Use of Emergency Departments (EDs) for Non-traumatic Oral Care in New Jersey, 2008-2010

Presentation of Findings
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OUTLINE

• Background & Methods

• Findings (NJ overall and 13 low-income regions)
  • ED oral care visit rates
  • ED oral care high-user rates
  • Characteristics of users of EDs for oral care
  • Characteristics of high users of EDs for oral care

• Summary, Conclusions & Implications

• Comments by
  • Dr. Cecile Feldman, Dean of the Rutgers School of Dental Medicine
  • Dr. Tonya X. Cook, Chief Dental Officer, Jewish Renaissance Medical Center
  • Dr. Barbara Rich, Past President of the New Jersey Dental Association and State Board of Dentistry

• Q&A
PREVENTABLE USE OF EMERGENCY DEPARTMENTS

- Difficulty accessing comprehensive community-based dental care can lead to care-seeking for oral health problems in hospital EDs.

- EDs generally do not have dental providers on staff and can usually only provide temporary treatment, such as antibiotics and pain medication, with referrals for follow-up care by a dental professional in the community.

- Use of EDs for non-traumatic oral care is therefore an expensive and preventable use of services that will rarely provide definitive treatment.
OBJECTIVE

• Inform strategies to improve access to oral and dental care in the community for vulnerable populations in New Jersey

APPROACH

• For NJ overall and the population in 13 low-income regions in the state (regions having at least 5,000 Medicaid beneficiaries\(^1\)),
  – examine volume and local variation in use of EDs for oral and dental conditions
  – examine demographics and other characteristics of high users of EDs for oral care

13 Low-Income Regions

Camden*
Greater Newark**
Trenton***
Asbury Park-Neptune
Atlantic City-Pleasantville
Elizabeth-Linden
Jersey City-Bayonne
New Brunswick-Franklin
Paterson-Passaic-Clifton
Perth Amboy-Hopelawn
Plainfield, North Plainfield
Union City-W. NY- Guttenberg-N. Bergen
Vineland-Millville

*Camden zip codes (08102, 08103, 08104 & 08105)
**Newark zip codes (07102, 07103, 07104, 07105, 07106, 07107, 07108, 07112, & 07114)
East Orange zip codes (07017, 07018)
Irvington zip code (07111)
Orange zip code (07050)
***Trenton zip codes (08608, 08609, 08611, 08618, 08629 & 08638)

Source: Kathe Newman, Rutgers University
METHODS

• New Jersey Uniform Billing Hospital Discharge Data: 2008-2010
• 2010 Census SF1 for population data
• Visits to ED for non-traumatic oral care defined as
  – Primary ICD-9-CM diagnosis code of 520 through 529.9
    520 Disorders of tooth development and eruption
    521 Diseases of hard tissues of teeth
    522 Diseases of pulp and periapical tissues
    523 Gingival and periodontal diseases
    524 Dentofacial anomalies, including malocclusion
    525 Other diseases and conditions of the teeth and supporting structures
    526 Diseases of the jaws
    527 Diseases of the salivary glands
    528 Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue
    529 Diseases and other conditions of the tongue
• High user defined as 4 or more oral care visits over 2008-2010 (which is equal to or above 96th percentile based on statewide distribution).
### Ten Most Frequent Primary Diagnoses for Oral ED Visits – NJ Overall

<table>
<thead>
<tr>
<th>Primary ICD-9-CM Diagnosis Code and Description</th>
<th>Average Annual Number of Visits</th>
<th>Percent of all Oral Visits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 525.9 : UNSPECIFIED DENTAL DISORDER</td>
<td>21,771</td>
<td>46.4</td>
</tr>
<tr>
<td>2 522.5 : PERIAPICAL ABSCESS</td>
<td>7,006</td>
<td>14.9</td>
</tr>
<tr>
<td>3 521.00: UNSPECIFIED DENTAL CARIES</td>
<td>5,394</td>
<td>11.5</td>
</tr>
<tr>
<td>4 528.9 : OTHER AND UNSPECIFIED DISEASES OF THE ORAL SOFT TISSUES</td>
<td>1,327</td>
<td>2.8</td>
</tr>
<tr>
<td>5 525.8 : OTHER SPECIFIED DENTAL DISORDERS</td>
<td>1,010</td>
<td>2.2</td>
</tr>
<tr>
<td>6 527.2 : SIALOADENITIS</td>
<td>933</td>
<td>2.0</td>
</tr>
<tr>
<td>7 523.10: CHRONC GINGIVITIS</td>
<td>888</td>
<td>1.9</td>
</tr>
<tr>
<td>8 522.4 : ACUTE APICAL PERIODONTITIS</td>
<td>800</td>
<td>1.7</td>
</tr>
<tr>
<td>9 526.9 : UNSPECIFIED JAW DISEASE</td>
<td>664</td>
<td>1.4</td>
</tr>
<tr>
<td>10 524.60: UNSPECIFIED TEMPOROMANDIBULAR JOINT DISORDERS</td>
<td>653</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Source: 2008-2010 UB hospital discharge data
RATE OF ED VISITS FOR ORAL CARE BY AGE CATEGORY

Source: 2008-2010 UB hospital discharge data
RATE OF ED ORAL CARE HIGH USERS BY AGE CATEGORY

High Users per 100,000 population

Source: 2008-2010 UB hospital discharge data
Age-Sex Adjusted Rates of ED Visits for Oral Care in 13 Low-Income Regions

8.8 Fold Variation

Visits per 100,000 population

Camden: 2025
Atlantic City: 1773
Trenton: 1492
Asbury Park: 1256
Newark: 974
Vineland: 948
Perth Amboy: 738
New Brunswick: 702
Paterson: 603
Plainfield: 522
Elizabeth: 524
Jersey City: 460
Union City: 231
New Jersey: 533
AGE-SEX ADJUSTED COSTS OF ED VISITS FOR ORAL CARE IN 13 LOW-INCOME REGIONS

11.7 Fold Variation

Cost per 1,000 population

Atlantic City $4,888
Camden $4,783
Trenton $3,365
Newark $2,134
Asbury Park $1,495
Vineland $1,449
Paterson $1,036
Perth Amboy $1,022
New Brunswick $946
Plainfield $835
Jersey City $663
Elizabeth $657
Union City $418
New Jersey $966
AGE-SEX ADJUSTED RATES OF ED ORAL CARE HIGH USERS IN 13 LOW-INCOME REGIONS

29 Fold Variation

High Users per 100,000 population

Atlantic City: 58
Trenton: 51
Camden: 50
Asbury Park: 41
Vineland: 31
New Brunswick: 22
Perth Amboy: 14
Newark: 12
Plainfield: 10
Elizabeth: 9
Jersey City: 8
Paterson: 7
Union City: 2
New Jersey: 16
RATE OF ED VISITS FOR ORAL CARE BY AGE CATEGORY AND RACE/ETHNICITY – NJ OVERALL

Source: 2008-2010 UB hospital discharge data
**DISTRIBUTION OF HEALTH INSURANCE PAYER TYPE BY FREQUENCY OF ED ORAL CARE VISITS – NJ OVERALL**

Source: 2008-2010 UB hospital discharge data

Note: FFS=Fee-For Service; HMO = Health Maintenance Organization; Payer category is assigned using information from the patient’s first ED visit.

*Self pay category includes patients classified as self-pay and uninsured.
†Medicare category includes the dual eligible population, those with both Medicare and Medicaid.
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SUMMARY (1)

- Groups with **highest** rates of ED oral care visits and high users
  - young adults (ages 19-34)
  - non-Hispanic blacks
  - individuals in low-income regions of the state

- Regions with **highest** rates of ED oral care visits, costs, and high users
  - Atlantic City-Pleasantville
  - Camden
  - Trenton

- Regions with **lowest** rates of ED oral care visits, costs, and high users
  - Jersey City-Bayonne
  - Union City-W. NY- Guttenberg-N. Bergen

Consistent with findings in national studies
SUMMARY (2)

- Users of the ED for oral care are disproportionately uninsured (self pay or charity care) compared to ED users with no oral care visits.

- High users, while still nearly half uninsured, are disproportionately covered by Medicaid (except ↑ charity care in Atlantic City-Pleasantville and Vineland-Millville) compared to users of the ED for oral care not meeting the high-user definition.

- Nearly half (46%) of ED visits for non-traumatic oral care are for unspecified dental disorders.
CONCLUSIONS & IMPLICATIONS (1)

• Large variation across regions suggests room for improvement in low-performing areas.
  – Though our findings do not explain the causes of this variation, lower-performing areas are roughly similar to higher-performing areas in their socioeconomic composition.

• ACA health insurance expansions should help dental care access for some populations, but not all
  – new Medicaid enrollees in NJ will receive dental benefits
  – weakening of the “essential” nature of pediatric oral health benefits in private plans
  – private plans not required to cover dental services for young adults and so may lead to increases in visits to primary care doctors or the ED for oral care among the newly-insured
CONCLUSIONS & IMPLICATIONS (2)

- Possible remedies to use of EDs for non-traumatic oral care
  - expand off-hours access to dental care in community settings
  - increase dental safety net and/or providers for the low-income & uninsured
  - address Medicaid reimbursement rates
  - establish dental clinics as part of an ED diversion strategy
  - strengthen ED and primary care doc links with safety net dental care providers
Final Report and Related Findings at
http://www.cshp.rutgers.edu

Hospital Utilization Patterns in Low Income Communities in New Jersey: Opportunities for Better Care and Lower Costs

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Key findings
- Forty percent of adults in New Jersey did not visit a dentist in the past year.
- The major barriers to dental care for adults are socioeconomic. Those who lack dental coverage and those with low incomes are the least likely to have visited a dentist.
- Independent of dental insurance and income, several other population groups are at higher risk of receiving no dental care. They are young adults (ages 19–29), Hispanics, and males.

2009 New Jersey Family Health Survey

Key findings
- By a large margin, young adults (ages 19–34) have the highest rate of visits to emergency departments (EDs) for non-traumatic oral care and are the most likely to be high users of the ED for oral care.
- There is great variation in the age-sex adjusted costs and ED visit rates for oral care across 13 selected low-income regions in New Jersey. This variation suggests large differences in the prevalence of unmet need for oral care services and room for improvement in access to community-based dental care.

Emergency departments (EDs) are poorly equipped to deal definitively with dental and oral health needs. Still, many people seek care in the ED for non-traumatic dental and dental-related conditions, possibly indicating inadequate access to dental care in the community. Affordability and dental provider shortages are known to be persistent barriers to regular and comprehensive oral care, especially for low-income and minority populations. This Facts & Findings examines variation in ED use for oral care to identify the regions and populations where improvement in access to dental services has the potential to reduce costs and prevent not only dental diseases, but also the long-term sequelae of poor oral health (e.g., nutritional deficiencies, elevated cancer risk, and adverse psychosocial outcomes).

Our analysis focuses on treat-and-release visits to EDs for oral care in New Jersey and in 13 selected low-income NJ regions from 2006 to 2010. We defined visits for oral care as any visit having a non-traumatic oral condition as the primary diagnosis (ICD-9-CM codes 520–529.9). This analysis also investigates characteristics of high users of the ED for oral care. High users were defined as individuals with four or more visits to the ED for oral care during the three-year study period (equivalent to the 75th percentile and above). All findings are derived from uniform billing (UB-04) records for all New Jersey hospitals. Through a special arrangement with the NJ Department of Health, our U8 database includes encrypted patient identifiers that allow us to identify multiple visits made by the same individual patient over time.
Thank You!

If you have any questions or comments you would like to share after the conclusion of this webinar, please contact me at klloyd@ifh.rutgers.edu
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