and to clarify future research or evaluation needs.

II. Guiding Questions

This technical brief is guided by the following questions:

- How do CHW recruitment, retention, scope of practice, reimbursement, or employer liability differ among U.S. programs, states, or territories requiring CHW certification to deliver interventions for asthma and selected other topics or chronic conditions (e.g., diabetes, cardiovascular disease, maternal-child health), compared to those that do not require any CHW certification for CHW delivery of these services?
    - Do these results differ when only asthma interventions or programs are analyzed?
    - Do these results differ by demographics of the population served (e.g., age, sex, racial/ethnic background, income level, rural vs. urban area)?
- Do quality or consistency of care, health outcomes (e.g., asthma control or asthma-related emergency department visits), or patient/family acceptance, trust, and use of CHWs differ among U.S. programs, states, or territories requiring CHW certification to deliver interventions for asthma and selected other topics or chronic conditions (e.g., diabetes, cardiovascular disease, maternal-child health), compared to those that do not require any CHW certification for CHW delivery of these services?
    - Do these results differ when only asthma interventions or programs are analyzed?
    - Do these results differ by demographics of the population served (e.g., age, sex, racial/ethnic background, income level, rural vs. urban area)?
- What is the context of CHW certification requirements and their implementation in the United States? This description might include the various CHW certification models (e.g., state-run, employer-run, or independent association-run, or community-based models; any training requirements, core competency curricula, or supervision or mentorship that might be involved; requisite infrastructure to establish various models of CHW certification), examples of CHW programs that do not require any certification, regulatory issues (e.g., regarding scope of practice), financing (including any training costs), and resources.
- What are the potential positive and negative implications of requiring CHW certification?
- What future research is needed to close existing evidence gaps regarding CHW certification?

III. Methods

1. Data Collection:

A. Discussions with Key Informants

We will identify Key Informants with experience and expertise across the spectrum of domains associated with CHW certification including CHWs and CHW trainers; CHW employers (including those from health systems, state health departments, and payors); patients with asthma and their caregivers and providers;

stakeholders from national agencies/organizations; and researchers, policy makers, and national thought leaders in the CHW arena.

We will solicit input on the predominant CHW certification models across the country as well as barriers and facilitators of CHW certification program implementation, in order to discern the proportion of certification programs that are employer-, state-, community-based organization-driven, or run by independent CHW associations. We will look to Key Informants to share their perspectives on the effect of certification on recruitment and retention in the CHW workforce, as well as CHW scope of practice, core competencies, and recommended governance structures for CHW certification. Input from patients, caregivers, and clinicians supporting asthma self-management and control and/or disease management for other chronic conditions will allow us to determine how CHW certification is regarded among direct recipients of CHW-delivered services, in particular, its perceived utility and desirability. Key Informants from CHW employers will help us explore the long-term financial models undergirding CHW certification initiatives. Our CHW Key Informants will be essential in not only addressing the aforementioned issues, but also, illuminating the ramifications of CHW certification on their everyday practice, impact on patient outcomes, entry and retention in the field, and the overall positives and negatives of CHW certification. Taken together, these interviews will allow us to characterize the full complement of factors associated with CHW certification that may not appear in either the grey or published literature.

We will develop interview guides, separate for each type of Key Informant, as appropriate. Key Informant interview questions will include the following questions:

Key Informant Interview Questions (preliminary)
1. To your knowledge, did we miss any key published or unpublished documents of interest (studies or reports)? Are there any on the horizon that we should be aware of? Are there any specific Web sites that we should search for additional information?
2. What are the prevailing sentiments about CHW certification among your friends/family members/colleagues/constituents? Do these differ for mandatory versus voluntary certification?
3. How might CHW certification influence the quality, delivery, and experience of care of patients with asthma? Among patients with multiple comorbid conditions?
4. From your perspective, to what extent does CHW certification influence CHWs' entry into the field, and their desire and capacity to remain in the field? Does this differ for mandatory versus voluntary certification?
5. From your perspective, what ways, if any, does certification contribute to patients' asthma-related outcomes, and/or outcomes of other chronic diseases?
6. Does it matter to you if the CHW you work with has been certified? Why? Why not?

7. What is the infrastructure needed to support CHW certification? What should the components of CHW certification be? Should there be maintenance or re-certification?
8. How do you attribute the work of CHWs to health outcomes? How would you measure the impact of a CHW?
9. Should CHWs' hiring and promotion require certification? How might certification efforts affect long-term, sustainable funding mechanisms to support CHWs?
10. What are the most important outcomes to consider when evaluating CHW certification?

We will conduct interviews individually or in small groups. Notes will be drafted for each call. Calls will be recorded to assist with ensuring complete and accurate documentation. Two team members will review the recordings and notes from the calls to identify themes.

B. Grey Literature search

Targeted gray literature searching will include reports and presentations published by the Association of State and Territorial Health Officials (ASTHO), the Centers for Disease Control (CDC), the Urban Institute, the Connecticut Health Foundation, the Progress Report of the Community Health Worker (CHW) Core Consensus (C3) Project, and the National Academy for State Health Policy. In addition, we will conduct a review of the websites of state health departments which have developed CHW certification programs (e.g., Texas, Massachusetts, Minnesota, and Ohio). We will also request recommendations from our Key Informants for other sources of information.

C. Published Literature search

We will define eligibility criteria, using refined Population, Intervention, Outcomes, and Setting criteria individualized to the guiding questions and with guidance from the interviews with the Key Informants. Our preliminary eligibility criteria are:

PICOTS	Inclusion	Exclusion
Population	• Studies conducted among CHWs* • Study addresses the use of CHWs for patients with asthma, diabetes, CVD, or maternal-child development	• Studies that do not meet our definition of CHWs • Studies that address the use of CHWs for patients with conditions other than asthma, diabetes, CVD, or maternal-child development
Intervention	• Study evaluates the effects of CHW certification.	• Studies that do not evaluate an aspect of CHW certification
Comparison	• States, health plans, or programs that do not require CHW certification (either training or experience-based certification. We will also allow for historical controls.	• Studies that do not have a comparison group.
Outcomes	• CHW recruitment, retention, scope of practice, reimbursement, employer	• Studies that do not evaluate one of the listed outcomes

	liability, payment mechanisms • Quality or consistency of care, health outcomes, patient/family acceptance, trust, or use of CHWs	
Timing	• We will include studies, regardless of timing.	• We will not have any criteria based on timing.
Setting	• Study is based in the United States	• Studies conducted outside of the United States
Study design	• Studies with a comparison group, such as randomized controlled trials, nonrandomized controlled trials, before/after studies, cross-sectional, or historical controls	• No original data (e.g., editorials, letters, commentaries, review articles) • Not written in English

* We will use the American Public Health Association's definition for community health workers.[1] Other terms for community health workers can be found in Appendix A.
Abbreviations: CHW = community health worker; CVD = cardiovascular disease

We will focus on PubMed and CINAHL, with targeted searches of PsychINFO and Web of Science. We will also handsearch previous relevant reviews.

Our preliminary specific search strategies are in Appendix B.

2. Data Organization and Presentation:

A. Information Management

Aided, where appropriate, by controlled vocabulary terms and text words, we will tag each eligible citation with a limited amount of information, directed by the elements of the guiding questions, including population, setting and type of intervention. To evaluate the state of the evidence concerning the relationships between CHW certification, CHW service delivery, and asthma and other chronic disease outcomes, we will abstract information based on elements of the National Quality Forum Criteria for Patient Reported Outcomes (PROs) in Performance Measurement. Our adaptation will include evidence of importance to stakeholders (patients, caregivers, CHWs, employers, and payors), scientific acceptability (specifically, validity and reliability), usability (i.e., evidence that data can be used to guide CHW interventions and practice), and relevance to CHWs and asthma-related outcomes. We will use this appraisal to develop a conceptual framework that will clarify connections between CHW certification context and health outcomes, with a particular emphasis on pediatric asthma control and management.

We will, where possible, summarize current and high quality systematic reviews and guidelines. For eligible systematic reviews and guidelines, we will assess their quality and extract select key elements, including the findings and recommendations. We will use ROBIS to assess the quality of systematic reviews and the AGREE-II instrument to assess guidelines.[19, 20]

All information from the article review process will be entered into the Systematic Review Data Repository (SRDR) by the reviewer. Reviewers will enter comments into the system whenever applicable. The SRDR database will be used to maintain the data and to create detailed evidence tables and summary tables. We

may contact the authors of the included studies for additional data, if necessary.

B. Data Presentation

As noted previously (Section 1A), we will identify themes in the Key Informant interviews that will help guide the literature reviews. The themes will also be used to help provide context for the findings from the literature review. We will classify identified material from the review, as described in Section 2A. These will be presented in matrices or graphs based on what conveys the message in most useful and useable format. We will also seek to develop or adapt a conceptual framework that will clarify connections between CHW certification context and health outcomes, with a particular emphasis on pediatric asthma control and management.

To provide a picture of the state of evidence, we will use software tools, such as SWIFT-REVIEW, to produce heat maps, matrices and other visualizations of the identified research. For instance, graphically displaying the number of CHW certification programs, by type of condition, by US state, etc.

IV. References

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V. Definition of Terms

Community Health Worker: Assist individuals and communities to adopt healthy behaviors. Conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health. May provide information on available resources, provide social support and informal counseling, advocate for individuals and community health needs,

and provide services such as first aid and blood pressure screening. May collect data to help identify community health needs. (Bureau of Labor and Statistics, 2017)

Certification: a formal recognition awarded by relevant authorities to health workers who have successfully completed pre-service education and who have demonstrated meeting predetermined competency standards (WHO, 2018)

CHW = Community health worker

PRO = patient-reported outcomes

TOO = Task Order Officer

VI. Summary of Protocol Amendments

In the event of protocol amendments, the date of each amendment will be accompanied by a description of the change and the rationale.

VII. Key Informants

Within the Technical Brief process, Key Informants serve as a resource to offer insight into the clinical context of the technology/intervention, how it works, how it is currently used or might be used, and which features may be important from a patient of policy standpoint. They may include clinical experts, patients, manufacturers, researchers, payers, or other perspectives, depending on the technology/intervention in question. Differing viewpoints are expected, and all statements are crosschecked against available literature and statements from other Key Informants. Information gained from Key Informant interviews is identified as such in the report. Key Informants do not do analysis of any kind nor contribute to the writing of the report and have not reviewed the report, except as given the opportunity to do so through the public review mechanism

Key Informants must disclose any financial conflicts of interest greater than $5,000 and any other relevant business or professional conflicts of interest. Because of their unique clinical or content expertise, individuals are invited to serve as Key Informants and those who present with potential conflicts may be retained. The TOO and the EPC work to balance, manage, or mitigate any potential conflicts of interest identified.

VIII. Peer Reviewers

Peer reviewers are invited to provide written comments on the draft report based on their clinical, content, or methodologic expertise. Peer review comments on the preliminary draft of the report are considered by the EPC in preparation of the final draft of the report. Peer reviewers do not participate in writing or editing of the final report or other products. The synthesis of the scientific literature presented in the final report does not necessarily represent the views of individual reviewers. The dispositions of the peer review comments are documented and will be published three months after the publication of the Evidence report.

Potential Reviewers must disclose any financial conflicts of interest greater than $5,000 and any other relevant business or professional conflicts of interest. Invited Peer Reviewers may not have any financial conflict of interest greater than $5,000. Peer reviewers who disclose potential business or professional conflicts of interest may submit comments on draft reports through the public comment mechanism.

IX. EPC Team Disclosures

EPC core team members must disclose any financial conflicts of interest greater than $1,000 and any other relevant business or professional conflicts of interest. Related financial conflicts of interest that cumulatively total greater than $1,000 will usually disqualify EPC core team investigators.

X. Role of the Funder

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Appendix A: List of terms for community health workers

CHW
Community care worker
Community care coordinator
Community health aide
Community health advocate
Community health liaison
Community health navigator
Community health representative
Community Health worker
Community liaison
Community navigator
Community outreach worker
Community-based health worker
Consejeras
Dumas
Embajadores
Health advocate
Health ambassador
Health Extension Worker
Health liaison
Health navigator
Health paraprofessional
Lay health advocate
Lay heath advisor
Lay health worker
Lay health volunteer
Outreach educator
Outreach worker
Patient navigator
Peer health workers/promoters
Promotores/promotoras de salud

Appendix B. Search Strategy

Search #	String
1	"Community Health Workers/legislation and jurisprudence"[Mesh] OR "Community Health Workers/organization and administration"[Mesh]
2	“CHW”[tiab] OR Community Care Worker*[tiab] OR Community health advocate*[tiab] OR community health aid*[tiab] OR Community health liaison*[tiab] OR Community health navigator*[tiab] OR community health representative* [tiab] OR Community Health worker* [tiab] OR “Community Health Workers” [mh] OR Community liaison*[tiab] OR Community navigator*[tiab] OR “Community-based health”[tiab] OR “frontline health worker”[tiab] OR Health advisor*[tiab] OR Health advocate*[tiab] OR Health ambassador*[tiab] OR Health Extension Worker*[tiab] OR Health liaison*[tiab] OR Health navigator*[tiab] OR “health paraprofessional"[tiab] OR OR Outreach educator*[tiab] OR outreach worker*[tiab] OR OR Patient navigator*[tiab] OR peer health worker*[tiab] OR consejera*[tiab] OR duma*[tiab] OR embajador*[tiab] OR promotor* de salud[tiab] OR promotora*[tiab]
3	(Early Intervention [mh] OR Community Health Workers/education*[mh] OR “Program Evaluation” [mh] OR Certification [mh] OR “program development” [mh] OR training [tiab] OR certif*[tiab] OR education [tiab] OR “Professional Development”[tiab] OR “program development” [tiab])
4	English[lang]
5	#1 OR (#2 AND #3)
6	#4 AND #5