Community Health Worker Model: From Grant to Operations

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Presentation Outline

1. WIN for Asthma
2. Business Case
3. CHWs and the Patient Centered Medical Home
WIN for Asthma

December 2005:

- Awarded 4-year grant from the Merck Childhood Asthma Network (MCAN)
- Worked closely with community partners to develop WIN for Asthma Program based on unique needs of local community
Washington Heights and Inwood
Community Characteristics

- 270,700 residents
- 51% foreign-born
- 75% Latino (55% Dominican, many recent immigrants)
- 70% speak Spanish at home
- 43% of children live below poverty line
WIN for Asthma Model

- Hospital-Academic-Community Partnership
- Community Health Workers
  - Bilingual
  - Community-based (4 CBOs)
  - Peer supporters & education reinforcement
WIN for Asthma Care Coordination

Referral and Enrollment Process

Child with asthma → Referral via WIN Hotline/ Eclipsys → Program Coordinator assigns case to CHW → CHW Contacts Caregiver within 24-48 hours →

- Caregiver Enrolls
- Caregiver Declines
- Caregiver Referred to partner
# WIN for Asthma Care Coordination

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stages 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Months 1 - 3</td>
<td>Months 4 - 6</td>
<td>Months 7 - 12</td>
</tr>
<tr>
<td>Comprehensive Asthma Education</td>
<td>Monthly Check-In</td>
<td>Bi-Monthly Check-In</td>
</tr>
<tr>
<td>Home Environmental Assessment</td>
<td>3 Month Follow-Up: ACT Survey</td>
<td>9 Month Follow-Up: ACT Survey</td>
</tr>
<tr>
<td>Goal Setting &amp; Service Referrals</td>
<td>Goals Check-in</td>
<td>Service Referrals</td>
</tr>
<tr>
<td>Pediatrician-Led Asthma Workshops</td>
<td>Service Referrals</td>
<td>12 Month Follow-up</td>
</tr>
<tr>
<td>Baseline Survey</td>
<td>6 Month Follow-up</td>
<td>Graduation</td>
</tr>
</tbody>
</table>
**WIN for Asthma: Key Outcomes**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Baseline</th>
<th>12 Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalizations</td>
<td>40%</td>
<td>13%</td>
</tr>
<tr>
<td>ED Visits</td>
<td>81%</td>
<td>38%</td>
</tr>
<tr>
<td>Missed School Days</td>
<td>83%</td>
<td>48%</td>
</tr>
<tr>
<td>Symptom Days</td>
<td>78%</td>
<td>52%</td>
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</tbody>
</table>

* p < .001
WIN for Asthma: Management Outcomes

* 62% of respondents feel in control (Baseline: 6%)
* 65% of respondents reduced triggers (Baseline: 5%)
* 46% of respondents family has AAP (Baseline: 35%)
* 37% of respondents school has AAP (Baseline: 28%)

*p < .001

**n**
- Feels In Control: 363
- Reduced Triggers: 378
- Family has AAP: 356
- School has AAP: 292
Business Case
Business Case Team and Process

- Convened multi-disciplinary team
- Held periodic strategy and analysis meetings
- Developed business case with emphasis on the following elements:
  - Program outcomes
  - Comparison group analysis
  - Community benefit
  - Financial ask
Quantitative Outcomes

Significant reduction in Inpatient admissions among participants post program enrollment

Two-sample T for In-Pt Hosp Adm Pre Enroll vs In-Pt hosp Adm Post Enroll

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>StDev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Pt Hosp Adm Pre Enroll</td>
<td>186</td>
<td>0.263</td>
<td>0.520</td>
<td>0.038</td>
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<tr>
<td>In-Pt hosp Adm Post Enroll</td>
<td>186</td>
<td>0.118</td>
<td>0.425</td>
<td>0.031</td>
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</tbody>
</table>

T-Test of difference = 0 (vs not =): T-Value = 2.95 P-Value = 0.003 DF = 355
Quantitative Outcomes

Significant reduction in ED visits among enrolled patients when compared to the control group

Two-sample T for ED Visits Control Group vs ED visit Post Enroll

<table>
<thead>
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<th>N</th>
<th>Mean</th>
<th>StDev</th>
<th>SE Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Visits Control Group</td>
<td>1109</td>
<td>1.312</td>
<td>0.788</td>
<td>0.024</td>
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<tr>
<td>ED visit Post Enroll</td>
<td>186</td>
<td>0.72</td>
<td>1.55</td>
<td>0.11</td>
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</tbody>
</table>

T-Test of difference = 0 (vs not =): T-Value = 5.13 P-Value = 0.000 DF = 201
Executive Summary

• Quantitative Outcomes
  • Significant reduction in ED visits and Inpatient admissions
  • Significant reduction in ED visits and Inpatient admissions among enrolled patients when compared to a control group

• Self Efficacy Outcomes measured at 6 months post enrollment*
  • Improved caregiver control of child’s asthma
  • Reduction of potential home based asthma triggers
  • Reduction in missed school days
  • Increase use of Asthma Action Plan
Business Case Impact

- Approved by senior management
- Operations dollars allocated to support **WIN for Asthma** community health workers and administrative staff
- Precedent set for integrating CHWs into the fabric of a large institution
CHWs and the Patient Centered Medical Home
Patient Centered Medical Homes-NYP

- 5 NYP Primary Care sites applied for NCQA Certification
  - Asthma
  - Adult Diabetes
  - Congestive Heart Failure
- Inclusion of CHW to the health care team
- Expansion of Care Coordination model to Adult Diabetes
Practice Based Support & Education

Implemented: February 2011

CHW:
- Member of health care team
  - Initially pediatric asthma followed by adult DM
- Applies non-clinical, peer-based approach to reinforce key health messages
- Helps patient understand diagnosis and uncovers disease management obstacles

Outcomes: 1500+ patients have received practice-based support & education to date
Conclusion

- Model for CHW in academic-hospital environment
- Importance of outcomes early on in program development
- Importance of exploring opportunities and of alignment with institutional goals
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