Welcome to
ASTHO’s Community Health Worker Call Series
Achieving a Strong Evidence-base for Sustainable CHW Programs

Presented by ASTHO and the Health Resources & Services Administration
Objectives of the call:

- Develop a broad understanding of the current status of CHW evaluation.
- Understand health outcomes CHWs help to accomplish and how they are accomplished.
- Become familiar with a national initiative intended to identify common process and outcome indicators for CHW practice.
- Identify and reflect on the tasks and action steps that participants can apply in their own settings.
Speakers

Noelle Wiggins, EdD, MSPH
Founder and Director, Community Capacitation Center
Multnomah County Health Department
Speakers

Edith Kieffer, MPH, PhD
Professor, School of Social Work
University of Michigan
Speakers

Terry Mason, PhD
Independent Public Health Policy Consultant
Boston, Massachusetts
Speakers

Leticia Rodriguez Garcia, CHW, MPHc
Portland State University
Brainstorming Question

What are some pressing questions you have about CHW evaluation?
Three truths and a misconception about CHW evaluation and research

• Truth #1: CHW programs have historically lacked stable funding (and still do).
• Truth #2: The lack of stable funding has extended to and affected our ability to conduct research and evaluation about CHW programs.
• Truth #3: CHW researchers and evaluators have been unable to conduct the kind of multi-site, longitudinal studies needed to firmly establish the evidence-base for a field or model (cf. David Olds’ Nurse Family Partnership).
• Misconception: There is a lack of research and evaluation concerning the CHW model.
A quick overview of the last 50 years of CHW research and evaluation

No. of studies found, searching Medline (EBSCOhost interface) on the term, “community health worker”:

- 1964-present: 1,948
- 1964-1973: 14 (word “aide” is often used)
- 1974-1983: 146 (majority in developing world)
- 1984-1993: 259 (focus remains outside the US, articles from Alaska, Appalachia appear)
- 1994-2003: 252
- 2004-2013: 864 (550 since 2010 when ACA was passed)
- 2014-2016: 574
Common outcomes studied, 1964-present

- Diabetes: 119
- Mental health: 88
- Prenatal: 46
- Hypertension: 39
- Asthma: 31
- Heart disease: 13
- SDOH: 11
- Health inequities: 5 (some are same as above)


Journal issues dedicated to CHWs (partial list)

• Two companion issues of the *Journal of Ambulatory Care Management*, one pair in 2011 and one pair in 2015
• *Health Promotion Practice*, May 2016, Vol. 17(3)
Where we are now and where we are going

- Increase in measurement of outcomes relevant to health services sector, e.g. utilization of health services, return on investment (ROI), cost effectiveness analysis (COA)
- Increase in methodological rigor
- Continued need for multi-site, longitudinal studies
- Need for common indicators so that results can be aggregated at multiple levels
- Need to maintain and increase CHW involvement in evaluation
CHW Randomized Controlled Trial Studies
Two Successful Examples

• Detroit health, social and community-based organizations and University of Michigan colleagues have used community-based participatory research (CBPR) approaches to address diabetes and its risk factors in Southwest and Eastside Detroit since the 1990s.
• CHWs were involved in formative work, developing and conducting the interventions, participated in planning and conducting process evaluation and disseminating results.
• The REACH Detroit Partnership and Healthy Mothers on the Move (Healthy MOMs) were two CHW-centered randomized controlled trials (RCTs) affiliated with the Detroit Community Academic Urban Research Center (URC).
The REACH Detroit Partnership

• The **REACH Detroit Partnership** (reachdetroit.org) was founded in 1999 with a CDC REACH (Racial and Ethnic Approaches to Community Health) grant.

• Community Health and Social Services (CHASS), a federally qualified health center and URC partner in southwest Detroit: host organization and, often prime grantee, during 3 phases, all with CHWs at their heart:
  • **Phase 1:** (CDC and Detroit foundation funding) community, social support, health system and individual-level interventions;
    • Community resources and activities were developed and demonstrated success, including CHASS’s community produce market and community-based physical activity.
    • Pre-post evaluation of outcomes among participants with type 2 diabetes
  • **Phase 2:** (NIH/NIDDK pilot funding): RCT with a delayed intervention control group
  • **Phase 3:** (NIH/NIDDK R-18 funding): RCT with an enhanced usual care control group
The REACH DETROIT PARTNERSHIP
CHW “Journey to Health” Intervention Goals

• Improve diabetes self-management
• Increase physical activity and healthy eating
• Enhance individual-family-provider relationships
• Increase access to community resources
• Increase healthcare consumer skills
The REACH Detroit Partnership
CHW “Journey to Health” Intervention

• CHWs link participants with community resources and services that address the social determinants of health; help participants develop health-related and other goals; provide 11 session individual and group education and social support through home visits and by accompanying participants to clinic visits.
REACH Detroit Partnership Analysis and Results

• Our third phase RCT, used a rigorous design, tracked outcomes at baseline, and 6 months and 12 months following the 6 month long intervention, comparing the CHW intervention to enhanced usual care.
• Added Peer Leader component to the RCT. Peers were trained, former REACH Detroit participants who kept contact with participants after the CHW intervention concluded.
• Linear mixed models using to estimate average pre-and-post intervention changes within and between CHW intervention-only, CHW intervention plus Peers and Enhanced Usual Care group.
• Our REACH Detroit studies have consistently shown that participants have achieved significantly improved blood sugar control, diabetes-related distress, and depressive symptoms; improved diabetes-related knowledge and self-management knowledge and efficacy.
Evaluation of Processes, Outcomes, and Return on Investment of Integrating CHWs into all Interdisciplinary Health Teams

Project Aims (funder: National Center for Healthcare Reform)

• Evaluate the impact of CHW-integrated patient care teams on quality of care, health outcomes, and costs
• Examine processes for successful integration of CHWs within health care teams
• Because this is a clinical program, we will evaluate clinical and related outcomes for all eligible patients who are assigned a CHW
• Mixed method evaluation
• Key process and outcome indicators: how fully CHWs are integrated; coordination among team members; referral linkages made/outcomes of referrals; effects on meeting client needs, health care use; satisfaction with CHWs and care; clinical outcomes; return on investment.
Dissemination of evaluation results

• CHWs involved process and outcome evaluation-reviewing, discussing results and their implications
• Community dissemination-focus groups/community discussions
• Steering Committee approved each new intervention design
Healthy Mothers On the Move
Madres Saludables en Movimiento

Funding: grant # 5 R18 DK 062344
National Institute of Diabetes, Digestive and Kidney Disorders
2002 – 2006
Healthy Mothers On the Move development

• Community-based Steering Committee built on results of HRSA and CDC funded studies to design the Healthy MOMs intervention. Women asked that the program be led by “women like us”...CHWs of course.
Healthy MOMs Purpose & Aims

**PURPOSE:** To demonstrate the effectiveness of a healthy lifestyle intervention tailored to the needs of pregnant and postpartum African American and Latino women in Detroit, Michigan in reducing behavioral and clinical risk factors for type 2 diabetes

**Primary Aim:** Increase the proportion of women who eat healthfully (increased fruits, vegetables & fiber; reduced fat and sugar); and who exercise regularly at least at moderate levels

**Process Aim:** Assess and document challenges and contributors to successful project implementation with an aim toward further opportunities for translation and sustainability
Healthy MOMs
Curriculum Content

Weekly Meetings:

| 2. Plan to be Active! *       | 9. Stay Motivated!               |
| 3. Plan to Eat Healthy! *     | 10. Healthy Activities Together! |
| 5. Eat More Fiber!            | 12. Mom & Baby*                  |

10 weekly group meetings and 10 linked weekly optional activity days
4 one-on-one home visits
Control group received sessions 1, 8, 11 and 12 in a group meeting.
Women’s Health Advocates (WHAs)
Optional Activity Days
Intervention Effects

Improved nutrient intake

- Healthy MOMs participants had greater improvements in nutrient consumption than women in the control group after the intervention.

<table>
<thead>
<tr>
<th>Increased consumption</th>
<th>Decreased consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vegetables p&lt;0.001</td>
<td>Added sugars p&lt;0.05</td>
</tr>
<tr>
<td>Fiber p&lt;0.02</td>
<td>Total fat p&lt;0.02</td>
</tr>
<tr>
<td></td>
<td>Saturated fat p&lt;0.01</td>
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<tr>
<td></td>
<td>Calories from saturated fat p&lt;0.001</td>
</tr>
<tr>
<td></td>
<td>Calories from solid fats &amp; added</td>
</tr>
<tr>
<td></td>
<td>sugars (SoFAS) p&lt;0.001</td>
</tr>
</tbody>
</table>

*Changes in consumption of calories, calories from added sugar, and fruits did not differ significantly for intervention group women compared to control group women (p>0.10).*
Healthy MOMs Intervention Effects
Reduced depressive symptoms

![Bar chart showing CES-D scores for MOMS Baseline, MOMS Follow-up, Control Baseline, Control Follow-up, and Intervention Effect.]

- MOMS Baseline: 13.3
- MOMS Follow-up: 11.2
- Control Baseline: 12.9
- Control Follow-up: 12.7
- Intervention Effect: 1.8

**p < 0.01
*p < 0.05
Effect of Healthy MOMs Intervention on Depression in Non-English Speaking Pregnant and Postpartum Latinas

Depression Score (CES-D) in Non-English Speaking Women

Baseline | Follow-up | Postpartum
---|---|---
13.42 | 12.26 | 12.47
12.92 | 11.67 | 10.89
11 | 13 | 15

Intervention (HLI) vs Control
Support and Acknowledgements

• Centers for Disease Control and Prevention
• Detroit Community Academic Urban Research Center
• Michigan Diabetes Research and Training Center
• General Clinical Research Center
• National Institutes of Health/NIDDK
  # 5 R18 DK 062344
• REACH Detroit Partnership
  CDC Cooperative Agreement # U50/CCU417409, U50/CCU522189-02
• HRSA/Maternal and Child Health Bureau
  HRSA/MCHB grant # H59MC07461
• W.K. Kellogg Community Health Scholars Program
For additional information regarding Healthy MOMs, please contact:

Edith Kieffer
Principal Investigator
ekieffer@umich.edu

Funding: grant # 5 R18 DK 062344
NIH/ National Institute of Diabetes and Digestive and Kidney Disorders
CHW Evaluation Issues in the Current Environment

In response to the first two presenters: Questions?
A. Were you surprised at the number of studies of CHW interventions?
B. Why do you think so many policy-makers & others think there is little to no evidence?
C. What is most interesting to you about the rigorous studies described by Edie Kieffer?
CHW Evaluation Issues in the Current Environment

KEY MULTIPLE PURPOSES OF EVALUATION RESEARCH

- Improve interventions
- Demonstrate CHW contribution
- Case to integrate/cover CHWs
Evaluation in Current Environment. . .cont’d.

1) Improve interventions/care team services
   ✓ Document process and challenges to assure quality, fidelity to model, accountability (Examples: REACH Detroit, Healthy MOMs projects)
   ✓ Help to identify best practices for implementation
   ✓ Assure best outcomes—implementation is KEY

2) Demonstrate CHW contribution to outcomes
   ✓ Common weakness of evaluations – insufficient information on CHW recruitment & hiring, training, activities – hard to replicate!
Evaluation in current environment . . . cont’d . . .

2) Demonstrate CHW contribution to outcomes (cont’d)

✓ Measure intermediate outcomes, precursors to health changes, sensitive to CHW activities, relationship building

Examples:

- improved patient knowledge of asthma triggers, use of asthma medications
- increased client empowerment, engagement in self care
- enhanced individual & family/provider relationships (REACH Detroit study)
- participant access to food, water, security (Common Indicators)
Evaluation in current environment. . .cont’d. . .

3) Making case for integrating CHWs into systems, financing and covering them sustainably

✓ Audience increasingly healthcare payers, provider decision-makers

✓ Common overlap between measures sensitive to CHW contributions and quality measures that health providers & payers like Medicaid are accountable for now
Examples of overlap:

- Improved appropriate use of asthma medication
- Improved rates of breast, cervical cancer screening
- Improved A1c control for diabetes patients
- Timely prenatal care
Evaluation in current environment . . . cont’d . . .

✓ **Cost effectiveness, return on investment** top priority

- **At a minimum** programs, intervention need to **capture costs** of implementation or integration of CHW model into existing systems

- **Most CHW evaluation research** that demonstrate cost savings, effectiveness, positive ROI **attributed to changes in health care utilization** (-ER, improved primary care use, lower readmission rates)

- **Additional cost saving** results with CHWs= fewer patient no-shows, fewer patients lost to care
Evaluation in current environment. . .cont’d. . .

Major caution:

✓ Risk = CHW intervention evaluations focus disproportionately on outcomes defined by medical systems, at expense of inclusion of CHW and other providers and communities who have major interests in health practices and outcomes
Evaluation in current environment. . .cont’d. . .

Current important research challenge:

1. **Major critique**— CHW studies too difficult to compare, measuring different outcomes

2. How to make large evaluation studies and regular program evaluations of CHWs contributions and impact easier to compare and aggregate?

3. **One solution**: The Common Indicators project at UMI and PSU-CCC—which the next speakers will discuss
CHW Evaluation Common Indicators Project

- Michigan Community Health Worker Alliance (MiCHWA) project; funding: the Vivian A. and James L Curtis Research and Training Center, University of Michigan School of Social Work
- Aimed to fill an evaluation knowledge gap by identifying and developing common evaluation indicators to capture the unique contributions of CHWs to successful CHW programs and their added value to the health care and human services system
- Literature review
- 9 Key Informant interviews with national CHW evaluation experts
- 3 Michigan-based focus groups with CHWs
- Michigan-based CHW program surveys
CHW Evaluation Common Indicators Project

Findings

• **What is unique about CHWs?**
• CHW focus group participants emphasized social support, meeting where people where they are, listening, empowerment and health promotion
• Key informants focused on tasks, e.g. health promotion, system navigation, also empowerment
• Program survey respondents emphasized trust and interpersonal relationships, satisfaction with CHW relationship, social support (peer, emotional, tangible)
• There was more agreement on qualities: 1) Ability of CHWs to establish and maintain rapport and 2) community membership and work in communities
CHW Common Indicators Summit in Oregon

- Hosted by the Community Capacitation Center (CCC) of the Multnomah Co. Health Dept. and the Oregon CHW Consortium at Portland State University
- Held in Portland, OR, on October 2-3rd, 2015
- CHW Common Indicator Summit was made possible by grants from the Cambia Health Foundation and Social Venture Partners of Portland, OR
- 16 CHWs, researchers and evaluators, and program staff from five states
- The first day ended with a review of potential common process and outcome indicators based on a summary of the results of the MiCHWA Program Evaluation Survey that was completed by Summit participants prior to the Summit
- Participants reviewed, compared and discussed indicators and data collection and analysis processes, identified gaps and considered implications for the work of the Summit
CHW Common Indicators (CI) Group

- Co-directed by Edith Kieffer and Noelle Wiggins
- An executive summary of the summit has been produced and continues to be shared with colleagues around the U.S.
- To further the development of common indicators, the CI group:
  - Participates in monthly conference calls;
  - Has grown to include 30+ CHWs, researchers and evaluators, and program staff from seven states;
  - Gained input on proposed indicators from additional Oregon experts during a session at the Oregon Community Health Workers Association (ORCHWA) Annual Conference on August 26th, 2016; and
  - Is planning an APHA 2016 pre-conference workshop titled “Developing common evaluation measures to sustain community health worker programs”
Proposed Process Indicators

Workforce capacitation and support
1. Level of support the organization provides for CHWs
2. Value of CHWs to the organization and acceptance of CHWs
3. Frequency of enactment of 10 core roles

Referrals made
1. CHW facilitated connection at all levels
2. CHW connections to resources, organizations, and policy makers

CHW involvement in decision and policy making process
1. Extent to which CHWs team with others in the system, including organizations and policy making bodies
2. Extent to which CHWs are integrated into health care teams
3. Extent of involvement of CHWs in decision-making processes
Proposed Outcome Indicators

1. Participant quality of life/life satisfaction
2. Participant (household) food security
3. Participant (household) water security
4. Participant (household) transportation security
5. Participant (household) access to health and social services
6. Participant knowledge, attitudes and behaviors
7. Participant (household) social support
8. Participant psychological empowerment
9. Participant civic engagement
10. CHW job satisfaction

Photos by Stacie Wolfe
APHA pre-conference workshop and scientific sessions

• Pre-Conference workshop on Saturday, October 29, from 1:00-5:00 p.m. titled: “Developing common evaluation measures to sustain community health worker programs”

• Two presentations on November 1st starting at 8:30 a.m. These are part of Session 4018.0, “Tools that support community engagement and CHW teaching, reporting, and documenting.”
  “Developing Common Community Health Worker (CHW) Program Evaluation Indicators: Methods and Results of a CHW Common Indicators Program Evaluation Survey;” and
  “Developing Common Community Health Worker (CHW) Program Evaluation Indicators: Development and facilitation of a summit to advance identification of common indicators for CHW program evaluation”
If you have a question, please type it into the chat box now.
Thank you for joining us!

Please complete our webinar evaluation survey:
http://astho.az1.qualtrics.com/SE/?SID=SV_2rhLj5ZArkKIar3

Visit ASTHO’s CHW website for additional resources:
http://www.astho.org/Community-Health-Workers/

ASTHO contacts:
Kristen Rego krego@astho.org
Megan Miller mmiller@astho.org