Disparities in the Use of Emergency Departments for Oral Care

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RUTGERS Center for State Health Policy

AcademyHealth Research Meeting
San Diego, CA
June 8, 2014

BACKGROUND

- Minority and low-income populations face barriers to accessing community-based dental care and may turn to hospital emergency departments (EDs) to address oral health issues. EDs generally do not have dental providers on staff and can usually provide only transitory treatment (antibiotics and pain medication) with referrals to follow-up care in the community. Therefore, use of EDs for non-traumatic oral care is an expensive and preventable use of services that may be a bellwether of both the adequacy and equity of access to dental services in the community.

RESEARCH OBJECTIVES

1. Examine ED use for non-traumatic oral care to identify regions and populations that may be experiencing inadequate access to community-based dental services in New Jersey.
2. Examine the demographics and other characteristics of high users of the ED for oral care.

METHODS

Data Sources

2008-2010 New Jersey Uniform Billing Hospital Discharge Data

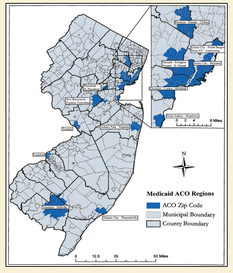
- All treat-and-release visits to NJ emergency departments by NJ residents
- Worked with NJ Department of Health to link multiple visits made by the same individual patient over time, allowing for patient-level and high user analyses.

2010 Census Summary File 1 by Zip Code Tabulation Area (ZCTA)

- Population denominators for rates and age-sex adjustment

Definition of Low-Income Regions

- Zip code defined regions with at least 5,000 Medicaid beneficiaries



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

Identification of Oral Care Visits

PRIMARY ICD-9-CM diagnosis code indicating a NON-TRAUMATIC oral health condition	
520 Disorders of tooth development and eruption	**525** Other diseases and conditions of the teeth and supporting structures
521 Diseases of hard tissues of teeth	**526** Diseases of the jaws
522 Diseases of pulp and periapical tissues	**527** Diseases of the salivary glands
523 Gingival and periodontal diseases	**528** Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue
524 Dentofacial anomalies, including malocclusion	**529** Diseases and other conditions of the tongue

Definition of ED Oral Care High Users

- Four or more oral care visits to ED (equal to or above 96th percentile based on statewide distribution)

Statistical Analyses

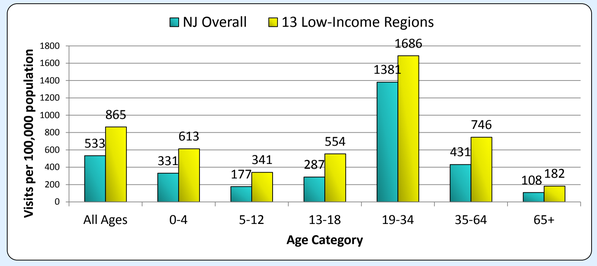
- Age-sex adjusted rates of visits and high users by region, age, and race/ethnicity.
- Distribution of health insurance payer type by oral care ED visit status.
- Prevalence of co-morbid conditions among users and high users of the ED for oral care.
- All analyses conducted using SAS 9.2.

PRINCIPAL FINDINGS

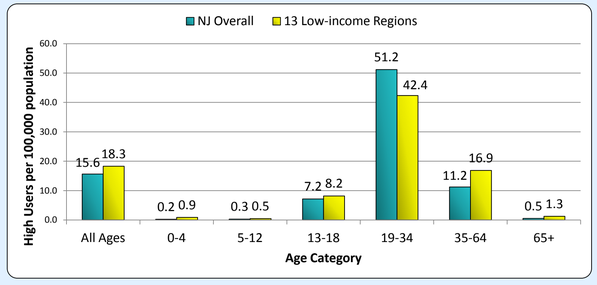
Top Five Primary Diagnoses for Oral Care ED Visits – NJ Overall

	Primary ICD-9-CM Diagnosis Code and Description	Average Annual Number of Visits	% of all Oral Care Visits
1	525.9 : UNSPECIFIED DENTAL DISORDER	21,771	46.4
2	522.5 : PERIAPICAL ABSCESS	7,006	14.9
3	521.00: UNSPECIFIED DENTAL CARIES	5,394	11.5
4	528.9 : OTHER AND UNSPECIFIED DISEASES OF THE ORAL SOFT TISSUES	1,327	2.8
5	525.8 : OTHER SPECIFIED DENTAL DISORDERS	1,010	2.2

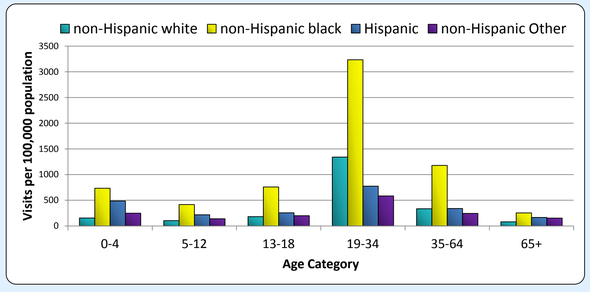
Rate of ED Visits for Oral Care by Age Category



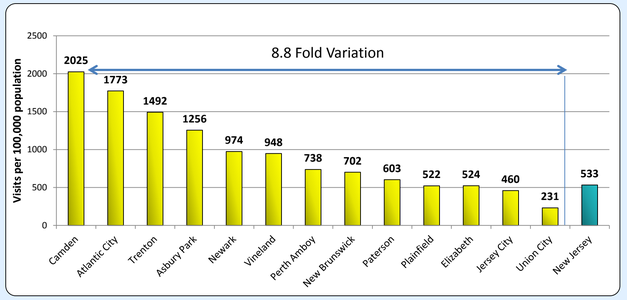
Rate of ED Oral Care High Users by Age Category



Rate of ED Visits for Oral Care by Age Category and Race/Ethnicity – NJ Overall



Age-Sex Adjusted Rates of ED Visits for Oral Care in 13 Low-Income Regions



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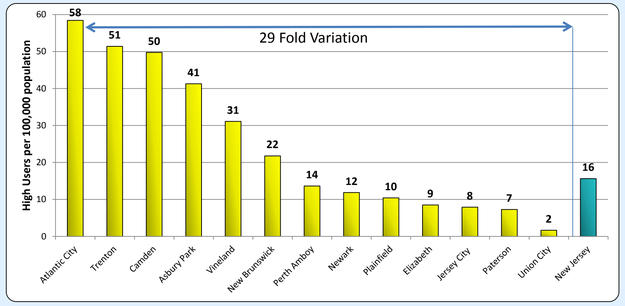
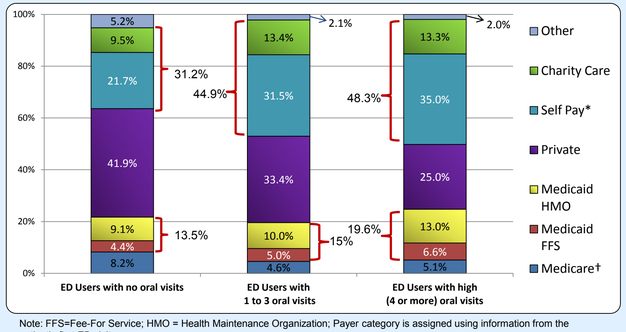


Distribution of Health Insurance Payer Type by Frequency of ED Oral Care Visits – NJ Overall



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.

Top Five Co-occurring Diagnoses among Users and High Users of the ED for Oral Care

	ALL Oral Care ED Users Co-occurring ICD-9-CM Diagnosis Code and Description	% of all oral care ED users
	NONE	53.4
	ONLY OTHER NON-TRAUMATIC ORAL CARE DIAGNOSES	11.9
1	305.1 : TOBACCO USE DISORDER	9.0
2	401.9 : UNSPECIFIED ESSENTIAL HYPERTENSION	7.3
3	493.90: ASTHMA UNSPECIFIED	3.9
4	250.00: DIABETES TYPE II WITHOUT COMPLICATION	2.9
5	784.2 : SWELLING IN HEAD & NECK	2.7

	ED Oral Care HIGH USERS Co-occurring ICD-9-CM Diagnosis Code and Description	% of oral care ED high users
1	305.1 : TOBACCO USE DISORDER	34.1
2	401.9 : UNSPECIFIED ESSENTIAL HYPERTENSION	11.4
3	873.63: BROKEN TOOTH - UNCOMPLICATED	10.4
4	493.90: ASTHMA UNSPECIFIED	9.2
5	784.2 : SWELLING IN HEAD & NECK	8.2
	ONLY OTHER NON-TRAUMATIC ORAL CARE DIAGNOSES	4.1
	NONE	3.0

CONCLUSIONS

- NJ has very large disparities in use of EDs for oral care, especially for non-Hispanic black young adults.
- There is substantial regional variation in rates of ED visits for oral care and high-user rates suggesting room for improvement in meeting oral healthcare needs in certain low-income regions, especially Atlantic City-Pleasantville, Camden, and Trenton.

IMPLICATIONS FOR POLICY, DELIVERY, OR PRACTICE

- While NJ's Medicaid expansion under the Affordable Care Act (ACA) entitles newly eligible low-income adults to comprehensive dental benefits, improvement in their access relies on sufficient capacity in the provider network. Additionally, oral care is not an essential health benefit for adults under the ACA, so many will still face affordability barriers to private dental care. Meanwhile, expansions in medical coverage could make it financially easier for newly-insured individuals to visit EDs or healthcare providers for oral health issues.

- Strengthening the dental safety net, particularly in low-income NJ regions, is essential to reducing expensive and avoidable ED oral care-seeking. Building ED-dental community relationships or establishing dental clinics as part of an ED diversion program are potential strategies for improving dental care access for vulnerable populations.

The authors wish to acknowledge Dr. Cecile Feldman, DMD, MBA, Dean of the Rutgers School of Dental Medicine for her expertise and assistance on this research project.

THIS RESEARCH WAS SUPPORTED BY A GRANT FROM

The Nicholson Foundation

See our full report: *Use of Emergency Departments for Non-traumatic Oral Care in New Jersey*. Rutgers Center for State Health Policy: New Brunswick, NJ, March 2014. Available at www.cshp.rutgers.edu.