Hot Spotting: Innovative Approaches to Caring for the Very Ill

Jeffrey Brenner, MD
Executive Director

Camden Coalition of Healthcare Providers
You are cordially invited to the first

**Camden City Healthcare Providers’ Breakfast**

Join fellow clinicians to get acquainted, and to share strategies, resources, and ideas on providing health care to Camden City residents.

**Thursday, January 24, 2002**
7:30 – 9:00 am

At the Rutgers University Octagon Room, Camden Campus Center, North Third Street

Sponsored by the Center for Strategic Urban Community Leadership at Rutgers University, Division of Urban Health in the Department of Family Medicine at Cooper Hospital, and the Camden Area Health Education Center

Please RSVP to Daria Chacón at 856-963-2432 x218 by Friday, January 11.
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
- Leading ED/hospital utilizers citywide
  - 324 visits in 5 years
  - 113 visits in 1 year
- Total revenue to hospitals for Camden residents $108 million per year
  - Most expensive patient $3.5 million
  - 30% costs = 1% patients
  - 80% costs = 13% patients
  - 90% costs = 20% patients
# Top 10 ER Diagnosis 2002-2007 (317,791 visits)

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<tr>
<th>Code</th>
<th>Diagnosis</th>
<th>Visits</th>
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<tr>
<td>465.9</td>
<td>ACUTE UPPER RESPIRATORY INFECTION (head cold)</td>
<td>12,549</td>
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<td>382.9</td>
<td>OTITIS MEDIA NOS (ear infx)</td>
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<td>079.99</td>
<td>VIRAL INFECTION NOS</td>
<td>7,577</td>
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<td>462</td>
<td>ACUTE PHARYNGITIS (sore throat)</td>
<td>6,195</td>
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<td>493.92</td>
<td>ASTHMA NOS W/ EXACER</td>
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<td>558.9</td>
<td>NONINF GASTROENTERI (stomach virus)</td>
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<td>789.09</td>
<td>ABDOMINAL PAIN-SITE NEC</td>
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<td>780.6</td>
<td>FEVER</td>
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<td>786.59</td>
<td>CHEST PAIN NEC</td>
<td>3,711</td>
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<tr>
<td>784.0</td>
<td>HEADACHE</td>
<td>3,248</td>
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</table>
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

Camden Coalition of Healthcare Providers
www.camdenhealth.org
Newark Beth Israel Hotspot Analysis (2010)

**Total Costs per Census Block (deciles)**
- $0
- $1 - $1,097
- $1,098 - $4,955
- $4,956 - $10,700
- $10,701 - $18,685
- $18,686 - $31,353
- $31,354 - $54,230
- $54,231 - $88,719
- $88,720 - $167,531
- $167,532 - $1,793,955

**Hotspot**
($>$200k in receipts and >50 patients)

**Mt Vernon and Manor Dr High Rises** (4 Buildings)
- 272 Patients
- 379 ER & Inpatient Visits
- $1.11 million in receipts

**Elizabeth Ave High Rises** (6 Buildings)
- 774 Patients
- 1,390 ER & Inpatient Visits
- $2.0 million in receipts

**Total Receipts by Zip Code**
- 07112: $24,079,842
- 07108: $16,553,538
- 07103: $14,181,330
- 07106: $11,788,444
- 07104: $7,022,274
- 07114: $6,440,656
- 07107: $5,594,552
- 07105: $5,498,100
- 07102: $4,206,927

**1060 Broad St**
- (1 Building)
- 87 Patients
- 198 ER & Inpatient Visits
- $993 thousand in receipts
MaineCare Hotspot Analysis: Penobscot County
7/1/2008 - 6/30/2010

What is a hot spot?
A hot spot is any geography where a large number of high utilizers reside. High Utilizers are defined as any individual with 3 or more hospital admissions or 6 or more ER visits within 2 years. Hot spots range from blue (no hot spot) to red (intense hot spot).
## Hospital Utilization since 1996

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<th>Category</th>
<th>Count</th>
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<td>ER Visits</td>
<td>102</td>
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<tr>
<td>Admissions</td>
<td>54</td>
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<tr>
<td>Total CT Scans</td>
<td>147</td>
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<tr>
<td>CT Scan-Head</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

ESRD
Renal Carcinoma
Hepatitis B
Hypertension
Hyperlipidemia
Peripheral vascular dx

Asthma
Glaucoma (blind in one eye)
Sleep Apnea
Severe Back Pain

www.camdenhealth.org
Patient Centered Care Coordination

- Meals
- Transport
- Home PT/OT
- Home Nursing
- Sub-Acute Rehab
- Dialysis
- Transplant
- Nephrology
- Opto
- PCP
- Urology
- Oncology
- Surgery
- GI
- Cardiology
- Pain Mgt
1 year pre-enrollment
Charges = $312,525; Receipts: $59,133
Inpatient days: 24; ED visits: 2

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

Length of stay

6-Mar-11 6-Apr-11 6-May-11 6-Jun-11 6-July-11 6-Aug-11 6-Sep-11 6-Oct-11 6-Nov-11 6-Dec-11 6-Jan-12 6-Feb-12 6-Mar-12 6-Apr-12 6-May-12

ED  IP

Example: In June 2011, there were 2 inpatient stays and 1 ED visit.
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
### Admitted past month, 6 month summary

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<th>Facility</th>
<th>Inp</th>
<th>ED</th>
<th>Name</th>
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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
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