Delivering Better Care at Lower Cost for Complex Patients

Jeffrey Brenner, MD
Executive Director
What do these patients have in common?

- Homeless patient in Trenton, NJ with 450 visits in a year
- Dialysis patient in Allentown, PA with $1 million in inpatient costs
- Frequently hospitalized wheelchair bound patient in San Diego, CA
- Middle class patient in South Eastern, PA with 147 CT scans
- Ventilator-assisted patient in Camden with $745,000 in charges
- Dialysis patient with $2 million in inpatient costs found by a group of student hotspotters
Outlier patients in the long tail of data
Who are patients with ‘super-utilization’?

• Homeless?
• Mentally ill?
• Addicted?
• Complex co-morbidity?
• Medication confusion?
• Transportation barriers?
### Hospital Utilization since 1996

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>ER Visits</td>
<td>102</td>
</tr>
<tr>
<td>Admissions</td>
<td>54</td>
</tr>
<tr>
<td>Total CT Scans</td>
<td>147</td>
</tr>
<tr>
<td>CT Scan-Head</td>
<td>73</td>
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Patient Case Presentation #1

55-yo Male, admitted for GI bleed and SOB (November 2011)
Dual coverage, Lives alone in high-rise apartment
6 months- 9 ED visits, 6 Inpt visits
12 Medications daily
Patient Case Presentation #2

52-yo Female, Spanish-speaking, admitted for SOB
Lives with family
6 months- 6 inpatient visits
Ventilator dependent and has tracheosotomy
Severe COPD
1 year pre-enrollment
Charges = $745,018; Receipts: $95,358;
Inpatient days: 55; ED visits: 1

Post-enrollment
Charges = $0; Receipts: $0
Inpatient days: 0; ED visits: 0
Overview of CCHP

• 85 full-time staff, $8 million annual budget
• Mix of foundation & federal grants, technical-assistance & care-coordination contracts, & hospital support
• Membership organization with twenty-member board; incorporated non-profit
Camden Coalition of Healthcare Providers

- Health Information Exchange
- High Utilizer Outreach Team
- Primary Care Redesign
- Research and Performance Improvement
- Cross-Site Learning and Workforce Development
- Advocacy and Policy Change
- Citywide Membership Non-profit
Camden Health Data

2002 – 2011 with Lourdes, Cooper, Virtua data

- 500,000+ records with 98,000 patients
- 50% population use ER/hospital in one year
Camden Health Data

Leading ED/hospital utilizers citywide

- 324 visits in 5 years
- 113 visits in 1 year
Cost Breakdown in Camden

Total revenue to hospitals for Camden residents
$108 million per year

- Most expensive patient $3.5 million
- 30% hospital receipts = 1% patients
- 80% hospital receipts = 13% patients
- 90% hospital receipts = 20% patients
<table>
<thead>
<tr>
<th>Primary ED Diagnosis, 2011</th>
<th>PATIENTS</th>
<th>VISITS</th>
<th>% OF VISITS</th>
<th>RECEIPTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper respiratory infections (head colds)</td>
<td>4,092</td>
<td>4,858</td>
<td>16.3%</td>
<td>$1,456,464</td>
</tr>
<tr>
<td>Sprains and strains</td>
<td>2,980</td>
<td>3,295</td>
<td>11.1%</td>
<td>$1,159,452</td>
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<tr>
<td>Contusions</td>
<td>2,561</td>
<td>2,786</td>
<td>9.4%</td>
<td>$837,132</td>
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<tr>
<td>Abdominal pain</td>
<td>1,986</td>
<td>2,318</td>
<td>7.8%</td>
<td>$926,239</td>
</tr>
<tr>
<td>Skin and subcutaneous tissue infections</td>
<td>1,717</td>
<td>2,213</td>
<td>7.4%</td>
<td>$673,115</td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>1,892</td>
<td>2,182</td>
<td>7.3%</td>
<td>$720,050</td>
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<tr>
<td>Back pain</td>
<td>1,484</td>
<td>1,735</td>
<td>5.8%</td>
<td>$517,997</td>
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<tr>
<td>Asthma</td>
<td>1,058</td>
<td>1,580</td>
<td>5.3%</td>
<td>$675,230</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>65,992</strong></td>
<td></td>
<td></td>
<td><strong>~$29 million</strong></td>
</tr>
</tbody>
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Camden Hospital Utilization
2011 Snapshot

Camden Coalition of Healthcare Providers
Healthcare Cost Hotspots in Camden, NJ (Jan 2002-June 2008)

High Cost Buildings...

- **Northgate II**
  - 3,901 visits, 615 patients
  - $83 million in charges ($21,000 per visit)
  - $12 million in receipts
  - 15% collection rate

- **Abigail House**
  - 1,414 visits, 332 patients
  - $92 million in charges ($65,000 per visit)
  - $15 million in receipts
  - 16% collection rate

Overview of High Cost Hotspots...

- **Receipts**: 37%
- **Visits**: 27%
- **Patients**: 18%
- **Area**: 10%
- **Blocks**: 6%

Map includes only blocks with at least 1 visit

Source: Cooper, Lourdes, and Virtua Hospital and ER billing data Jan 2002-June 2008
Triage
Bedside Engagement
Initial Care Planning

Questions for My Care Team...

Birth Certificate
Social Security Card
Non-Driver's NJ I.D.
* Housing
* Schooling
* Employment
Addictions Support
Medication Support
Transportation
Phone Communication
Clothing
Food - Welfare?
Home Visit
Enrollment
Domains of Care Planning

- Addiction
- Advocacy & Activism
- Benefits & Entitlements
- Education and Employment Connection
- Family, Personal, Peer Support
- Food and Nutrition Support
- Health Maintenance, Management, and Promotion
- Housing & Environment
- ID Support
- Legal Assistance
- Medication and Medical Supplies
- Mental Health Support
- Provider Relationship Building
- Transportation Support
- Patient-Specific Wildcard
Home Visit
Home-based Medication Reconciliation
Tracking
Graduation
Dash-boarding & Score-carding
CCHP’s Care Management RCT

Key Outcomes: reduced re-hospitalizations and ED visits in 12 month period following discharge

current n = 250 / 800
Clinical Redesign Activities

Seven Day Pledge

**ASK YOUR DOCTOR FOR A 7 DAY APPOINTMENT.**

CAMDEN COALITION OF HEALTHCARE PROVIDERS
AND NICHOLSON FOUNDATION COLLABORATION

**7 DAY PLEDGE**

Seeing your primary care provider within 7 days of hospital discharge can help with:

- Answering any questions about your new medications or health conditions
- Getting additional services you need to stay healthy

AND

- Preventing you from going back to the hospital!

Seeing your doctor is an important part of recovery! The next time you leave the hospital, make sure to ask your primary care provider for an appointment within 7 days.

ASK YOUR DOCTOR ABOUT THE 7 DAY PLEDGE.
Clinical Redesign Activities
Seven Day Pledge

An initiative to reduce hospital readmissions.
Clinical Redesign Activities
Seven Day Pledge
Clinical Redesign Activities

**ACO Incentive Plan**

- **Practice incentive**
  - **$150** payment for each 30 minute post-hospital follow-up PCP visit within 7 days of discharge
  - **$100** payment for each 30 minute post-hospital follow-up PCP visit within 14 days of discharge

- **Patient incentive**
  - **Cab voucher** to and from post-hospital follow-up PCP visits for patients (given at hospital bedside)
  - **$20 Visa gift card** for patients upon completion of post-hospital follow-up PCP visit (if within 14 days)

- **Other incentives**
  - Patient satisfaction surveys $500
  - 2 practice work sessions $1,000
  - 4 quality improvement dinners (provider/staff incentivized)
  - Approved QI plan $2,500
Why is saving money so hard in healthcare?
Research Article

Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults

The Adverse Childhood Experiences (ACE) Study

Vincent J. Felitti, MD, FACP, Robert F. Anda, MD, MS, Dale Nordenberg, MD, David F. Williamson, MS, PhD, Alison M. Spitz, MS, MPH, Valerie Edwards, BA, Mary P. Koss, PhD, James S. Marks, MD, MPH
Effective vs Efficient
Fountain of Youth Discovered in Doylestown, PA

Effect of a Community-Based Nursing Intervention on Mortality in Chronically Ill Older Adults: A Randomized Controlled Trial

Kenneth D. Coburn*, Sherry Marcantonio, Robert Lazansky, Maryellen Keller, Nancy Davis

Health Quality Partners, Doylestown, Pennsylvania, United States of America

- 1,700 adults over 65 over 10 years
- Randomized study run by Mathematica begun in 2002
- Part of a Medicare Coordinated Care Demonstration Project
- 25% lower relative risk of death (9.9% vs 12.9%)
- Highest risk patients 48% reduction in death rates
- 33% reduction in hospitalization
- 22% reduction in total cost to Medicare