Research & Results: CHW Strategies & Asthma Care: A Webinar for Providers and Home Visiting Programs

November 6, 2014
Research & Results: CHW Strategies & Asthma Care: A Webinar for Providers and Home Visiting Programs

Welcome

• Joan Cleary, Minnesota Community Health Worker Alliance

Today’s format

• Please hold questions until the Q&A session following the presentations
About *Success with CHWs*

- A program from Minnesota Community Health Worker Alliance
  - Increase familiarity with the CHW role and its benefits to patients, families, communities and the health care system.
  - Share ways to integrate CHWs with members of your asthma team to effectively address asthma disparities.
  - Explore questions related to CHW scope of practice, education, financing and supervision.
- Includes this colloquium and other events, including online toolkits
- Funded by:
  - The St. Paul Foundation
  - MN Community Measurement
Upcoming *Success with CHWs* Events

**Friday, November 21**

8:00-11:00 a.m. CST  
Wilder Center, St. Paul

**Learning Session for Asthma Care Providers and Home Visiting Programs on Integrating CHW Services into Pediatric Asthma Care**

This free workshop will feature Megan Sandel, MD, MPH, and Anne Walton, RN, AE-C from Boston Medical Center

**Wednesday, December 3**

10:00-11:00 a.m. CST

**Webinar: Community Health Worker Enrollment, Coverage and Payment under Minnesota Health Care Programs**

Register at: [http://mnchwalliance.org/calendar/](http://mnchwalliance.org/calendar/)
Research & Results: 
CHW Strategies & Asthma Care: A Webinar for Providers and Home Visiting Programs

Today’s presenters

• Jim Krieger, MD, MPH
  Chief of the Chronic Disease and Injury Prevention Section at Public Health - Seattle & King County and Clinical Professor of Medicine and Health Services at the University of Washington

• Erica Marshall, MPH
  Asthma Prevention and Control Director, Massachusetts Department of Public Health
**Asthma Today**

1 in 12
About 1 in 12 people (about 25 million) have asthma, and the numbers are increasing every year.

12M
About 1 in 2 people (about 12 million) with asthma had an asthma attack in 2008, but many asthma attacks could have been prevented.

$56 Billion
Asthma cost the US about $56 billion in medical costs, lost school and work days, and early deaths in 2007.
Asthma Affects Low Income Communities
From Minnesota to Washington
The Asthma Paradox

- Understanding of the pathogenesis and treatment of asthma has increased
- Effective interventions to control asthma exist
- However, morbidity and mortality from asthma continue to increase worldwide
Why Are We Not Doing Better?

• Health care organizations and clinicians are not providing state of the art care
• Patients and families are not effectively self-managing asthma and not adhering to treatment recommendations
• Environmental conditions and triggers are not being reduced
Barriers To Achieving Optimal Care

• Patients:
  – View asthma as an acute episodic illness rather than a chronic disease
  – Have competing priorities
  – Lack knowledge, skills and resources

• Health care organizations
  – Are not organized to manage asthma effectively
  – Lack knowledge, skills, resources and point of care information
  – Assume patients will put aside their priorities, beliefs, and concerns to follow the treatment plan
<table>
<thead>
<tr>
<th>Year Range</th>
<th>Program Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997-2001</td>
<td>Healthy Homes I</td>
<td>CHW home environment visits Children</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Healthy Homes II</td>
<td>CHW comprehensive home visits Children</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Allies Against Asthma</td>
<td>Coalition-based systems change</td>
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<tr>
<td>2004-2007</td>
<td>Breathe Easy Homes</td>
<td>New asthma-friendly housing Children</td>
</tr>
<tr>
<td>2007-2012</td>
<td>HomeBASE</td>
<td>CHW comprehensive home visits Adults</td>
</tr>
<tr>
<td>2009-2012</td>
<td>Highline Communities Healthy Homes</td>
<td>Existing asthma-friendly housing Remediation and weatherization</td>
</tr>
<tr>
<td>2009-2013</td>
<td>Medicaid Healthy Homes</td>
<td>CHW comprehensive home visits Children enrolled in managed care</td>
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What is a Community Health Worker?

- Frontline health worker
- Trusted member of community
- Liaison between institutions and community
- Facilitates access and improves quality and cultural competence of services
- Builds individual and community capacity
- Unique health professional:
  - Hired primarily for understanding of and connection to the populations and communities she serves
  - Works most of time in the community
  - Experience in providing services in community settings
Community Health Workers

• Lay people from the community
• Share culture, language and life experiences with clients
• Personal experience with asthma
• Skilled at building trusting and supportive relationships with clients
• Bridge between community and service providers
• Receive rigorous and standardized training
Training and Quality Assurance

- Core training
  - 80 hours
  - Classroom and experiential learning
  - Asthma content
  - CHW roles and skills
- Bi-weekly maintenance training
- Case review
- Visit observations
- Chart audits

<table>
<thead>
<tr>
<th>Month</th>
<th>Current Asthma Status</th>
<th>% Problems addressed with correct protocol (Goal=90% by V3-starting Jan. 2011)</th>
<th>%Mandatory protocols addressed (Goal =100% by V#2)</th>
<th>%Problems not addressed by V3</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 2011</td>
<td>• Well=60% • Not well=20% • Very poorly=20%</td>
<td>90% by V3</td>
<td>94 % by V2 (95% by V3) Med Adh each visit =74%</td>
<td>10%</td>
</tr>
<tr>
<td>September 2011</td>
<td>• Well=70% • Not well=30%</td>
<td>96% by V3</td>
<td>96% by V2 Med Adh q visit=98%</td>
<td>5%</td>
</tr>
<tr>
<td>October 2011</td>
<td>• Well=20% • Not well=40% • Very poorly=40%</td>
<td>94% by V3</td>
<td>100% by V2 Med Adh q visit=90%</td>
<td>6%</td>
</tr>
</tbody>
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Community Health Worker
Home Visits for Asthma

• 3-4 visits to low-income children and adults with asthma
• Assess home environment and self-management skills
• Offer education and support for self-management, action plan
• Coach provider-patient communication
• Help navigate health system
• Provide asthma trigger control resources (bedding covers, vacuum, door mat, cleaning supplies)
• Provide social support
• Address social determinants
Participant Supplies
Healthy Homes Outcomes

- Symptoms decrease by 21+ days per year
- Quality of life improves
- Urgent health care use decreases 40-70% (children)
- Knowledge and actions increase
- Exposure to triggers decreases

Urgent Care Use

<table>
<thead>
<tr>
<th>% with 1+ episodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>high intensity</td>
</tr>
<tr>
<td>low intensity</td>
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</table>
Costs and ROI

• Costs of asthma treatments
  – Home Visits: $1341/year
  – Inhaled Steroids: Fluticasone 110 ug: $2160/year
  – Xolair: $10,400-20,800+

• Healthy Homes I High vs. Low Intensity (projected over 4 years)
  – Net savings: $189-721

• Medicaid Demonstration Project (annual)
  – Marginal intervention costs: $707
  – Marginal intervention savings: $1341
  – Net savings: $634
  – ROI: 1.9
How About Adults?
HomeBASE

- Randomized controlled trial comparing intervention to usual-care
- 366 participants
  - Age 18-65
  - Not well controlled asthma or worse
  - Speak either English or Spanish
  - Household income below 250% of federal poverty level
- Intervention
  - Intake visit and 4 follow-up visits by CHW
  - Self-management support
  - Supplies (bedding covers, bedding encasement,
  - Cleaning supplies, HEPA air filters, medication boxes)
  - Coordination with primary care
Symptom-Free Days

- **Symptom free days:** Increase 2.1 days per 2 weeks more in CHW group (p < 0.000)
- **Quality of life score:** Increase 0.50 more in CHW group (p < 0.000)
- **Number urgent care episodes:** No difference (p = 0.89)
Implementing Home Visits

• Visitor: CHW with caseload of 50-60 clients
  – Shares culture and life experiences
  – Personal or family experience with asthma
  – Well trained: 40 hour initial training, weekly in-service training
  – Well supervised: structured work environment, activity monitoring, clinical backup

• Client: Poorly controlled asthma

• Number of visits: Initial and 3 follow-up

• Visit Content
  – Assessment
  – Medical self-management skills
  – Trigger reduction self-management skills
  – Effective communication with medical provider
Implementing Home Visits

• Approach
  – Client-centered, motivational interviewing
  – Address psychosocial needs and resource barriers
  – Systems linkages
  – Provide social support

• Supplies
  – Vacuum

• Client tracking and follow-up

• Program infrastructure
  – Quality monitoring
  – Data system
Beyond Seattle/King County
Many, Many CHW Asthma Programs

- Tacoma, WA
  - [http://www.tpchd.org/health-wellness-1/diseases-conditions/asthma/](http://www.tpchd.org/health-wellness-1/diseases-conditions/asthma/)
- Long Beach/San Bernardino, CA
  - [http://www.asthmapartners.org/component/content/article/64/236.html](http://www.asthmapartners.org/component/content/article/64/236.html)
- Imperial Valley, CA
- NYC (Harlem):
  - [http://www.harlemasthma.org/air/Services/](http://www.harlemasthma.org/air/Services/)
- NYC
  - [http://nyp.org/services/acn_outreach_win.html](http://nyp.org/services/acn_outreach_win.html)
- Boston
  - [http://www.childrenshospital.org/cai](http://www.childrenshospital.org/cai)
- Springfield, MA
- Baltimore
  - [http://baltimorehealth.org/asthma.html#services](http://baltimorehealth.org/asthma.html#services)
- Indianapolis:
  - [http://www.asthmaindy.org/](http://www.asthmaindy.org/)
- Chicago
- Portland
  - [https://web.multco.us/health/healthy-homes](https://web.multco.us/health/healthy-homes)
- Philadelphia
  - [http://www.chop.edu/service/community-asthma-prevention-program-capp/](http://www.chop.edu/service/community-asthma-prevention-program-capp/)
Inner City Asthma Study

21 fewer days with symptoms per year in intervention group

(P<0.001)

ICAS (Morgan et al. NEJM 2004;351: 1068)
• The Task Force recommends the use of home-based multi-component, multi-trigger environmental interventions in children with asthma on the basis of strong evidence of effectiveness in reducing symptom days, improving quality of life or symptom scores, and reducing the number of school days missed.

• Reviewed 760 articles and included 25 studies

• Included studies published 1966-2008
Symptom Days

Quality of Life Score: +0.6 points

Acute Care Visits: -0.7 per year
Cost-Effectiveness

Summary of Key Findings

- Studies with satisfactory program cost information report the range of program costs from $231 to $1,720 per participant
- Cost-Benefit studies show net positive returns on investment with a benefit-cost ratio ranging from 5.3 to 14.0
- Cost-Effectiveness studies demonstrate that costs per SFD range from $12 to $57, and could be lower if all direct and indirect cost were included

Based on this evidence, the economic benefits from these interventions have the potential to match or even exceed the cost of intervention
Cost: ICER Review (2013)

- 14 studies
- Contexts:
  - Chronic disease support: asthma, diabetes, and HIV
  - Cancer screening
  - Interventions for high consumers of healthcare resources or other high-risk individuals.
- Majority of studies showed net cost savings over 6 months to 2 years relative to control groups
Conclusions

• Home visits by CHWs that address self-management support and indoor trigger exposure improve asthma outcomes

• Addition of home visits by CHWs to clinic-based education improves asthma outcomes

• Add 21+ more symptom-free days per year

• Improve quality of life

• Reduce exposure to triggers

• Promote behavior changes
Conclusions

Offering families a choice of options for self-management support may be optimal

– Home visits
– 1:1 clinic-based education
– Group activities
Issues to Think About

• Who should be a CHW? Peers or professionals?
• Where should CHWs “live?”
• Specialist or generalist?
• Certification? Credentialing?
• And of course, reimbursement
• What else?
Sustaining and Scaling

• Contracting with Medicaid Health Plans
  – ROI and clinical effectiveness data captured the attention of clinical leadership at Molina Healthcare of Washington.
  – Active conversation regarding contracting for CHW home visits for Molina members with asthma and diabetes.
  – Hopeful other four plans in the state will follow.

• Building Infrastructure
  – State and local training

• Implementing health reform
  – WA SIMS Grant
  – State CHW Task Force
Emerging Opportunities

• ACA
  – ACOs and CCOs– aligning incentives for use of CHWs?
  – Prevention and Public Health Fund – funding?
  – Community benefits – funding?
  – Patient-Centered Medical Home – integrate CHWs?

• More...
  – CMS Medicaid regulation – reimburse for preventive services by unlicensed professionals (including CHWs) recommended by licensed professional
  – Health Impact Bonds

• What else?
For more information

- [http://www.kingcounty.gov/healthservices/health/chronic/asthma.aspx](http://www.kingcounty.gov/healthservices/health/chronic/asthma.aspx)

- Or Google – King County Asthma Program
The Role of CHWs in the Work of the Massachusetts Asthma Prevention and Control Program

Erica Marshall, MPH

Director – Asthma Prevention and Control Program
Massachusetts Department of Public Health
Overview

• Who is the APCP?
• Why has the APCP prioritized CHW strategies in MA?
• How has the APCP implemented CHW interventions to date?
• What is the broader context for CHWs in MA?
• How is the APCP developing statewide infrastructure to support CHW asthma work?
• How will the APCP meet its goals for CHWs in the future?
MA Asthma Prevention and Control Program (APCP)

• Mission: Improve quality of life for all people with asthma and reduce asthma disparities

• Statewide Partnership: Massachusetts Asthma Action Partnership (MAAP)

• Funded by CDC and HUD
APCP Asthma CHW Projects

• Reducing Ethnic/Racial Disparities in Youth (READY) study
  – Funded by HUD Healthy Homes Technical Studies and ARRA R01 NIH grants

• Asthma Disparities Initiative (ADI)
  – Similar clinic-based CHW home intervention
  – Linked to policy efforts at local level
  – Evaluation: how CHWs create bridges between families/clinics/communities
  – Funded by CDC Negotiated Agreement
READY Study – Cost Analysis

• An intervention:
  – Based in the medical home
    • With large Black and Hispanic pediatric patient population
    • Boston Medical Center and Baystate Medical Center
  – Integrates Community Health Workers (CHWs) into medical team
  – CHWs conduct in-home environmental assessment and education over multiple visits
  – CHWs provide low cost tools to family
  – CHWs’ link visit findings back to medical team

• Purpose is to conduct a cost analysis of the intervention
READY Preliminary Health Outcomes

<table>
<thead>
<tr>
<th>Health Outcomes</th>
<th>READY Participants N = 65</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Baseline N (%)</td>
</tr>
<tr>
<td>Asthma symptom days (Mean, SD))</td>
<td>4.34 (4.1)</td>
</tr>
<tr>
<td>Asthma control level</td>
<td></td>
</tr>
<tr>
<td>Well controlled</td>
<td>8 (12.3)</td>
</tr>
<tr>
<td>Not well controlled</td>
<td>37 (56.9)</td>
</tr>
<tr>
<td>Very poorly controlled</td>
<td>20 (30.8)</td>
</tr>
<tr>
<td>ER visit</td>
<td>35 (53.9)</td>
</tr>
<tr>
<td>Hospitalization</td>
<td>17 (26.2)</td>
</tr>
<tr>
<td>Urgent care use*</td>
<td>48 (73.9)</td>
</tr>
<tr>
<td>Oral Steroid medication used</td>
<td>48 (73.9)</td>
</tr>
<tr>
<td>Rescue medicine used</td>
<td>53 (81.5)</td>
</tr>
<tr>
<td>Received Asthma Action Plan (AAP)</td>
<td>44 (67.7)</td>
</tr>
<tr>
<td>Actually used the AAP</td>
<td>30 (47.7)</td>
</tr>
</tbody>
</table>

Note: * Urgent care use: visit an emergency room or urgent care center or stay overnight in a hospital or unscheduled office visit
Discussion with Insurers

• Response from Insurers to Asthma CHW Intervention
  – Openness to payment
    • Some convinced it works
    • Some still need more cost benefit analysis

• To expand reimbursement wanted:
  – Standardized training
  – Standardized skill assessment/evaluation
  – Easy referral system
CHW Movement in MA

- MA Association of CHWs forms in 2000
- 2006 MA Health Care Reform law includes reference to CHW
  - Tasks MA DPH to conduct CHW workforce study
- Study released in 2010 and includes recommendations on workforce sustainability
- CHW certification law passed 2010
- Draft regulations expected soon
The Massachusetts Context for CHWs and Asthma

• Strong group of committed asthma coalitions, providers, and advocates
  – Raised awareness
  – Supported legislation
  – Developed best practices/business case
  – Coordinated efforts

• Massachusetts Health Care Reform
  – Increased coverage and focused on containing costs

• Evidence-base for interventions increased
Other CHW Asthma Initiatives in MA

• **MassHealth Children’s High Risk Asthma Bundled Payment (CHABP) Pilot Project**
  – Legislatively mandated
  – Establishes a bundled payment system for currently unreimbursed asthma mitigation services - Phase 1, with goal of establishing comprehensive bundled payment for asthma care - Phase 2
  – Engages limited pilot sites and targets high-risk pediatric asthma patients; designed to prevent hospital admissions and emergency room utilization
  – Supports intervention similar to READY along with clinical case management
  – Program cost and outcome evaluation will be used to explore further program expansion
Other CHW Asthma Initiatives in MA

- **Health Resources in Action’s New England Asthma Innovations Collaborative: CMS HCIA Award**
- New England Initiative lead by Asthma Regional Council of New England
- Program Components:
  - Asthma Education and Home Visiting Service delivery expansion (1,136 children)
  - Workforce development
  - Committed Medicaid payers
  - Payer and Provider Learners Community
  - Policy goal: sustainable payment system, 3 MA insurers committed to covering if ROI demonstrated, total 4 MCOs and 6 Medicaid programs in NE participating
Other CHW Asthma Initiatives in MA

• **MDPH’s Prevention and Wellness Trust Fund**
  – Established by state legislature
  – Pediatric asthma included as priority condition of Trust RFR
  – Six of nine funded sites will address pediatric asthma
    • Five of the six sites will use CHWs
NEW Goal 2: Reduce Disparities in Asthma Outcomes for Massachusetts Residents

Priority populations:
- Children ages 0-4 years
- Adults ages 65+ years
- Young males (ages 0 – 14 years)
- Adult women (ages 19 years and older)
- Black non-Hispanic and Hispanic residents

Activities:
- Provide 5,000 multi-trigger multi-component home interventions for children with asthma to achieve a population level decrease in ED rates for Black non-Hispanic and Hispanic children
- Data analysis for priority populations
- Development and promotion of best practices for priority populations
APCP Priorities 2014-2019

GOAL: Universal access to quality CHW-led asthma home visiting intervention across Massachusetts

- How will we reach this goal?
  - Strong emphasis on achieving insurance reimbursement for CHW-led asthma home visits
  - Driving demand for home visits with payers and providers
  - Building state-wide CHW training and implementation infrastructure to support increased demand and improve quality
  - Support of ongoing asthma home visiting initiatives through Asthma Learning Collaborative
Reimbursement and Driving Demand for CHW-led asthma home visits

- Promote adoption of CHW-led asthma home visits to primary care providers through provider-focused white paper
- Partner with CDC-funded asthma programs across New England on a regional business case
- Use surveillance and health claims data to target particular insurers/providers for adoption of CHW-led asthma home visiting model
- Link healthcare organizations with home-based e-referral system linking clinicians and PWTF sites
- Continue to address provider-identified barriers to model adoption
Providing CHW Training

- Training and support developed and implemented for MDPH by Boston Public Health Commission’s CHEC Program
- Included:
  - Comprehensive Outreach Education Certificate Program offered by CHEC
  - 4 Day Asthma Home Visitor Training developed by CHEC, 2 day “refresher” training annually
  - 2 day Supervisor Training
  - Quarterly in-person support meetings

Under Development
- Mentorship component
- Observation-based skill assessment
Asthma Learning Collaborative

- Utilize Institute for Healthcare Improvement (IHI) model for Quality Improvement
  - Initially support success of PWTF and CHABP
  - Expert clinical faculty
  - Provide technical assistance to intervention sites
  - Will focus on care management, home visits, and school-based interventions

- Statewide Standardized Asthma Home Visiting Toolkit
APCP’s Funding Support for CHW Work

• This presentation was supported by the federal agencies listed below. The content of the presentation is solely the responsibility of the presenter and does not necessarily reflect the views of those agencies:

  – National Institute of Environmental Health Sciences (NIEHS); R01 ARRA Award; READY Study; #5R01ES017407-02
  – Housing and Urban Development; Healthy Homes Technical Studies Award; READY2 Study; #MALHH0227-10
  – Centers for Disease Control and Prevention; National Center for Environmental Health; Addressing Asthma from a Public Health Perspective; #5U59EH000501-4
Contact Information and Resources

Erica Marshall, erica.marshall@state.ma.us
617-624-5401

• APHA Community Health Worker Section
  http://www.apha.org/membergroups/sections/aphasections/chw/
• MDPH Office of Community Health Workers
  http://www.mass.gov/dph/communityhealthworkers
• CDC E-Learning CHW
  http://www.cdc.gov/dhdsp/pubs/chw_elearning.htm
• Seattle King County CHW Resources
  http://www.kingcounty.gov/healthservices/health/chronic/asthma/resources/tools.aspx
• Asthma Prevention and Control Program
  www.mass.gov/dph/asthma
Q&A
For more information, please contact
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Minnesota Community Health Worker Alliance
joanlcleary@gmail.com
www.mnchwalliance.org