Uniting Policy, Practice and System Change to Create Healthcare Systems That Work

Strategies for Improving Quality and Creating Patient-Centered Care to Better Address the Needs of Underserved Populations

Thursday, November 20, 2014

Sponsored by Merck Foundation
Successful Models for Improving Access to Quality Care:
A Look at the Work of the Alliance to Reduce Disparities in Diabetes

Moderated by Jeffrey Levi, PhD

- **Megan Lewis, PhD**, Director, Patient & Family Engagement Research Program, Center for Communication Science, RTI International
- **Marshall Chin, MD, MPH, FACP**, Richard Parrillo Family Professor of Healthcare Ethics, Department of Medicine, University of Chicago
- **Erin Kane, MD**, Family Medicine Doctor, Baylor Scott & White Health System
- **Jeffrey Brenner, MD**, Executive Director, Camden Coalition of Healthcare Providers
Evaluation of the Alliance to Reduce Disparities in Diabetes

Megan Lewis, PhD
Director, Patient and Family Engagement Research Program
Center for Communication Science
The Alliance Background

- The Alliance was launched in 2009 to help address health and health care disparities with respect to type 2 diabetes.
- Five grantees from across the U.S. implemented programs that focused on reducing disparities in diabetes care and enhancing outcomes through multi-level, multi-component, clinical and community interventions.
- An important contribution of the Alliance programs and cross-site evaluation was to demonstrate how interventions successfully make the leap from science to practice.
Alliance Structure

- Wind River Indian Reservation Diabetes Management and Prevention Project
  Wind River Indian Reservation, Wyoming
- Improving Diabetes Care and Outcomes on the South Side of Chicago
  Chicago, Illinois
- Diabetes for Life Program
  Memphis, Tennessee
- The Diabetes Equity Project
  Dallas, Texas
- Camden Citywide Diabetes Collaborative
  Camden, New Jersey
- NAB
  National Advisory Board
  Located throughout the country
- NPO
  National Program Office
  Center for Managing Chronic Disease
  University of Michigan at Ann Arbor
- Independent Evaluator
  RTI International
  RTP, NC
Goal: Transform health care delivery to reach and optimally serve people in vulnerable communities who are most at risk for the negative consequences of diabetes\textsuperscript{1}

Accomplished by: Tailoring the content of the intervention to the local needs and resources of each site while focusing on three core components:
Core components were guided by an adaptation of the Chronic Care Model\textsuperscript{2}.

The Alliance programs did not use a prescribed implementation strategy, such as that used in the Breakthrough Series\textsuperscript{3}.
The Alliance Model

## Self-Management Education Topics

**Encounters Across Sites and Time**

<table>
<thead>
<tr>
<th>Diabetes Self Management Education Topics</th>
<th>Number of Times Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-management topic</strong></td>
<td></td>
</tr>
<tr>
<td>Diabetes basics</td>
<td>1,954</td>
</tr>
<tr>
<td>Managing medication</td>
<td>6,761</td>
</tr>
<tr>
<td>Physical activity</td>
<td>3,062</td>
</tr>
<tr>
<td>Smoking and alcohol</td>
<td>1,548</td>
</tr>
<tr>
<td>Complications</td>
<td>1,418</td>
</tr>
<tr>
<td>HbA1c, BP, and cholesterol education</td>
<td>1,908</td>
</tr>
<tr>
<td><strong>Teaching/Practicing skills</strong></td>
<td></td>
</tr>
<tr>
<td>Glucose monitoring/Glucose targets</td>
<td>8,044</td>
</tr>
<tr>
<td>Healthy eating/Food planning</td>
<td>7,482</td>
</tr>
<tr>
<td>Doctor visits and self-exams</td>
<td>501</td>
</tr>
<tr>
<td><strong>Goal setting/Problem solving</strong></td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td>2,319</td>
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<tr>
<td>Decision making/Goal setting</td>
<td>1,829</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36,826</strong></td>
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</table>
### Alliance Programs Improved Clinical Outcomes

<table>
<thead>
<tr>
<th>Clinical Measure</th>
<th>N</th>
<th>First Mean (SD)</th>
<th>Last Mean (SD)</th>
<th>Difference Mean (SD)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PROGRAM PARTICIPANTS</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c</td>
<td>1515</td>
<td>8.4 (2.2)</td>
<td>7.7 (1.9)</td>
<td>0.7 (1.9)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>Blood Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systolic</td>
<td>1573</td>
<td>129.2 (18.7)</td>
<td>128.2 (19.3)</td>
<td>1.1 (18.9)</td>
<td>0.025</td>
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<tr>
<td>Diastolic</td>
<td>1573</td>
<td>78.8 (11.4)</td>
<td>78.0 (11.8)</td>
<td>0.9 (12.5)</td>
<td>0.006</td>
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<tr>
<td><strong>Weight</strong></td>
<td>1596</td>
<td>201.0 (53.1)</td>
<td>201.4 (52.5)</td>
<td>0.4 (14.5)</td>
<td>0.337</td>
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<tr>
<td><strong>Lipids</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>654</td>
<td>181.8 (42.9)</td>
<td>176.9 (41.4)</td>
<td>5.0 (41.3)</td>
<td>&lt; 0.002</td>
</tr>
<tr>
<td>HDL</td>
<td>501</td>
<td>48.1 (14.5)</td>
<td>47.7 (13.6)</td>
<td>0.4 (10.3)</td>
<td>0.366</td>
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<tr>
<td>LDL</td>
<td>490</td>
<td>101.3 (35.7)</td>
<td>98.8 (33.2)</td>
<td>2.4 (32.0)</td>
<td>0.094</td>
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<tr>
<td><strong>Triglycerides</strong></td>
<td>448</td>
<td>169.8 (117.0)</td>
<td>152.3 (110.0)</td>
<td>17.5 (107.5)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>COMPARISON GROUP</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Clinical Values</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HbA1c</td>
<td>533</td>
<td>8.4 (2.4)</td>
<td>8.02 (2.14)</td>
<td>0.4 (2.15)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>Blood Pressure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Systolic</td>
<td>574</td>
<td>131.5 (20.5)</td>
<td>130.0 (19.0)</td>
<td>1.3 (21.7)</td>
<td>0.142</td>
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<tr>
<td>Diastolic</td>
<td>574</td>
<td>78.8 (13.1)</td>
<td>76.4 (12.4)</td>
<td>2.2 (14.9)</td>
<td>&lt; 0.001</td>
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<tr>
<td><strong>Weight</strong></td>
<td>54</td>
<td>213.8 (48.9)</td>
<td>208.6 (52.1)</td>
<td>5.2 (23.5)</td>
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<tr>
<td><strong>Lipids</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>173.8 (42.6)</td>
<td>165.3 (44.2)</td>
<td>8.5 (41.9)</td>
<td>&lt; 0.001</td>
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<tr>
<td>HDL</td>
<td>58</td>
<td>49.1 (16.3)</td>
<td>50.0 (16.2)</td>
<td>0.9 (8.8)</td>
<td>0.421</td>
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<tr>
<td>LDL</td>
<td>200</td>
<td>102.1 (39.2)</td>
<td>99.3 (35.1)</td>
<td>2.8 (37.6)</td>
<td>0.300</td>
</tr>
<tr>
<td><strong>Triglycerides</strong></td>
<td>58</td>
<td>160.7 (113.8)</td>
<td>155.9 (107.4)</td>
<td>4.8 (77.6)</td>
<td>0.640</td>
</tr>
</tbody>
</table>
**Alliance Programs Improved Clinical Indicators of Better Quality Care**

<table>
<thead>
<tr>
<th></th>
<th>% in Good Control</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program Participants</strong></td>
<td><strong>Comparison Group</strong></td>
</tr>
<tr>
<td>HbA1c</td>
<td>33***</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>54</td>
</tr>
<tr>
<td>LDL cholesterol</td>
<td></td>
</tr>
</tbody>
</table>

*** p < 0.001
### Alliance Programs Improved Important Patient-Reported Outcomes

<table>
<thead>
<tr>
<th>Patient-reported Outcomes</th>
<th>N</th>
<th>First Mean (SD)</th>
<th>Last Mean (SD)</th>
<th>Difference Mean (SD)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources and Support for Self-Management</td>
<td>243</td>
<td>2.50 (1.02)</td>
<td>2.79 (0.94)</td>
<td>0.29 (1.01)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>Self Care Behavior</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General diet</td>
<td>546</td>
<td>3.72 (2.04)</td>
<td>4.74 (1.79)</td>
<td>1.02 (2.23)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Specific diet</td>
<td>550</td>
<td>4.04 (1.50)</td>
<td>4.57 (1.51)</td>
<td>0.53 (1.68)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Exercise</td>
<td>552</td>
<td>2.63 (2.11)</td>
<td>2.94 (2.16)</td>
<td>0.31 (2.48)</td>
<td>0.003</td>
</tr>
<tr>
<td>Glucose</td>
<td>552</td>
<td>4.11 (2.27)</td>
<td>5.02 (2.07)</td>
<td>0.90 (2.53)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Foot care</td>
<td>553</td>
<td>4.14 (2.50)</td>
<td>5.53 (2.02)</td>
<td>1.39 (2.56)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Smoking status N (%)</td>
<td>549</td>
<td>80 (15)</td>
<td>87 (16)</td>
<td>--</td>
<td>0.262</td>
</tr>
<tr>
<td><strong>PACIC</strong></td>
<td>257</td>
<td>3.47 (0.92)</td>
<td>3.98 (0.83)</td>
<td>0.51 (0.99)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>Perceived Diabetes Competence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>561</td>
<td>42.10 (10.35)</td>
<td>42.85 (10.29)</td>
<td>0.74 (8.64)</td>
<td>0.023</td>
</tr>
<tr>
<td>Mental</td>
<td>561</td>
<td>43.32 (10.88)</td>
<td>47.80 (10.89)</td>
<td>4.48 (11.99)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td><strong>Quality of Life</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Program Participation Led to Better HbA1c

Note: Means adjusted for site, age, gender, measurement order, class attendance, and interaction between measurement order and class attendance. Changes in HbA1c values over time differed significantly across patients depending on class attendance (class attendance x measurement order: Wald χ²(3)=9.93, p=0.019). From Lewis, Bann, et al., 2014 ⁶
Patient Perceptions of Better Health Care Quality Led to Better HbA1c

Note: Means adjusted for site, age, gender, measurement order, RSSM, and interaction between measurement order and RSSM. Changes in HbA1c values over time differed significantly for patients with different RSSM values (RSSM x measurement order: Wald $\chi^2(3) = 12.80, p = 0.005$). From Lewis, Bann, et al., 2014.
Grantees spent approximately $975 per patient in the first year and an additional $520 per patient in subsequent years.  

<table>
<thead>
<tr>
<th>Program effectiveness</th>
<th>Optimistic</th>
<th>Conservative</th>
</tr>
</thead>
<tbody>
<tr>
<td>HbA1c reduction</td>
<td>0.66%</td>
<td>0.31%</td>
</tr>
<tr>
<td>Systolic blood pressure decrease</td>
<td>0.8%</td>
<td>No effect</td>
</tr>
<tr>
<td>Total cholesterol decrease</td>
<td>2.7%</td>
<td>No effect</td>
</tr>
<tr>
<td>Incremental cost-effectiveness (per QALY)</td>
<td>$23,161</td>
<td>$61,011</td>
</tr>
</tbody>
</table>
### Important Implementation Themes Emerged Across Sites

#### Patient Self-Management<sup>5</sup>
- Empowerment
- Access
- Support
- Addressing local needs and barriers
- Care coordination

#### Implementing Multi-level, Multi-Component Programs
- Communication
- Relationship building
- Aligning the program with larger organizational and community values and institutions

#### Patient Stories
- **Prior to enrollment:**
  - Depression and Hopelessness
- **During program:**
  - Support, Empowerment, and Education
- **After program:**
  - Improved psychological health and better overall well being

#### Health Care Provider Training and Multidisciplinary Teams
- Communication and cultural competency training for providers
- Providers became better at communicating and engaging with patients
- Care coordination improved because of multidisciplinary teams

#### Sustainability
- Care coordination and Multidisciplinary teams
- 3 strategies to achieve sustainability:
  - Clinic-Community collaborations
  - Community health workers
  - Sharing electronic data
CCM Inspired Programs Are Effective When Adapted to Local Contexts

- Programs reduced diabetes disparities
  - Tailored programs in 5 sites significantly improved several clinical indicators of good diabetes management: HbA1c levels, blood pressure, and triglycerides
  - Programs increased diabetes self-management behaviors, patient’s perceptions of quality health care, and quality of life
  - More patients were meeting quality of care indicators for clinical outcomes

- Programs were cost-effective

Rigorously tested interventions based on the CCM can be adapted to local contexts and improve clinical and patient-reported outcomes.
Acknowledgements

- RTI evaluation team
  - Douglas Kamerow, MD
  - Connie Hobbs, BA
  - Pam Williams, PhD
  - Tom Hoerger, PhD
  - Shawn Karns, BA
  - Joe Burton, MA
  - Claudia Squiers, MPH
  - Rebecca Moultrie, AA
  - Tania Fitzgerald, MSW
  - Olivia Taylor, MPH
  - Brittany Zulkiewicz, BA
  - Sidney Holt, BA

- Site investigators and project teams

- National Program Office members Noreen Clark, Julie Dodge and Belinda Nelson

- For more information – melewis@rti.org
Citations

1. Clark, Quinn, Dodge & Nelson, 2014
2. Coleman, Austin, Brach, & Wagner, 2009
3. Institute for Healthcare Improvement, 2004
5. Lewis, Williams, Fitzgerald, et al., 2014
6. Lewis, Bann, Karns, et al., 2014
South Side of Chicago

- **Challenges**
  - Poverty
  - Social challenges
  - Food deserts
  - Unsafe recreation
  - Mistrust of healthcare
  - Weakened hospital safety net

- **Strengths**
  - Historical, social, political, and cultural traditions
  - Community resources and institutions
  - Healthcare institutions
Conceptual Model of Intervention

- Community Partnerships
- Quality Improvement
- Patient Activation
- Provider Training

The Chronic Care Model

Community Health Systems

Patient Practice Team

Productive Interactions
<table>
<thead>
<tr>
<th>Sustainable Community Partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Food pantries</strong></td>
</tr>
<tr>
<td><strong>Pharmacy discounts</strong></td>
</tr>
<tr>
<td><strong>Farmer’s markets</strong></td>
</tr>
<tr>
<td><strong>Fitness instructors</strong></td>
</tr>
</tbody>
</table>

Greater Chicago Food Depository distribution day at KLEO Community Center.
Prescriptions for Food and Exercise

- Chicago Park District
- Farmer’s Market
- Walgreens
- Food Depository
Food for Health

Nutrition is an important part of your treatment plan.

Use this sheet to help you follow your doctor’s guidance for a healthful eating plan. Read the nutrition labels on all your food products to learn more about what you’re putting in your body.

What are Low-Carb Foods?

- Carbohydrates (or carbs) include fruits, sweets and starches.
- The good news is that you don’t have to cut them out. Eating the right portion is important.
- AIM for 15 grams or less of carbohydrates per serving, and 45-60 grams or less per meal.

- Tomatoes
- Onions
- Carrots
- Mushrooms
- Tea and Coffee
- Yogurt
- Cottage cheese
- Green, leafy vegetables
- Green, yellow, red peppers
- Eggs
- Tofu
- Fish
- Chicken
- Lean cuts of meat
- Peanut butter

What are Low-Fat Foods?

- Go for foods that are reduced or low-fat; these will have at least 25% less fat per serving as compared to the traditional version of the food item.

- Olive Oil
- Avocado
- Fruits
- Vegetables
- Walnuts
- Flaxseeds
- Salmon
- Tuna
- Whole wheat bread
- Oatmeal
- Grains
- Pasta
- Rice

Healthful Eating
Just what the Doctor Ordered!

What are High-Fiber Foods?

- The best sources of fiber have: 5 grams of fiber or more per serving.
- Food that is a good source of fiber has 2.5 to 4.9 grams of fiber per serving.

- Prunes
- Dates
- Beans
- Oatmeal
- Avocados
- Raspberries
- Figs (dried)
- Apricots (dried)
- Coconut (dried)
- Fortified cereals
- Bran cereals
- Toasted wheat germ

What are Low-Sodium Foods?

- Look for foods with less than 140 milligrams of sodium per serving—that’s about 1/16 of a teaspoon.

- Careful: “No salt added” means no salt added during processing; it does not necessarily mean sodium-free!

- Milk
- Eggs
- Sherbert
- Pastas
- Rice
- Fresh fish
- Fresh poultry
- Tobasco
- Vinega
- Nuts (unsalted)
- Peanut Butter
- Tortillas (low sodium)
- Fresh fruit
- Fresh vegetables
- Sour cream

For more information
Visit www.southsidediabetes.org
Or Call (773) 702-2939

THE UNIVERSITY OF CHICAGO MEDICINE
Farmer’s Market Food Rx
Come join us at the **Well Experience Walgreens** for a Happy & Healthy Food Store Tour!

**ALL tours will take place the 4th Wednesday of the month at 75th & State from 3 to 4pm**

**AND**

**The 2nd Monday of the month at 55th & Wentworth from 1 to 2pm**

Join in on the tour and receive a *Walgreens gift bag*!

You must register in advance in order to participate in the grocery store tour as spaces are limited.

For more details, call:

- **75th & State**: (773) 224-1211
- **55th & Wentworth**: (773) 268-5664

We look forward to seeing you there!

Call phone numbers below for more details or to register.

Dates and locations are listed below.

For more tips on healthy eating, visit [southsidediabetes.com](http://southsidediabetes.com)

<table>
<thead>
<tr>
<th>Location 1</th>
<th>Location 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>75th &amp; State</td>
<td>55th &amp; Wentworth</td>
</tr>
<tr>
<td>11 E. 75th St.</td>
<td>5401 S. Wentworth</td>
</tr>
<tr>
<td>Chicago, IL 60619</td>
<td>Chicago, IL 60615</td>
</tr>
<tr>
<td>(773) 224-1211</td>
<td>(773) 208-6664</td>
</tr>
<tr>
<td>From 3-4pm</td>
<td>From 1-2pm</td>
</tr>
</tbody>
</table>

- **Wednesday, October 22nd**  | **Monday, October 13th**       |
- **Wednesday, November 26th** | **Monday, November 10th**      |
- **Wednesday, December 24th** | **Monday, December 8th**       |
- **Wednesday, January 28th**  | **Monday, January 12th**       |
Walgreens: Case Study of Business Investment

- **What’s in it for Walgreens**
  - National home: Chicago
  - Philanthropic, **community-oriented** leadership/management teams
  - Rebranding as a **“health entity”** (ACOs, other clinical partnerships)
  - Customer **branding**/loyalty
  - **New customers**/exposure
  - Affiliation with **prestigious teaching hospital** (co-branding)

- **What’s in it for the South Side Diabetes Project**
  - **Community resource** for fresh produce
  - **Sustainable** programming
  - In-kind **financial support** of coupon costs
  - In-kind use of **pharmacists** (trained in diabetes education)
  - In-kind diabetes **self-management resources** (diabetic socks, pedometers, etc)
  - In-kind **community education space** within pharmacies (community education)
  - De-identified, aggregate data for **research** purposes
The KLEO partnership
Integrating Patient Education and Community Partnerships
Lessons Learned

- Integrate health care and community – e.g. ACO
- Start small, focus on participants’ priorities, and build from there
- Align with others
  - Tremendous enthusiasm from all – “It’s the right thing”
- Integration is time-consuming and challenging, but payoffs are substantial

Chin MH, Peek ME. Health Promotion Practice 2014
Policy Implications

- Create incentives for population health and addressing social determinants
- Build incentives for reducing disparities
- Require community benefit
  - Non-profit hospital tax incentives
Thank you!

- Merck Foundation
- NIDDK R18 DK083946, P30 DK092949, K23 DK075006, K24 DK071933
- University of Chicago CTSA Pilot and Collaborative Translational and Clinical Studies Award
Diabetes Equity Project: Community Health Workers in the PCMH

Erin Kane, MD
November 20, 2014
Goal: To optimize primary care for underserved patients with diabetes

Baylor Community Care

- 5 clinics throughout Dallas/Fort Worth
- Low-income, uninsured patients with chronic diseases
- 35% of patient population with a diagnosis of diabetes
- Limited access to formal CDE led diabetes education programs
Diabetes Equity Project

- Community Health Worker led diabetes self management education
  - 1:1 visits, included family members
  - 6 visits over 1 year
  - Protocol based teaching
  - Documenting in electronic patient registry to track outcomes
  - Average CHW patient panel size: 250 patients

- CHW requirements
  - Medical assistant background
  - 160 hour state sanctioned CHW certification classes
  - American Association of Diabetes Educators Level 1 training
Patient Demographics

**Age**
- 19-44
- 45-64
- 65+

**Education Level**
- Less than High School
- High School/GED
- Trade
- College

**Ethnicity**
- White
- African American
- Hispanic
- Other

**Primary Language**
- English
- Spanish
- Other
Every 1% drop in HbA1c reduces the risk of microvascular complications by 40% and death by 21% (UKPDS35).
### Inpatient Mean Encounters Per Patient

<table>
<thead>
<tr>
<th>Case/Control</th>
<th>Pre/Post Intervention</th>
<th>Mean Encounter</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case</td>
<td>Pre</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>0.08</td>
<td>&lt;.0001</td>
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<tr>
<td>Control</td>
<td>Pre</td>
<td>0.66</td>
<td>0.2288</td>
</tr>
<tr>
<td></td>
<td>Post</td>
<td>0.52</td>
<td></td>
</tr>
</tbody>
</table>

- The annual DEP investment for a CHW to educate one DEP patient is $402.80.
- The combined Inpatient and ED cost savings post program enrollment is $137.19.
Community Health Workers in the PCMH

- Trusted peer
- Bilingual
- Frequent contact with patient, very accessible
- 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.
- “The DHP is from the community, so what she says holds more weight. She may better understand common misconceptions and be able to challenge patients in a way that the doctor in a white coat can’t.”
Expansion of CHW role within BSWH

- Two new community health worker job codes were approved by BHCS Human Resources
- Several CHWs have been promoted to supervisor roles
- Started with 5 – now 30 system wide
- Average pay: $17.50/hour

Medicaid 1115 Waiver

- DSRIP (delivery system reform incentive payments)
- Provided funding for expanding the use of CHWs
### Very High Job Satisfaction

#### 2012 DEP Equity

<table>
<thead>
<tr>
<th></th>
<th>Favorable</th>
<th>Mixed</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you rate Baylor as a place to work compared with other organizations you know about?</td>
<td>100%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I feel positive and optimistic about my work most of the time</td>
<td>100%</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

#### 2012 HTPN Allied Health

<table>
<thead>
<tr>
<th></th>
<th>Favorable</th>
<th>Mixed</th>
<th>Unfavorable</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you rate Baylor as a place to work compared with other organizations you know about?</td>
<td>86%</td>
<td>10%</td>
<td>4%</td>
</tr>
<tr>
<td>I feel positive and optimistic about my work most of the time</td>
<td>93%</td>
<td>3%</td>
<td>4%</td>
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</tbody>
</table>

Employee engagement survey  
CHWs compared with similar level employees (medical assistants)
Sustainability and Expansion

Through DEP, we have found that CHW-led diabetes self management education improves glycemic control and patient confidence in managing diabetes for an underserved patient population.

Hopeful future changes:
- Expand certification programs in other states (currently only in Texas, Washington, Oregon, Minnesota and Ohio).
- Continue expanding Medicaid reimbursement mechanisms for CHW services.

For more information about this work: [www.diabetestoolkit.org](http://www.diabetestoolkit.org)
MISSION
To improve the quality, capacity, coordination and accessibility of the healthcare system for all residents of Camden.

VISION
Camden will be the first city in the country to bend the cost curve while improving quality.

Overview of CCHP

• 60 full-time staff, $6.1 million annual budget
• Mix of foundation & federal grants, technical-assistance & care-coordination contracts, & hospital support
• Membership organization with twenty-member board; incorporated non-profit
Hotspotting:

a data driven process for the timely identification of extreme patterns in a defined region of the healthcare system used to guide targeted intervention and follow up to better address patient needs, reshape ineffective utilization, and reduce cost.
Camden’s Health Information Exchange

### Admitted Past Month (High Use)

<table>
<thead>
<tr>
<th>Name</th>
<th>DOB</th>
<th>Age</th>
<th>Gender</th>
<th>Admit Date</th>
<th>Discharge Date/Days</th>
<th>Facility</th>
<th>Total Days</th>
<th>Int (Time)</th>
<th>Ext (Time)</th>
<th>Provider</th>
<th>Practice</th>
<th>Insurance</th>
<th>Adm Diagnoses</th>
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<tbody>
<tr>
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<td>CUH 30</td>
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<td>3</td>
<td>4</td>
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<tr>
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<td>F</td>
<td>25</td>
<td>F</td>
<td>(Day 1)</td>
<td>CUH 5</td>
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<td>4</td>
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<tr>
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<td>E</td>
<td>(Day 1)</td>
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<tr>
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</tbody>
</table>

### Diagram: Camden Health Information Exchange (HIE)

- Hospitals
- PCPs
- MCOs
- Correctional Facilities
- Labs
- FQHGs
- Home Health

**CAMDEN HIE**

- NPI
- Lab/Radiology Results
- Discharge Summaries
- Medication List (CCHP)

**Camden County**
- Fairview
- St. Luke’s
- Dr. Acosta
- Reliance
- Osborn

**CAMCare**

- CCHP
- United Healthcare

**Additional Providers**
- Cumberland County General Hospital (CCGH)
- CAMcare
- Holy Redeemer

**Technical Partners**
- Craft
- Quest Diagnostics
- Virtua

**Community Partners**
- CAMCare
- Holy Redeemer
- Cumberland County General Hospital (CCGH)
- Cumberland County General Hospital (CCGH)
Clinical Interventions

**PUSH** upstream workflows for hospital-based enrollment and initial care planning

**CARRY** centralized community-based, patient-centric activities

**CATCH** refocused efforts to redesign primary care around PCP-based ACO activation
Intervention Goals

• Education
• Housing
• Medicaid Enrollment

Patient Goals

• Stay connected to family
• Admit impact of drug use
• Behavioral health program
• Stable living situation
• Address Medical Issues

Intervention

Camden Coalition of Healthcare Providers
NJ ACO Demonstration Project

- Community model
- MCO opt-in
- Public participation
- Participation by all hospitals & 75% of PCP
- 4+ behavioral health & addiction agencies
- Gainsharing agreement
• Board of Directors
• Executive Committee
• Quality Committee
• Finance Committee
• HIE Committee
• CEO Roundtable
• Care Coordination Meeting
• Community Advisory Council

ACO Governance & Engagement
Theory of Change
Uniting Policy, Practice and System Change to Create Healthcare Systems That Work

*Strategies for Improving Quality and Creating Patient-Centered Care to Better Address the Needs of Underserved Populations*

Thursday, November 20, 2014

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