Emergency Department Care in California: Who Uses It and Why?

Shannon McConville
Public Policy Institute of California
Why Study Emergency Departments?

- Fundamental part of health care safety net
  - Only source of guaranteed care for uninsured

- Emergency departments in California stressed
  - More people visiting fewer emergency departments

- Public and policymaker concern on the rise
  - Closures, overcrowding, quality of care
Outline

- Overcrowding
- Usage Patterns and Diagnoses
- Health, Insurance, and Immigration Status
- Summary and Conclusions
Upward trend in ED Visits in Late 1990s ...

ED visits, EDs in operation all year

- Emergency departments
- Total ED visits


(millions)

200 - 400
...Leveled Off Into This Decade

ED visits, EDs in operation all year

Emergency departments

Total ED visits

(millions)
Overcrowding a Complex Problem

- Closures, high volume strains system
- Patient boarding
- Staffing issues
- Limited alternative outpatient options
- Ambulance diversions
Public Hospitals Most Stressed

Overcrowding status by ownership type

- Patients leaving without being seen (>5%)
- Ambulance diversions (>20%)

Ownership types:
- All
- Public
- Nonprofit
- For-profit
- District
Los Angeles, Central Valley Have Most Overcrowded EDs

Overcrowding status by region

- Bay Area
- Central Valley
- Los Angeles
- Other Southern California

(%)
## Large Hospitals, Those With High Occupancy Rates Most Crowded

<table>
<thead>
<tr>
<th>Hospital characteristics</th>
<th>Most crowded</th>
<th>Least crowded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beds</td>
<td>351</td>
<td>210</td>
</tr>
<tr>
<td>ED visits</td>
<td>40,685</td>
<td>22,639</td>
</tr>
<tr>
<td>ED beds</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td>Occupancy rate (%)</td>
<td>62</td>
<td>51</td>
</tr>
</tbody>
</table>

### Neighborhood characteristics

| Total population                  | 39,132       | 36,125        |
| Medi-Cal beneficiaries            | 9,405        | 5,219         |
| Foreign-born (%)                  | 27.5         | 25            |
| Poverty rate (%)                  | 19.4         | 11.6          |
Outline

- Overcrowding
- **Usage Patterns and Diagnoses**
- Health, Insurance, and Immigration Status
- Summary and Conclusions
Uninsured Comprise Small Proportion of ED Visits

Distribution of ED visits, by insurance coverage, Los Angeles County

- 24% Medi-Cal
- 35% Private insurance
- 17% Medicare
- 7% Other
- 17% Uninsured
Highest Visit Rates Found Among Publicly Insured

ED visit rates, by insurance coverage

- California
- Los Angeles

Visits per 100 persons

- All
- Private
- Medi-Cal
- Medicare
- Uninsured
Infants, Seniors Have Highest Visit Rates

ED visit rates, by patient age

Visits per 100 persons

California
Los Angeles

All
Under 1
1 to 17
18 to 64
65 and over
Few Admissions for Children, Young Adults

<table>
<thead>
<tr>
<th>Age</th>
<th>Most Common Diagnosis</th>
<th>% All ED Visits</th>
<th>% Admitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infants &lt; 1</td>
<td>Acute Upper Respiratory Infection</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Children 1-17</td>
<td>Acute Upper Respiratory Infection</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Adults 18-34</td>
<td>Abdominal Pain</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Adults 35-64</td>
<td>Chest Pain</td>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>Adults &gt; 65</td>
<td>Heart Disease</td>
<td>8</td>
<td>71</td>
</tr>
</tbody>
</table>
Avoidable Visits Decline with Age

Percent avoidable ED visits, by patient age

- Under 1
- 1 to 17
- 18 to 34
- 35 to 64
- 65+
Children With Medi-Cal Make More Avoidable ED Visits

Type/severity of ED visits, by insurance coverage, children under 18

- **Uninsured**
- **Medi-Cal**
- **Private insurance**
Uninsured Have More Psych/Drug Visits, Fewer Admissions

Type/severity of ED visits, by insurance coverage, adults 18–64

- **Avoidable**
- **Unavoidable**
- **Injury**
- **Psych/Drugs**
- **Admission**

- **Uninsured**
- **Medi-Cal**
- **Private insurance**

(%)
Outline

- Overcrowding
- Usage Patterns and Diagnoses
- **Health, Insurance, and Immigration Status**
- Summary and Conclusions
Health Status a Strong Predictor of Recent ED Visit

Likelihood of recent ED visit, by health status

- Excellent/very good: 12%
- Good: 13%
- Fair: 18%
- Poor: 28%
Medi-Cal Patients More Likely to Use ED Regardless of Health Status

Likelihood of recent ED visit, by insurance coverage

- Private insurance: 12%
- Medi-Cal: 19%
- Uninsured: 12%
Asian, Hispanic Non-citizens Less Likely to Use ED Than Native Whites

Likelihood of recent ED visit, by race/ethnicity, nativity/citizenship

<table>
<thead>
<tr>
<th>Race/Ethnicity, Nativity/Citizenship</th>
<th>% Likelihood of Recent ED Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>White, U.S. born</td>
<td>15</td>
</tr>
<tr>
<td>White, foreign-born</td>
<td>16</td>
</tr>
<tr>
<td>Black, U.S. born</td>
<td>17</td>
</tr>
<tr>
<td>Hispanic, U.S. born</td>
<td>14</td>
</tr>
<tr>
<td>Hispanic, foreign-born</td>
<td>12</td>
</tr>
<tr>
<td>Asian, U.S. born</td>
<td>10</td>
</tr>
<tr>
<td>Asian, foreign-born</td>
<td>9</td>
</tr>
</tbody>
</table>
Outline

- Overcrowding
- Usage Patterns and Diagnoses
- Health, Insurance, and Immigration Status
- Summary and Conclusions
Summary

- ED visits stable at about 10 million per year
- Certain hospitals struggle more with overcrowding than others
- Four in 10 ED visits are potentially avoidable
- Medi-Cal, not uninsured, are heaviest users of emergency departments
- Non-citizen Hispanics and Asians less likely to use ED compared to whites.
Conclusions

- Expanded outpatient alternatives to ED may help reduce number of visits
  - Urgent care clinics, community health centers with extended/weekend hours
  - Medi-Cal provider network could be expanded, reimbursement rates raised

- Improving patient flow in hospitals could raise efficiency, reduce wait times
  - Fast-track emergency departments
  - Transfer systems, other holding areas
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Type and Severity of ED Visits, Los Angeles County, Children 0-17

- Avoidable
- Unavoidable
- Injury
- Admission

Uninsured
Medi-Cal
Private Insurance
Type and Severity of ED Visits, Los Angeles County, Adults 18 - 64

- Avoidable
- Unavoidable
- Injury
- Psych/Drugs/Alcohol
- Admission

- Uninsured
- Medi-Cal
- Private Insurance
## County Differences

<table>
<thead>
<tr>
<th>County</th>
<th>ED Visits per 100 pop&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Avoidable Visits per 100 pop&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Medi-Cal ED Visits per 100 beneficiaries</th>
<th>Clinic Visits per 100 pop</th>
<th>Total Doctors per 100,000</th>
<th>Percent Uninsured</th>
<th>Poverty Rate</th>
<th>Percent Foreign Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stanislaus</td>
<td>35.4</td>
<td>17.3</td>
<td>46.7</td>
<td>31.4</td>
<td>181.7</td>
<td>11.1%</td>
<td>14.4%</td>
<td>20.3%</td>
</tr>
<tr>
<td>Fresno</td>
<td>30.1</td>
<td>13.5</td>
<td>39.6</td>
<td>47.9</td>
<td>216.9</td>
<td>18.6%</td>
<td>20.7%</td>
<td>22.6%</td>
</tr>
<tr>
<td>SanJoaquin</td>
<td>29.4</td>
<td>13.0</td>
<td>35.2</td>
<td>32.4</td>
<td>163.4</td>
<td>13.7%</td>
<td>14.6%</td>
<td>23.5%</td>
</tr>
<tr>
<td>ContraCosta</td>
<td>28.6</td>
<td>13.1</td>
<td>49.1</td>
<td>15.4</td>
<td>301.8</td>
<td>8.8%</td>
<td>11.0%</td>
<td>23.1%</td>
</tr>
<tr>
<td>SanBernardino</td>
<td>29.1</td>
<td>12.9</td>
<td>45.1</td>
<td>8.5</td>
<td>186.3</td>
<td>14.8%</td>
<td>15.0%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Alameda</td>
<td>28.0</td>
<td>12.8</td>
<td>44.5</td>
<td>40.0</td>
<td>323.3</td>
<td>11.3%</td>
<td>11.8%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Riverside</td>
<td>27.6</td>
<td>12.2</td>
<td>35.6</td>
<td>13.9</td>
<td>153.1</td>
<td>13.7%</td>
<td>11.4%</td>
<td>21.8%</td>
</tr>
<tr>
<td>Kern</td>
<td>26.9</td>
<td>11.8</td>
<td>36.7</td>
<td>61.6</td>
<td>153.0</td>
<td>15.8%</td>
<td>21.2%</td>
<td>20.3%</td>
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<tr>
<td><strong>LosAngeles</strong></td>
<td><strong>24.5</strong></td>
<td><strong>10.7</strong></td>
<td><strong>26.2</strong></td>
<td><strong>25.4</strong></td>
<td><strong>298.7</strong></td>
<td><strong>16.5%</strong></td>
<td><strong>16.3%</strong></td>
<td><strong>36.0%</strong></td>
</tr>
<tr>
<td>SanFrancisco</td>
<td>23.1</td>
<td>9.4</td>
<td>30.0</td>
<td>65.9</td>
<td>808.0</td>
<td>9.4%</td>
<td>12.2%</td>
<td>35.8%</td>
</tr>
<tr>
<td>Sacramento</td>
<td>23.9</td>
<td>10.1</td>
<td>28.1</td>
<td>10.2</td>
<td>295.3</td>
<td>9.1%</td>
<td>13.6%</td>
<td>20.0%</td>
</tr>
<tr>
<td>SanMateo</td>
<td>23.0</td>
<td>10.4</td>
<td>33.7</td>
<td>12.4</td>
<td>426.6</td>
<td>7.8%</td>
<td>7.4%</td>
<td>34.6%</td>
</tr>
<tr>
<td>Ventura</td>
<td>23.1</td>
<td>9.7</td>
<td>34.8</td>
<td>21.6</td>
<td>242.7</td>
<td>13.0%</td>
<td>9.9%</td>
<td>20.7%</td>
</tr>
<tr>
<td>SanDiego</td>
<td>22.2</td>
<td>9.0</td>
<td>35.8</td>
<td>45.2</td>
<td>343.4</td>
<td>13.1%</td>
<td>11.0%</td>
<td>23.4%</td>
</tr>
<tr>
<td>Orange</td>
<td>21.9</td>
<td>9.1</td>
<td>28.8</td>
<td>13.0</td>
<td>323.9</td>
<td>15.1%</td>
<td>8.8%</td>
<td>30.4%</td>
</tr>
<tr>
<td>SantaClara</td>
<td>18.7</td>
<td>7.7</td>
<td>24.0</td>
<td>19.4</td>
<td>392.9</td>
<td>8.1%</td>
<td>8.3%</td>
<td>36.3%</td>
</tr>
<tr>
<td>California</td>
<td>27.5</td>
<td>12.0</td>
<td>35.6</td>
<td>31.6</td>
<td>292.4</td>
<td>13.5%</td>
<td>13.3%</td>
<td>27.2%</td>
</tr>
</tbody>
</table>

<sup>a</sup> This rates have been age-adjusted using the age distribution of the total California population to account for differing age structures across counties.