Research Questions and Approach

• What is the scope of ED visit reduction programs and what is known about their effectiveness?

• Methods
  – Environmental scan
  – Literature review
  – Effectiveness evaluation
Total of 197 programs nationwide since 2003

Programs for **high risk populations**
- Target high utilizers who are medically and socially complicated
- Small population with large volume of visits

Programs to reduce **low acuity ED visits**
- Target visits for conditions that could be safely managed in non ED settings
Environmental Scan: High Risk Populations

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Programs Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case management</td>
<td>34</td>
</tr>
<tr>
<td>Health and social services navigation/care coord.</td>
<td>16</td>
</tr>
<tr>
<td>Acute disease management and education</td>
<td>15</td>
</tr>
<tr>
<td>Permanent supportive housing</td>
<td>14</td>
</tr>
<tr>
<td>Sobering centers</td>
<td>8</td>
</tr>
<tr>
<td>Ambulatory Intensive Care Units (AICUs)</td>
<td>7</td>
</tr>
<tr>
<td>Medical respite</td>
<td>6</td>
</tr>
<tr>
<td>ED diversion</td>
<td>5</td>
</tr>
<tr>
<td>Chronic non-cancer pain</td>
<td>4</td>
</tr>
<tr>
<td>Health technology/information sharing</td>
<td>4</td>
</tr>
<tr>
<td>Patient education</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>115</strong></td>
</tr>
</tbody>
</table>
## Environmental Scan: Low Acuity Visits

<table>
<thead>
<tr>
<th>Program Type</th>
<th>Programs Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linkage to primary care/care coordination</td>
<td>19</td>
</tr>
<tr>
<td>Alternative site expansion</td>
<td>15</td>
</tr>
<tr>
<td>ED diversion</td>
<td>10</td>
</tr>
<tr>
<td>Financial incentives</td>
<td>8</td>
</tr>
<tr>
<td>Patient education</td>
<td>8</td>
</tr>
<tr>
<td>Health technology/information sharing</td>
<td>3</td>
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<tr>
<td>Retail clinics</td>
<td>3</td>
</tr>
<tr>
<td>Telemedicine</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>68</strong></td>
</tr>
</tbody>
</table>
Literature Review

• 91 programs qualified

• 32 of high/moderate quality
  – 19 High Risk Populations
  – 13 Low Acuity ED visits

• 59 of low/very low quality

• Only 13 programs had any financial evaluation
Effectiveness Evaluation

• 32 high and moderate quality studies

• Evaluation criteria
  – Impact on ED and other health services use
  – Cost-effectiveness
  – Quality
    • Unintended consequences
    • Patient and provide reported outcomes, health outcomes
Effectiveness: High risk populations

• Many programs reported reductions in ED use
  – Little evidence to support program effectiveness based on program costs, quality, and overall health services use

• Permanent supportive housing and intensive case management most promising
  – Reported savings from annual ED visit reductions: $4-$704
  – Generally insufficient to cover program costs

• Savings from reduced hospitalizations not ED visits
Effectiveness: Low Acuity ED visits

• Little evidence to support effectiveness of primary care/alternative site expansion or patient education

• Co-pays over $50 shown to reduce both necessary and unnecessary ED use in Medicaid

• Lack of data regarding retail clinics and health technology/information sharing
Limitations of ED Visit Reduction Program Literature

- Inadequate selection of comparison groups
- Lack of data regarding impact on other health services
- No or incomplete capture of costs and savings
- Rarely assessed impact of ED use outside of program site
- Few studies focused entirely on Medicaid populations
Challenges in Implementing ED Visit Reduction Programs in Medicaid

- No off-the-shelf formula for success
- Successful “high risk” programs can be very costly
- Primary care key for low acuity but limited capacity
- Program staff burnout, difficulty recruiting providers
Acknowledgments

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