Frequent users of the emergency department: do they make visits that can be addressed in a primary care setting?

Shan W. Liu MD, MD¹, John T. Nagurney, MD, MPH¹, Yuchiao Chang, PhD¹, Blair A. Parry, BA¹, Carine Yelbili⁴, Diane Eatherton⁴, Peter Smulowitz, MD, MPH², Steven J. Atlas, MD, MPH⁴

*Massachusetts General Hospital, Boston Health Care Hospital, Harvard Medical School

Inclusion/Exclusion Criteria
- To determine how frequent ED users differ from non-frequent ED users in terms of presenting conditions that might be addressed in a primary care setting.
- To compare visits for mental health, alcohol, and substance abuse among frequent and non-frequent ED users.
- We hypothesized that frequent ED users were more likely to have visits for conditions potentially amenable to timely and effective primary care.

Objective

Results

- 2.1% of patients (1,360/65,419) were considered frequent users and accounted for 11.5% (10,172/91,198) of visits in CY 2010.
- Frequent users were older men insured by Medicare, Medicaid, and/or welfare.
- A higher percentage of visits by frequent users were associated with hospital admission (29.1% vs. 26.0%, p<0.0001).

Table 1 – Type of visits made by frequent vs. non-frequent ED users

<table>
<thead>
<tr>
<th>Visit type</th>
<th>Frequent user</th>
<th>Non-emergent (%)</th>
<th>Emergent, PCP treatable (%)</th>
<th>Emergent but avoidable (%)</th>
<th>Emergent, not avoidable (%)</th>
<th>Mental health (%)</th>
<th>Drug related (%)</th>
<th>Alcohol related (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>N=10,172 visits</td>
<td>2,051 (20.2)</td>
<td>1,292 (12.7)</td>
<td>674 (6.6)</td>
<td>1,199 (11.8)</td>
<td>587 (5.8)</td>
<td>74 (0.7)</td>
<td>971 (9.5)</td>
</tr>
<tr>
<td>No</td>
<td>N=81,026 visits</td>
<td>18,041 (22.3)</td>
<td>10,456 (12.9)</td>
<td>3,192 (3.9)</td>
<td>11,485 (14.2)</td>
<td>3,149 (3.9)</td>
<td>245 (0.3)</td>
<td>1,303 (1.6)</td>
</tr>
<tr>
<td>All</td>
<td>N=91,198</td>
<td>20,092 (22.0)</td>
<td>11,748 (12.9)</td>
<td>3,866 (4.2)</td>
<td>12,684 (13.9)</td>
<td>3,736 (4.1)</td>
<td>319 (0.3)</td>
<td>2,274 (2.5)</td>
</tr>
</tbody>
</table>

P value
- 0.0015
- <0.001
- <0.001
- <0.001
- 0.85
- 0.0004
- <0.0001

Conclusions

- Frequent ED users were not more likely to make non-emergent or emergent but potentially PCP treatable visits to the ED than non-frequent ED users.
- Frequent ED were more likely to have mental health, drug related, and alcohol related visits than non-frequent ED users.
- Widespread, non-targeted approaches to reducing ED visits by frequent users may not be productive.
- Policies targeting ED use by frequent users might instead consider focusing on management of mental health and substance abuse.

Results (continued)

- After controlling for covariates, frequent ED users had lower odds of admission, [odds ratio (OR) 0.90 (95% CI 0.82-0.99) and higher odds of the ED visit being related to mental health (OR 1.39, 95% CI 1.19-1.63), drug related (OR 2.14, 95% CI 1.49-3.07), and alcohol related visits (OR 4.92, 95% CI 4.21-5.75).

Limitations
- Data comes from a single, urban hospital ED site
- Limited ability to identify ED visits that may be avoidable with improved primary care: use of Billing algorithm to categorize visits controversial.

Conclusions

- Frequent ED users were not more likely to make non-emergent or emergent but potentially PCP treatable visits to the ED than non-frequent ED users.
- Frequent ED were more likely to have mental health, drug related, and alcohol related visits than non-frequent ED users.
- Widespread, non-targeted approaches to reducing ED visits by frequent users may not be productive.
- Policies targeting ED use by frequent users might instead consider focusing on management of mental health and substance abuse.

Disclosures

No investigator has any disclosures to report.