Overview of Camden Emergency Department and Hospitalization Data

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Construction of Camden Health Database

- Good planning starts with good data
- No good local datasets, most current data at the county or state level
- Patient level data is crucial to understanding health patterns
- Local data could pull together stakeholders and break down barriers
Camden Health Data

- Billing data for Camden City residents only
  - Cooper Health System
  - Our Lady Of Lourdes Health System
  - Virtua Health System

- Included in data files
  - Name, DOB, address
  - Diagnosis codes
  - Gender, Race, Insurance status, Date of Admission, Date of Discharge, Type of Visit
  - Charges/receipts
  - Emergency department visits and inpatient hospitalizations
Camden Health Data

- HIPAA protections/IRB protocols
  - Protocol reviewed by three IRB’s (Institutional Review Boards)
  - Took approximately 9 months
  - Files isolated to a single hard drive
  - Locked in filing cabinet, behind 2 locked doors, next to security desk
  - Access only available to three researchers who are registered with the IRB’s.
Camden Health Data

- Obtaining the Data
  - Hospital IT departments very slow
  - Incorrect data

- Data cleaning/standardization
  - Addresses misspelled and non-standard
  - Incorrectly entered names, DOB, etc
  - Insurance company info coded differently with each institution
Camden Health Data

- Data Linkage Between Datasets
  - Complex process to link patients between disparate data sets
  - Probabilistic linkage based on Name, DOB, Address, and Hospital ID
  - Commercial software packages available

- Creation of Relational Database
  - Split flat data files into multiple related tables
  - Create queries and reports

- Geocode and map data
Camden Health Data

Overview 2003:

- 68,000 Visits
- 38,000 Unique patients across institutions
  - Used rough methodology of DOB and part of address
- Approx 50% of the City population uses the ER/hospital in one year
- Significant geographic variations
Visit Frequency (Pt's vs Visits)

- 1 Visit: 35%
- 2 Visits: 23%
- 3 Visits: 14%
- 4 Visits: 9%
- 5+ Visits: 63%

Patients:
- 1 Visit: 19%
- 2 Visits: 5%
- 3 Visits: 4%
- 4 Visits: 8%
- 5+ Visits: 20%
Patient Insurance Status

- Self pay / charity care: 27%
- Horizon Mercy (Medicaid HMO): 16%
- Medicare (Fee for service): 7%
- Medicaid (Fee for service): 6%
- Americhoice (Medicaid HMO): 4%
- Other Medicaid HMO: 3%
- Aetna / USHC (Private HMO): 2%
- Other: 10%
Camden Hospital and Emergency Room
Health Data - 2003

Visits that Include a Diagnosis of Falls
- Red: Above City Range
- Yellow: Within City Range
- Blue: Below City Range

Comparisons are based on rate per 100,000 population.

Source: CAMConnect Camden Health Report, 2006
Camden Health Data

New Data Set 2002 - 2007

- 387,000 records with 98,000 patients
- Leading utilizer came 324 visits
- Most expensive patient $3.5 million
- Total revenue to hospitals for Camden residents $460,000,000 + charity care
- 80% costs = 13% patients
- 90% costs = 20% patients
## Top 10 ED Diagnosis 2002-2007 (317,791 visits)

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<th>Code</th>
<th>Diagnosis</th>
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<td>ABDOMINAL PAIN-SITE NEC</td>
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<td>FEVER</td>
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<td>PAIN IN LIMB</td>
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Hospital Admissions and ER Visits for Chronic Disease 2002 - 2007
Hospital Admissions and ER Visits for Diabetes 2002 - 2007
Top 1% of Utilizers (2002-2007)

- 1,035 patients with 39,056 visits
- Between 24 and 324 visits
- Total charges $375 million
- Total receipts $46 million + charity care
- Enough $$ to fund 50 family physicians or 100 nurse practitioners
More Information

www.camdenhealth.org
www.camconnect.org

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