Establishing the Business Case for Evidence-Based Chronic Disease Self-Management Education Programs

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Senior Director, Community Benefit
Overview of Presentation

• About Dignity Health
• National Goals for Health Reform
• History of our Initiative
• Making an Impact and Establishing the Business Case
• Tracking Trends and Outcomes
• Challenges and Opportunities
• Sustaining the Program / Keys to Success
Dignity Health
Dignity Health

Dignity Health Statistics (FY14)

- One of the nation's largest health care systems
- Acute Care Facilities: 39
- Assets: $15.8 billion
- Net Operating Revenue: $10.7 billion
- Acute Care Beds: 8,500
- Skilled Nursing Beds: 700
- Active Physicians: 9,000
- Total Employees: 55,000
- General Acute Patient Care Days: 1.6 million
- Community Benefits and Care of the Poor: $2 billion*

* Including unpaid costs of Medicare
Dignity Health Today

One of the largest health systems in the nation

- **20** State Network
- **380+** Care Sites
- **9,000** Affiliated Physicians
- **56,000** Employees
- **39** Acute Care Hospitals

Providing integrated, patient-centered care to more than two million people annually

Diversified service offerings and partnerships supporting population health

Growing national footprint with U.S. HealthWorks

Hospitals in Arizona, California, and Nevada
DIGNITY HEALTH – ABOUT US

• OUR MISSION
  - We are committed to furthering the healing ministry of Jesus. We dedicate our resources to:
    - Delivering compassionate, high-quality, affordable health services;
    - Serving and advocating for our sisters and brothers who are poor and disenfranchised; and
    - Partnering with others in the community to improve the quality of life.

• OUR VISON
  - A vibrant, national health care system known for service, chosen for clinical excellence, standing in partnership with patients, employees and physicians to improve the health of all communities served.
The Goals of Health Reform
National Goals for Reform

• Goals of Health Reform
  - Lower health care costs
  - Improve the quality of care
  - Provide coverage options for the uninsured

• National Quality Strategy
  - Better Care
  - Healthy People/Healthy Communities
  - Affordable Care

• National Prevention Strategy
  - Empower people
  - Ensure healthy and safe community environments
  - Promote clinical and community preventive services
  - Eliminate health disparities
Looking Back and Looking Forward
In the Beginning...

The Community Need Index
The Community Need Index

- The Community Need Index (CNI)
  - *Qualitative* means of defining community “Need” at a local level
  - *Standardized* mechanism for identifying variation in local need
  - Tool to help *Justify* and *Prioritize Resource Allocation* at a local level
  - Baseline against which to *Measure Performance Over Time* toward meeting community need
# CNI Scoring Comparison

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Indicator</th>
<th>Indicator %</th>
<th>Barrier Score</th>
<th>Indicator %</th>
<th>Barrier Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Elderly Poverty</td>
<td>3%</td>
<td>3</td>
<td>17%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Child Poverty</td>
<td>8%</td>
<td>3</td>
<td>27%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Single Parent Poverty</td>
<td>32%</td>
<td>3</td>
<td>40%</td>
<td>4</td>
</tr>
<tr>
<td>Cultural</td>
<td>Minority Population</td>
<td>8%</td>
<td>2</td>
<td>97%</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Limited English</td>
<td>1%</td>
<td>2</td>
<td>16%</td>
<td>5</td>
</tr>
<tr>
<td>Education</td>
<td>Without HS Diploma</td>
<td>9%</td>
<td>1</td>
<td>45%</td>
<td>5</td>
</tr>
<tr>
<td>Insurance</td>
<td>Unemployed</td>
<td>4%</td>
<td>2</td>
<td>15%</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Uninsured</td>
<td>13%</td>
<td>2</td>
<td>32%</td>
<td>5</td>
</tr>
<tr>
<td>Housing</td>
<td>Renting %</td>
<td>12%</td>
<td>1</td>
<td>38%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Final CNI Score</strong></td>
<td></td>
<td><strong>1.8</strong></td>
<td><strong>38%</strong></td>
<td><strong>4.6</strong></td>
</tr>
</tbody>
</table>

*(Low Need) (High Need)*

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Dignity Health.
Strong Correlation with Discharge Rates

Annual Admission Rate per 1000 Population by CNI Score

All Service Lines

Admission Rates in High Need Areas Twice Those of Less Need
Strong Correlation with Avoidable Admissions

**Annual Admission Rate per 1000 Population by CNI Score**

**Ambulatory vs. Marker Conditions**

Preventable Admissions More Than Twice As Likely To Occur In High Need Areas; While Marker Conditions Occur At The Same Frequency

Note: Ambulatory Sensitive Conditions if treated properly in an OP setting, do not generally require an acute care admission
Ambulatory Care Sensitive Conditions - Defined

• Medical conditions for which hospital use might be reduced by timely and effective outpatient care prior to the need for hospitalization (hence, the terms "avoidable" or "preventable" hospital use).

• Appropriate prior ambulatory care could
  - prevent the onset of an illness or condition;
  - control an acute episodic illness or condition;
  - or manage a chronic disease or condition.
A New and Expanded View

• Residents of high risk areas are *more than twice as likely* to be hospitalized for ambulatory care sensitive conditions.

• The Community Need Index has put a face on the poor unlike any we have seen before.

• Carol Bayley, VP Ethics and Justice Education
No Data: No Problem

How was this impacting us?
CHW Tended Uncompensated Care

FY04-FY08 Uncompensated Care

- Other Public Programs for the Indigent
- Charity Care
- Medicaid
- Medicare
Non-Commercial ACSC FY08 Operating Margin
Chronic Disease: A National Crisis

• Chronic diseases are the No. 1 cause of death and disability in the U.S.

• Treating patients with chronic diseases accounts for 75% of nation’s health care spending

• Two thirds of the increase in health care spending is due to increased prevalence of treated chronic disease

• The vast majority of cases of chronic disease could be prevented or managed.

www.fightchronicdisease.org
100% of the current Community Health Needs Assessments conducted by Dignity Health facilities cited chronic disease management for diabetes, asthma, heart disease and/or cancer as a priority unmet need.
Launched Three Pilot Programs

- Saint Francis Memorial Hospital
  - McMillan Stabilization Project
    • Decreased ED utilization by public inebriates 13% and linked them to appropriate social services.

- St. John’s Regional Medical Center
  - Diabetes Initiative
    • Educated health professionals about current treatment of diabetes.
    • Launched community wide education/support.
    • Received federal funding for improvement in Latino health

- California Hospital Medical Center
  - Chronic Disease Self-Management Program
    • One year post intervention, participants utilization of inpatient services decreased 82% and ED use from 20 days to one.
We CAN Make a Difference!

Next Step: Toolkits
APPLYING THE SCIENCE OF COMMUNITY BENEFIT

Ambulatory Care Sensitive Conditions

"Knowing is not enough; we must apply. Willing is not enough; we must do.

J.W. von Goethe

CHW HORIZON 2010 SYSTEM-WIDE 5 YEAR GOAL IN COMMUNITY BENEFIT

- CHW will expand and/or enhance services for persons with disproportionate unmet health needs resulting in care delivery in settings most appropriate to meet their needs.
- Ensure appropriate access to care for the poor and disenfranchised, which is evidenced by a 5% reduction in hospital admissions for ambulatory sensitive conditions.

EXECUTIVE SUMMARY

Residents of communities with multiple socioeconomic barriers are more likely to be hospitalized for ambulatory sensitive conditions (ASC), conditions that if treated in the community may not require acute care admissions. Appropriate prior ambulatory care might prevent the onset of an illness, control an acute condition, or help to manage a chronic disease.

In response to this compelling information, which combined with our hospital utilization data, we have developed a strategic initiative to reduce the number of inpatient hospital admissions for ambulatory sensitive conditions by 5% over the next five years.

We believe that by applying the science of community benefit with a focus on disease management programs in our communities with greatest need, we have a unique opportunity to reduce health disparities. This goal is to improve health status and quality of life in a sustainable manner and reduce the demand for high-cost medical care to treat preventable conditions.

This report has been developed to help enhance or develop community health initiatives that will help CHW achieve the community benefit objectives outlined in Horizon 2010. It is intended that programs will focus on the areas where demand for the mission imperative to serve and advocate for our others and others who are poor and disenfranchised can be best realized. The report includes:

- the demographics of the community served by your facility, which gives insight to the socioeconomic status of neighborhoods and barriers to access;
- the Community Need Index (CNI) ranking by zip code of each neighborhood in your service area, which will help pinpoint populations who are likely to have the most unmet health needs;
- a summary of current community benefit expense and an assessment of FY04 utilization of hospital services that involves ambulatory sensitive conditions;
- an overview of the funds consumed through the CHW Community Grants and Community Investments programs which may reveal opportunities for additional investment and
- free source information on programs that address ambulatory care sensitive conditions from the Centers for Disease Control and the Joint Commission on Accreditation of Hospital Organizations (JCAHO) and a list of effective disease management strategies currently offered at CHW faciliites.

We will work together over the next year to review this information and to plan a strategy of intervention to address these community health issues and their underlying causes. It is expected that an intervention strategy will be implemented in FY07 and the objectives achieved by 2010.
Toolkit - Hospital-Specific Data Included

**WHAT ARE THE CURRENT ISSUES?**
- Increasing costs of insurance are unsustainable.
- Solutions at the federal level are unlikely.
- Given budget constraints and a lack of support for systemic change in healthcare financing.
- Costs shifting from employees to employers is resulting in higher out-of-pocket expenses, which are adversely impacting lower-income population.
- Chronically ill are more likely to defer care due to cost.
- Reimbursements to cover the cost of care for ASC conditions, regardless of payer, is not adequate.

**HOW DOES THIS AFFECT CHW HOSPITAL?**
By focusing our community benefit efforts on reducing utilization for ASCs, CHW hospitals will generally benefit as follows:
- CHW hospitals, in general, have a negative operating performance associated with these admissions.
- Patients presenting with underlying conditions related to selected ASCs (Diabetes, COPD, etc.) are largely responsible for this performance.
- Reducing their associated complications should improve patient outcomes and reduce costs in subsequent admissions.
- Focusing on reducing admissions from this population frees capacity for those patients in greatest need for out-patient care services.

**UTILIZATION FOR IMPANT AMBULATORY SENSITIVE CONDITIONS AT CHW HOSPITAL**
This utilization data reflects all inpatient admissions that included an ASC DRG diagnosis.

<table>
<thead>
<tr>
<th>DRG</th>
<th>ASC Description</th>
<th>Cases</th>
<th>Net Margin (Loss)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8950</td>
<td>Simple Fracture</td>
<td>259</td>
<td>268,595</td>
</tr>
<tr>
<td>127</td>
<td>Congestive Heart Failure</td>
<td>292</td>
<td>56,630</td>
</tr>
<tr>
<td>88</td>
<td>Chronic Obstructive Pulmonary Disease (COPD)</td>
<td>145</td>
<td>155,668</td>
</tr>
<tr>
<td>143</td>
<td>Chest Pain</td>
<td>48</td>
<td>60,364</td>
</tr>
<tr>
<td>95</td>
<td>Asthma</td>
<td>58</td>
<td>94,976</td>
</tr>
<tr>
<td>7160</td>
<td>Respiratory Infection</td>
<td>95</td>
<td>49,882</td>
</tr>
<tr>
<td>173</td>
<td>Inflammatory Bowel Disease</td>
<td>14</td>
<td>34,482</td>
</tr>
<tr>
<td>294/205</td>
<td>Diabetess</td>
<td>69</td>
<td>77,712</td>
</tr>
<tr>
<td>Total</td>
<td>1023</td>
<td>(12,079,139)</td>
<td></td>
</tr>
</tbody>
</table>

Pneumonia, heart disease, chest pain and chronic obstructive pulmonary disease are the top ASCs at CHW hospital. Prevention programs aimed at managing the incidence of these conditions may improve the health status and quality of life for individuals and reduce hospital admissions and expenditures. Measures to prevent or manage diabetes, a known contributor to the incidence of these diseases, are of great importance, particularly in this service area with community demographics indicating a high risk for and incidence of this disease among Hispanic, Latino residents. Because of the increased risk of pneumatic events, it makes sense for patients to pursue preventative care early. Further, it is more costly to manage respiratory complications in patients, it is advisable for all individuals who are 65 or older to be immunized with pneumococcal vaccine once and with influenza vaccine every year.

**WHAT IS CURRENTLY BEING DONE TO ADDRESS UNMET HEALTH NEEDS AT CHW HOSPITAL?**

**WHAT IS ALREADY KNOWN ABOUT THE COMMUNITY?**

<table>
<thead>
<tr>
<th>2003 Needs Assessment</th>
<th>2004 Top Total ASC from Utilization Data</th>
<th>Community Demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Primary Care</td>
<td>Pneumonia</td>
<td>Population</td>
</tr>
</tbody>
</table>
| Specialty Care Physicians | Heart Disease | Area 1 | 60%
| Primary Care Physicians | Chest Pain | Area 2 | 15%
| Other Public Programs | COPD | Elderly | 65%
| Behavioral Health | | Social Services | 20%
| Bilingual/Cultural Clinic | | Community Services | 10%

**COMMUNITY NEED INDEX – SOCIOECONOMIC ASSESSMENT OF HEALTH SERVICES UTILIZATION RISK**

<table>
<thead>
<tr>
<th>Zip Code</th>
<th>Score</th>
<th>Population</th>
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</thead>
<tbody>
<tr>
<td>93030</td>
<td>4.2</td>
<td>49,355</td>
</tr>
<tr>
<td>93033</td>
<td>4.9</td>
<td>61,435</td>
</tr>
<tr>
<td>93041</td>
<td>3.6</td>
<td>20,442</td>
</tr>
</tbody>
</table>

**FY05 COMMUNITY BENEFIT EXPENSES**

<table>
<thead>
<tr>
<th>Benefits for the Poor</th>
<th>Benefits for the Broader Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transitional Housing</td>
<td>3,205,134</td>
</tr>
<tr>
<td>Home Health Care</td>
<td>1,405,130</td>
</tr>
<tr>
<td>Other Public Programs</td>
<td>61,652</td>
</tr>
<tr>
<td>Community Services</td>
<td>287,403</td>
</tr>
</tbody>
</table>

Total: $3,741,132
Evidence-Based Examples and Best Practices Provided
As a result of evidence-based chronic disease self-management programs offered to the community, participants in the programs are empowered to better self-care through enhanced self-efficacy.

**Measurable Objective:**
- 100% of Dignity Health hospitals have established and maintained evidence-based disease self-management education programs and have demonstrated a decrease in or avoidance of admission 90 days post intervention among participants of the program from a baseline established through self-reported utilization. (Chronic Disease Management)
The Business Case

- Disease self-management plays an integral part in managing the risk and health of populations.
  - Fewer readmissions
  - Decreased utilization (free bed capacity for more appropriate inpatient admissions)
  - Decreased length of stay
  - Fewer complications
  - Decreased costs
  - Improved quality
  - Increased health/quality of life for patients living with chronic conditions
Non-Commercial Utilization Inpatient

Current and Trended Data
## In Patient Hospitalizations for Prevention Quality Indicators (PQI)
### FY2014 Non-Commercial – Areas of Focus

<table>
<thead>
<tr>
<th>PQI Condition</th>
<th>Cases</th>
<th>Days</th>
<th>ALOS</th>
<th>Net Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angina Without Procedure</td>
<td>239</td>
<td>482</td>
<td>2.02</td>
<td>($394,146)</td>
</tr>
<tr>
<td>Asthma in Younger Adults</td>
<td>991</td>
<td>2,300</td>
<td>2.32</td>
<td>($2,725,130)</td>
</tr>
<tr>
<td>Bacterial Pneumonia</td>
<td>6,068</td>
<td>26,587</td>
<td>4.38</td>
<td>($21,463,283)</td>
</tr>
<tr>
<td>Congestive Heart Failure</td>
<td>7,331</td>
<td>30,387</td>
<td>4.15</td>
<td>($21,180,408)</td>
</tr>
<tr>
<td>COPD or Asthma in Older Adults</td>
<td>5,228</td>
<td>18,724</td>
<td>3.58</td>
<td>($15,205,785)</td>
</tr>
<tr>
<td>Diabetes Long Term Complications</td>
<td>2,460</td>
<td>12,012</td>
<td>4.88</td>
<td>($7,334,486)</td>
</tr>
<tr>
<td>Diabetes Lower Extremity Amputation</td>
<td>240</td>
<td>2,607</td>
<td>10.86</td>
<td>($1,892,019)</td>
</tr>
<tr>
<td>Diabetes Short Term Complications</td>
<td>1,976</td>
<td>6,407</td>
<td>3.24</td>
<td>($7,786,247)</td>
</tr>
<tr>
<td>Diabetes Uncontrolled</td>
<td>232</td>
<td>621</td>
<td>2.68</td>
<td>($335,001)</td>
</tr>
<tr>
<td>Hypertension</td>
<td>4</td>
<td>41</td>
<td>10.25</td>
<td>($98,596)</td>
</tr>
<tr>
<td>Low Birth Weight</td>
<td>2,148</td>
<td>40,890</td>
<td>19.04</td>
<td>($30,584,726)</td>
</tr>
<tr>
<td>Perforated Appendix</td>
<td>838</td>
<td>4,418</td>
<td>5.27</td>
<td>($5,269,729)</td>
</tr>
<tr>
<td>Urinary Tract Infection</td>
<td>3,588</td>
<td>12,299</td>
<td>3.43</td>
<td>($5,400,778)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>31,343</td>
<td>157,775</td>
<td>5.22</td>
<td>($119,670,333)</td>
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</tbody>
</table>
Inpatient Utilization for Chronic Conditions

Non-Commercial - 3 Year Trend Number of Cases

- Congestive Heart Failure
- COPD or Asthma in Older Adults
- Diabetes

FY2012 Cases
FY2013 Cases
FY2014 Cases
Inpatient Utilization for Chronic Conditions
Non-Commercial - 3 Year Trend Number of Days

<table>
<thead>
<tr>
<th>Condition</th>
<th>FY2012 Days</th>
<th>FY2013 Days</th>
<th>FY2014 Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestive Heart Failure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPD or Asthma in Older Adults</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Inpatient Utilization for Chronic Conditions
Non-Commercial - 3 Year Trend Net Margin

- Congestive Heart Failure
- COPD or Asthma in Older Adults
- Diabetes

FY2012 Net Margin
FY2013 Net Margin
FY2014 Net Margin
In the last year alone (FY2014), facility reports reveal that more than $1.9 million was invested in Chronic Disease Self-Management Education programs by our hospitals, which served nearly 8,000 individuals.

Ninety days following participation in the programs only 8% of the participants were seen in either the hospital or emergency department (self-reported).

The average variable cost per inpatient case for all chronic PQI conditions was more than $10,000 for fiscal year 2014.

Not only does the intervention reduce the burden of cost on healthcare systems, more importantly it also empowers people living with chronic conditions to better self care and improved quality of life.

With a primary focus on vulnerable communities, this intervention effort also helps to reduce health inequity.
Evidence-Based Programming – CDSME

“I am ninety years old and this program has been very helpful in my way of life... the importance of daily exercise and less worry over my health problems... I am much more relaxed than I have been in a long time.”

“We learned to deal more effectively with anxiety, anger, pain, depression and emotions. I now have more confidence in myself...”
Moving Forward
Challenges, Opportunities and Next Steps
Community Benefit Expense
Five-Year Trend (in thousands)
HEALTH IMPROVEMENT

Lifestyle interventions

Low risk → At risk → Early Signs → Symptoms → Disease

Preventive Services

Primary and Secondary Prevention

Screening

DISEASE MANAGEMENT

Disease Management

Case Management

Acute Treatment

Disease Management

HEALTH MANAGEMENT

POPULATION-BASED

CASE-BASED
CDSME Programs (Stanford evidence-based curriculum) offered in:

- Bay Area (San Francisco, Santa Cruz)
- Sacramento (including Sierra Nevada and Woodland) (6 facilities)
- Southern CA (both CHMC & Inland Empire expected 2015) (4 facilities)
- Arizona (in collaboration with AZ Living Well Institute) (3 facilities)
- North State (3 facilities)
- Merced
- Stockton
- Central Coast (3 facilities)
- Bakersfield (3 facilities)
- Henderson (3 facilities)

CDSMP Programs offered in:

- December 2014 Leaders: 74, Master Trainers: 15, T-Trainer: 1
- Tomando (Spanish) Leaders: 51, Master Trainers: 5
- Both (English & Spanish) Leaders: 8, Master Trainers: 10

TOTALS: Leaders: 133, Master Trainers: 30, T-Trainer: 1
NEXT STEPS

• Meeting with Blue Shield Representatives to discuss pilot potential and payment structure

• Employee Giving Campaign donations to the Community Health Partnership Fund will finance the education of new trainers in Arizona (December 2014)

• System Community Health Partnership Fund is financing consultant fees and CMS Application Fees ($900 each facility) for Diabetes Self-Management Program

• In collaboration with Dignity Health IT, staff from AZ, NV, CA building the back end for referral to the CDSME Programs through the Electronic Health Record and subsequent tracking of completion rates

• Research collaboration with Stanford “Building Better Caregivers”
To Ensure Continuing Success

• The Board and System Leadership need to believe in and support the effort.
  - It was elevated to a system wide goal and continues to be the primary system initiative in Community Benefit in support of Operations and the Office of Population Health Management

• Integrate community benefit into the overall strategy of the organization.
  - Ensure that all stakeholders realize the value of this focused effort

• No data, no problem.

• Share best and promising practices.

• Let your in-reach be as important as your outreach.

• Support the facilities with funding or in kind support.

• PARTNER - PARTNER - PARTNER
Discussion