Community Health Workers at Baylor Scott & White Health

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Expanding Use of CHWs at Baylor

- 2007: 1 CHW
- 2009: +4 CHWs
- 2010-11: +4 CHW Community Care Navigation
- 2011: CHW I and II Job Codes Created
- 2012: Two Staff Promotions to CHW II
- 2014: 30 CHWs

- Current CHW Staff Serving BSWH

- Two main roles for CHWs:
  - Patient navigation
  - Chronic disease education/health coaching

- Alliance to Reduce Disparities in Diabetes – Merck Foundation Grant was the catalyst to institutionalize the CHW workforce at BSWH
  - Human Resources: CHW specific job codes created
  - Supervisor position developed
  - Average wage: $17.50/hour
Chronic Disease Education

• Goal: To optimize primary care for “at-risk” patients with diabetes

• Tactics:
  • Embed community health workers within PCMH
  • Train and manage CHWs
  • Leverage software for data capture and communication
  • Currently located at 8 community clinics throughout DFW
Community Health Workers in Chronic Disease Education

• Bilingual, medical assistant trained CHW
• Frequent 1:1 contact with patient, very accessible
• Visit protocols focus on:
  • Medication adherence and access
  • Understanding disease and complications
  • Lifestyle changes: diet, exercise
  • Improving patients’ confidence in managing their disease

• Enables providers to task-shift these topics to CHWs.

www.diabetestoolkit.org
Study patients with at least 2 measures within specified period were included in the analysis. Visits listed are quarterly. The most recent measure was used. Data source is the registry used for the study. Data extracted January 6, 2014.

Decrease in Mean Average HbA1C

Every 1% drop in HbA1c reduces the risk of microvascular complications by 40% and death by 21% (UKPDS35)
# Improvements in Patient Reported Outcomes

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Patients (n)</th>
<th>Baseline (mean)</th>
<th>Follow-up (mean)</th>
<th>P-value</th>
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<tbody>
<tr>
<td>Diabetes Knowledge Assessment</td>
<td>260</td>
<td>9.42</td>
<td>9.83</td>
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<tr>
<td>Perceived Competence in Managing Diabetes</td>
<td>402</td>
<td>22.41</td>
<td>24.11</td>
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<tr>
<td>Diabetes Quality of Life (DQoL)</td>
<td>101</td>
<td>84.1</td>
<td>90.49</td>
<td>&lt;.0001</td>
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<td>EQ-5D</td>
<td>345</td>
<td>0.80</td>
<td>0.85</td>
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Impact on Utilization and Costs

- Observed a reduction in inpatient encounters in the year following patient enrollment (0.18 vs. 0.08, p<.0001)
- No impact on ED utilization
- Cost savings per patient = $137.19
- Cost for a CHW to educate 1 patient = $402.80

- Not an overall cost savings, but evidence that program is cost-effective ($23,161/QALY)
  - Increased costs associated with expanding health care access to underserved populations
  - Majority of savings from diabetes management programs accrue in the long-term by preventing long-term complications
Community Care Navigation

• Community health worker bridges the transition for high-risk patients from the hospital to medical home

• Patient criteria:
  • Low income (< 200% FPL)
  • Uninsured
  • Chronically ill
  • No medical home

• Accessible, bilingual contact for patients and families
Community Care Navigation

- CHW receives referral from inpatient care coordination/SW team
- Visits the patient at the bedside
- Schedules patient appointment at a Baylor Community Clinic
- Reduces barriers for patients
  - Aids with paperwork and translation
  - Transportation
  - Affordable medicine access
  - Brings medical records to new PCP
Community Care Navigation: Significantly increasing primary care access for *high risk* BSWH inpatients

Certified Community Health Worker delivered navigation for chronically ill, under-resourced inpatients from hospital to PCMH (with Medical Director oversight)

*Pre-CCN method was faxed referrals to medical home from hospital. Percentages based upon eligible patients. Community Care Navigation program includes arranging PCMH appointment, enrolling in financial assistance programs, addressing transportation barriers, and assuring access to resources such as DME and medications.*

### Patients Connected to Primary Care Post-Discharge

- **Pre-CCN***: 0%
- **FY-13**: 55% within 14 days
- **FY-14**: 52% within 14 days

**N = 1,200**
## Readmissions and Cost Savings for Care Navigation vs. Usual Care

### Difference in Hospitalizations + ED Visits

<table>
<thead>
<tr>
<th></th>
<th>Navigation</th>
<th>Usual Care</th>
<th>Difference</th>
<th>% Change</th>
<th>P-value</th>
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<tbody>
<tr>
<td>Total 30-days</td>
<td>4.7</td>
<td>7.5</td>
<td>-2.8</td>
<td>-37.6</td>
<td>0.37</td>
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<tr>
<td>Total 60-days</td>
<td>8.1</td>
<td>14.9</td>
<td>-6.8</td>
<td>-45.4</td>
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<td>Total 90-days</td>
<td>10.5</td>
<td>21.6</td>
<td>-11.1</td>
<td>-51.5</td>
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<td>Total 6 months</td>
<td>32.6</td>
<td>33.7</td>
<td>-1.2</td>
<td>-3.5</td>
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<td>Total 1-year</td>
<td>59.0</td>
<td>60.5</td>
<td>-1.4</td>
<td>-2.4</td>
<td>0.88</td>
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### Cost Savings from Prevented Readmissions

<table>
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<tr>
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<th>Estimate</th>
<th>Lower 95%CI</th>
<th>Upper 95%CI</th>
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<tbody>
<tr>
<td>30-days</td>
<td>2</td>
<td>($16,454)</td>
<td>($18,520)</td>
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<tr>
<td>60-days</td>
<td>6</td>
<td>($39,732)</td>
<td>($44,720)</td>
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<tr>
<td>90-days</td>
<td>10</td>
<td>($69,832)</td>
<td>($78,600)</td>
</tr>
<tr>
<td>6 months</td>
<td>2</td>
<td>($12,040)</td>
<td>($13,551)</td>
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<tr>
<td>Total 1-year</td>
<td>0</td>
<td>$760</td>
<td>$855</td>
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Challenges and Lessons Learned

**Challenges**
- Opportunities for CHW career advancement
- Provider acceptance of CHW role at beginning of programs
- Sustainable funding

**Lessons Learned**
- Unique CHW/Patient relationship is the cornerstone of the intervention
  - Identification of cultural and other barriers
- CHW competency is a must have
  - Training and state certification in Texas
  - Clearly defined protocols and procedures
- Centralized management, team structure
  - Protects the role of the CHW
  - Not pulled into other fill in roles in the clinic
- Outcome tracking and communication to aid sustainability
Current State

- Expansion of CHW role within BSWH
  - Several CHWs have been promoted to supervisor roles
  - CHW council created to evaluate system-wide strategy
  - Role to expand CHWs into Central Texas campus with Scott & White/Baylor merger
  - Recent grant accepted to add CHWs to aid Medicare patients

- Medicaid 1115 Waiver Funding
  - DSRIP (delivery system reform incentive payments)
  - Provided funding for expanding the use of CHWs

Thank you!!
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