Community Health Workers (CHWs) in Research Supporting Patients with Asthma — The Guidelines to Practice (G2P) Study

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• Have nothing to disclose.
Objectives

At the conclusion of this activity, the participant should be able to:

• Understand the role of Community Health Workers in improving the health impacts of asthma

• Identify how members of the research team can build an infrastructure of support of CHWs and intervention delivery

• Explain where stakeholder engagement can support CHWs, expand impact, and increase sustainability of effective interventions.
Acknowledgements

• FQHC Clinic Partners:
  • Neighborcare Health
  • HealthPoint

• Medicaid Managed Care Organizations
  • Molina of Washington
  • Community Health Plan of Washington

• Investigators

• CHWs
  • Michelle Di Miscio, Joyce McCraney, Safia Mohamed, and Maria Rodriguez

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Kaiser Permanente of Washington: Community Health & Benefit
Build on past CHW work

• Research Legacy going back to 1997 at the Health Dept.
  • 10+ Research studies comparing 270 – 660 participants
  • Over 4000 participants served
  • Materials and background: King County Asthma Program
    • [http://www.kingcounty.gov/asthma](http://www.kingcounty.gov/asthma)

• Many in the room too!
Home Intervention: 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 ongoing rigorous and standardized training
Core Asthma Service – CHW model

- 3 home visits
- Motivational Interviewing
- Self-management
- Cultural competence
- Asthma knowledge

Topics
- Medication adherence
- Trigger reduction
- Home remediation
- Care coordination
- Goal setting
CHW: Home Visits
CHW: Home Visits
CHW: Home Visits
New Research Design: Integrated System

- **Home**: CHW Home Visits for self-management support
- **Clinic**: EHR Enhancement, Team and System Redesign, Spirometry and Allergy Testing, Staff Education
- **Common Asthma Management Plan**: Cross-Site Communication and Coordination
- **Plan**: Enhanced Case Management, ED and Hospitalization Notification, Medication Monitoring
Guidelines to Practice (G2P)

- 551 patients with uncontrolled asthma
- Ages 5-75

Randomization:
- CHW vs. No CHW

Non-Randomized elements:
- 13 FQHC clinics in 2 systems
  - 4 Enhanced at the start of the trial
- 2 Medicaid health plans
Results: Preliminary

• CHW intervention had significant results
• “Enhanced Clinic” intervention had insignificant results
  • Non-Randomized, feasibility study
  • Results lean with some significance to show additional impact when CHWs were integrated with enhanced clinics
• Today, I will focus only on CHW findings and discuss their role in research
## Who Participated

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
<th>CHW</th>
<th>Non-CHW</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>551</td>
<td>273</td>
<td>278</td>
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<tr>
<td>Age %</td>
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<td></td>
<td></td>
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<tr>
<td>5-17</td>
<td>47.0%</td>
<td>46.5%</td>
<td>47.5%</td>
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<td>18-75</td>
<td>53.0%</td>
<td>53.5%</td>
<td>52.5%</td>
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<tr>
<td>Female %</td>
<td>63.0%</td>
<td>61.9%</td>
<td>64.0%</td>
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<tr>
<td>Race/Ethnicity %</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>33.9%</td>
<td>31.1%</td>
<td>36.7%</td>
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<tr>
<td>White</td>
<td>23.2%</td>
<td>22.7%</td>
<td>23.7%</td>
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<tr>
<td>Other</td>
<td>15.1%</td>
<td>16.5%</td>
<td>13.7%</td>
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<tr>
<td>Latino/Hispanic</td>
<td>27.8%</td>
<td>29.7%</td>
<td>25.9%</td>
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<tr>
<td>Language %</td>
<td></td>
<td></td>
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<tr>
<td>English</td>
<td>73.1%</td>
<td>74.4%</td>
<td>71.9%</td>
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<tr>
<td>Spanish</td>
<td>19.2%</td>
<td>20.5%</td>
<td>18.0%</td>
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<tr>
<td>Somali</td>
<td>7.6%</td>
<td>5.1%</td>
<td>10.1%</td>
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## Results

<table>
<thead>
<tr>
<th></th>
<th>CHW Intervention</th>
<th></th>
<th>Adjusted difference</th>
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<tbody>
<tr>
<td></td>
<td>Unadj. Mean</td>
<td>Coeff.</td>
<td>p-value</td>
</tr>
<tr>
<td></td>
<td>CHW</td>
<td>Non-CHW</td>
<td></td>
</tr>
<tr>
<td>Primary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptom free days</td>
<td>7.7</td>
<td>6.4</td>
<td>1.27</td>
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<tr>
<td>Asthma Control (ACT/cACT)</td>
<td>18.1</td>
<td>16.9</td>
<td>1.20</td>
</tr>
<tr>
<td>Quality of Life (AQLA/PAQLA)</td>
<td>5.4</td>
<td>5.1</td>
<td>0.39</td>
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<tr>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nocturnal wakening nights</td>
<td>2.5</td>
<td>3.8</td>
<td>-1.22</td>
</tr>
<tr>
<td>Urgent care utilization</td>
<td>1.1</td>
<td>1.7</td>
<td>-0.63</td>
</tr>
<tr>
<td>Rescue inhaler: β-agonist use</td>
<td>3.6</td>
<td>4.6</td>
<td>-0.92</td>
</tr>
<tr>
<td>Urgent oral steroid use</td>
<td>0.3</td>
<td>0.5</td>
<td>-0.14</td>
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<tr>
<td>Missed work/school days</td>
<td>0.6</td>
<td>1.1</td>
<td>-0.51</td>
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</tbody>
</table>

Unadj. Mean is the unadjusted mean for participants in the study group who completed the exit interview.
Results

After one year of study intervention with CHWs...

- Asthma-related quality of life improved*
- More days free of asthma symptoms*
- Physical health status improved

*Outcomes also significant in the CHW + enhanced clinic intervention group
Results

- Fewer people had poorly controlled asthma*
- Fewer asthma-related hospital, ED, urgent care visits*
- Nights awaken decreased
- Reduced use in rescue medicine

*Outcomes also significant in the CHW + enhanced clinic intervention group
Supportive Research Team

Supervisory:
- Program
- Clinical – Nurse, Social worker, or Physician

Ongoing Professional Development:
- Motivational Interviewing
- Self-care

Evaluation Core:
- Missing data and quality improvement

Other support:
- Program Coordinators
- Health Department supports
- Partnerships and overall program advisory
Partnerships

Community Health Worker

Basic:
• Home Environment / Medical Adherence
• Primary Care Team
• Health Plan – Care Manager

Expanded:
• Medical Legal Partnership or Tenants’ Rights
• Weatherization – home improvements
• Pharmacy
• School / Child Care

Home Environment (BP)
Primary Care Clinic (BP)
Health Plan (Medicaid MCO) (BP)
Medical Legal/Tenant Rights Orgs (EP)
Child Care/School Nurses (EP)
Pharmacy (EP)
Weatherization (EP)

Basic Programming (BP)
Expanded Programming (EP)
Pursuing Sustainable Programming

• Social Partnerships: Weatherization and Healthy Housing
• Medicaid MCOs
• Integrated Health System: Medicaid 1115 Waiver
Learn More

- www.pcori.org
- info@pcori.org
- #PCORI2018
- http://www.kingcounty.gov/asthma
Questions?
Thank You!

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