Medicaid Expansion and Change in Hospital Emergency Department Visits for Oral Health Conditions among Rhode Island Adults

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• RI adults (age 21-64) Who Received Preventive Dental Care in the Past Year by Dental Insurance Type

RI Health Insurance Status Change among RI Adults (21-64 years)

Objectives

• Report changes in RI adults’ ED utilization with oral health conditions associated with expanded Medicaid coverage under the Affordable Care Act (ACA) in 2014

• Summarize the ED visits by age group and insurance status;

• Discuss potential interventions to assure optimal oral health care for all Rhode Islanders.
Is ED use for oral health conditions such a concern?

• Not designed to provide on-going, non-urgent, comprehensive standard of care to patients with chronic conditions.

• ED physicians/nurses are not trained to diagnose/treat dental conditions.

• Most of dental conditions are better served in a primary care setting.

• Higher charges for ED visits

• Already overburdened EDs
DATA SOURCE: RI Hospital Discharge Data

- Hospital inpatient and ED encounters are submitted by the 14 Rhode Island hospitals

- **Patient demographic and insurance information**: age, sex, race/ethnicity, zip code of residence, expected source of payment (private or public health insurance or self-pay)

- **Administrative information**: admission and discharge dates, admission type and source, discharge status, charges

- **Medical information**: admitting diagnoses and clinical procedures (ICD-9-CM), dates of procedures, service type
Methods

Inclusion:
• First half year of ED encounters between 2010–2014
• Adults (age 21–64 years)
• With non-traumatic oral/dental health conditions with primary admitting diagnoses (i.e. ICD-9-CM codes of 520.0–529.9) that did not result in hospital admission

Data analysis: SAS® version 9.3
• Bivariate analysis to test if utilization was associated with different age groups and payment sources
Results
<table>
<thead>
<tr>
<th>Primary Diagnosis</th>
<th>ICD-9-CM code</th>
<th>Number of visits</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unspecified disorders of the dental/supporting structure</td>
<td>525.8, 525.9</td>
<td>7,738</td>
<td>46.2%</td>
</tr>
<tr>
<td>Dental caries, pulpitis and periapical lesions</td>
<td>521.0, 522</td>
<td>6,704</td>
<td>40.0%</td>
</tr>
<tr>
<td>TMJ and Jaw</td>
<td>524.6, 526</td>
<td>706</td>
<td>4.2%</td>
</tr>
<tr>
<td>Soft tissue lesions</td>
<td>528</td>
<td>629</td>
<td>3.8%</td>
</tr>
<tr>
<td>Gingival and periodontal lesions</td>
<td>523</td>
<td>348</td>
<td>2.1%</td>
</tr>
<tr>
<td>Salivary gland</td>
<td>527</td>
<td>336</td>
<td>2.0%</td>
</tr>
<tr>
<td>Other (including eruption, tooth development, erosion)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Top 10 Primary Admitting Dx by Insurance Type

<table>
<thead>
<tr>
<th>Private insurance</th>
<th>Medicaid</th>
<th>Self-pay (uninsured)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck strain</td>
<td>Pregnancy related complication (648.93)</td>
<td>Alcohol abuse</td>
</tr>
<tr>
<td>Abdominal pain (789.00)</td>
<td>Alcohol abuse</td>
<td>Lumbago</td>
</tr>
<tr>
<td>Pregnancy related complication (648.93)</td>
<td>Lumbago</td>
<td><strong>Unspecified disorder of teeth and supporting structures (525.9)</strong></td>
</tr>
<tr>
<td>Chest pain (786.50)</td>
<td>Abdominal pain (789.00)</td>
<td>Neck strain</td>
</tr>
<tr>
<td>Headache</td>
<td>Headache</td>
<td>Abdominal pain (789.00)</td>
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<tr>
<td>Chest pain (786.59)</td>
<td><strong>Unspecified disorder of teeth and supporting structures (525.9)</strong></td>
<td>Headache</td>
</tr>
<tr>
<td>Lumbago</td>
<td>Neck strain</td>
<td>Chest pain (786.50)</td>
</tr>
<tr>
<td>Open wound of upper limb</td>
<td>Chest pain (786.50)</td>
<td>Depressive disorder</td>
</tr>
<tr>
<td>Syncope and collapse</td>
<td>Chest pain (786.59)</td>
<td>Acute alcoholic intoxicification</td>
</tr>
<tr>
<td>Alcohol abuse</td>
<td>Abdominal pain (789.09)</td>
<td>Chest pain (786.59)</td>
</tr>
</tbody>
</table>
Who utilizes Hospital EDs for non-traumatic oral/dental conditions? - By Age Group

<table>
<thead>
<tr>
<th>Year</th>
<th>21-34 years</th>
<th>35-49 years</th>
<th>50-64 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>56.7%</td>
<td>31.3%</td>
<td>12.4%</td>
</tr>
<tr>
<td>2011</td>
<td>57.2%</td>
<td>31.3%</td>
<td>11.5%</td>
</tr>
<tr>
<td>2012</td>
<td>55.3%</td>
<td>31.6%</td>
<td>13.1%</td>
</tr>
<tr>
<td>2013</td>
<td>54.9%</td>
<td>31.3%</td>
<td>13.8%</td>
</tr>
</tbody>
</table>
Who utilizes Hospital EDs for non-traumatic oral/dental conditions? - By Age Group

- **50-64 years**
  - 2010: 12.4%
  - 2011: 11.5%
  - 2012: 13.1%
  - 2013: 13.8%
  - 2014: 13.4%

- **35-49 years**
  - 2010: 30.9%
  - 2011: 31.3%
  - 2012: 31.6%
  - 2013: 31.3%
  - 2014: 32.3%

- **21-34 years**
  - 2010: 56.7%
  - 2011: 57.2%
  - 2012: 55.3%
  - 2013: 54.9%
  - 2014: 54.4%
Who utilizes Hospital EDs for non-traumatic oral/dental conditions? - By Payment Source (21-64 years)
Who utilizes Hospital EDs for non-traumatic oral/dental conditions? - By Payment Source (21-64 years)
Charged for ED Visits with Non-traumatic Oral/Dental Conditions - By Payment Source

- Self-pay
- Medicaid
- Commercial
$\text{### Charged for ED Visits with Non-traumatic Oral/Dental Conditions - By Payment Source}$

![Graph showing the charges for ED visits with non-traumatic oral/dental conditions by payment source from 2010 to 2014. The graph indicates a rise in charges for Medicaid and Self-pay, with a notable dip in 2013, and a steady trend for Commercial.]
Graph showing Charged for ED Visits with Non-traumatic Oral/Dental Conditions - By Payment Source for years 2010 to 2014.
A costly consequence of delayed care?

- RI Adult Medicaid Enrollees (age 21-64) Who Received at least One Dental Care

(RI Medicaid Claim Database)
A costly consequence of delayed care?

- RI Adult Medicaid Enrollees Who Received at least One Dental Care

- RI General Dentists who had Medicaid patients >10% in their practice: 28% (RI Dentist Survey, 2010-11)
Medicaid Reform

- Dental benefit package redesign
- Sustainable reimbursement system
- Coordinated care
- Treatment without educating patient is waste of opportunity