Development of Emergency Department (ED) Community Health Indicators

Supported by:
Agency for Healthcare Research and Quality (AHRQ)
Substance Abuse and Mental Health Services Agency (SAMHSA)
Project Team

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- Collaborating Organizations
  - University of California at San Francisco
  - Truven Health Analytics
  - Telligen

AHRQ: Carol Stocks, Ryan Mutter
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AHRQ Quality Indicator Program

- Collection of fully specified indicators based on hospital discharge data
- No-cost software tools with extensive documentation
- Used widely
- National-State-Regional example applications
  - Evaluation (research, quality improvement, policymaking)
  - Standardizing comparisons
  - Flagging potential concerns based on variation

- **Current project:**
  - Develop and validate indicators of community health that use **ED administrative claims data**
Indicator Development Process

Conceptual Development
- Conceptual Framework
- Definition of Community

Indicator Identification and Selection
- Literature Review
- Qualitative Review

Development of Administrative Data-based Indicators
- Specification
- Validation

Dissemination
Using Emergency Department Data for Community Indicators (Numerator)

ED “window” into social and community factors that impact health\textsuperscript{1,2,3}

Defining Community (Denominator) for Indicators: Input from Community Panel

What is a community?

Community has two parts:
1. Geographic constraint (e.g. nation, state, city)
2. Population included (e.g. low SES, Medicare)

- Generically, how should community be defined?
- Ideally, how should community be defined for a multi-purpose tool?
- Feasibly, how should community be defined for a multi-purpose tool?
Denominator Recommendation:
Based on Community Panel Input

- Ideally, denominator would be flexible to meet needs of the user
- But...can’t validate all potential user situations
- Solution:
  - Validate using county, the most commonly advocated standardized definition.
  - Create guidelines for flexible community definitions
    - Minimum population
    - Allowable heterogeneity of population
Identifying and Selecting Indicators

- Indicators identified through literature review
  - Defined indicators and concepts
  - Not constrained by data type
- Structured expert panel review
- AHRQ and SAMHSA priorities

- 119 Indicator concepts → 12 Indicators for further development
## Indicators Selected for Development

<table>
<thead>
<tr>
<th>General Health</th>
<th>Behavioral Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>• ED Visits for Acute ACSC</td>
<td>• ED Visits for Substance Use</td>
</tr>
<tr>
<td>• ED Visits for Chronic ACSC</td>
<td>• ED Visits for Non-psychotic Mental Illness</td>
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<tr>
<td>• ED Visits for Asthma</td>
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<tr>
<td>• ED Visits for Chronic Back Pain</td>
<td>• ED Revisits for Serious Mental Illness</td>
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<tr>
<td>• ED Visits for Non-traumatic Dental Conditions</td>
<td>• ED Revisits for Substance Use</td>
</tr>
<tr>
<td>• Admission Rate for Community Resource-Sensitive Conditions</td>
<td>• ED Visits for Intimate Partner Violence</td>
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</tbody>
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Data Sets Used

AHRQ Healthcare Cost and Utilization Project

- State Inpatient Databases (SID)
  - Admissions originating in ED
- State Emergency Department Databases (SEDD)
  - ED visits: treated and released, died in ED, AMA
- Year: 2010
- 27 States
State Level Variation

GH 1 Dental

State Rate

0 200 400 600 800 1,000
County Level Variation

ED Visits for Non-Traumatic Dental
Indicator Rate by Denominator Size

GH1 Dental - Histogram by Quartiles of Denominator Size

1st Quartile (11 - 11,560)
2nd Quartile (11,561 - 26,619)
3rd Quartile (26,620 - 70,107)
4th Quartile (70,108+)
Total

Graphs by GH1DenomQuart
Next Steps

- Continued empirical analyses
- Structured panel review by clinical experts
  - Fall 2013 (BH set); Winter 2014 (GP set)
- Beta testing and software refinement
- Dissemination

- Project completion:
  - Behavioral health – March 2014
  - General population – Sept 2014