ER VISITS FOR NON-TRAUMATIC DENTAL CONDITIONS

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Emergency Room (ER) use for Dental Problems
Non-Traumatic Dental Conditions

- Dental Caries
- Intraoral Abscesses
- Periodontal Diseases
- Other
Top reasons given by 14,962 adults for not having visited the dentist in the past 12 months, 2015.

- Cost
- Fear of the dentist
- Inconvenient location or time for appointment
- Trouble finding a dentist who accepts my insurance
- No original teeth
- No perceived need for dental care
- Other

Marko Vujicic et al. Health Aff 2016;35:2176-2182
Percentages of National Health Interview Survey respondents who did not get selected health care services they needed in the past 12 months because of cost, by age group, 2014.

Marko Vujicic et al. Health Aff 2016;35:2176-2182
ER use for dental problems

- ER as a safety net?
- Those with limited/no access to regular dental care → ER for dental problems
  - ERs not equipped
  - Emergency Physicians not trained
- Outcome:
  - Prescription for a medication
  - Referral to see a dentist
  - Rarely is any therapeutic procedure performed
National Trends in ER Visits for NTDC

- About 1.5-2.5% of all ED visits are for NTDCs
- In 2016, **2.2 million** ER visits were made nationally for NTDCs, leading to total expenditure of **2.4 billion US dollars**
- Over the past couple decades, ER visits for NTDCs had been steadily increasing, but it has slowed down more recently
National Trends in ER visits for NTDCs

Source: CDC MMWR
National Trends in ER visits for NTDCs

Source: HPI analysis of the 2016 Nationwide Emergency Department Sample, Agency for Healthcare Research and Quality
https://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPlgraphic_0819_1.pdf?la=en
Risk Indicators

- Younger Adults (21-35 years)
- Medicaid/ Self-Pay
- Rural/ Urban
- No dental visit in past year
- Low-income

- All of the above groups are also more likely to visit the ER with dental problems repeatedly
ER use for dental problems: Implications

■ Economic:
  - *ED visits cost more than a $1000/visit*

■ Societal/ Systemic:
  - *Possibly contributes to prescription opioid abuse*
  - *ER overcrowding*

$88 million
More than 115,000 hospital ER visits for dental problems produced charges exceeding $88 million (2010).1

$23 million
The approximately 60,000 emergency hospital visits for non-traumatic dental problems or other oral health issues cost more than $23 million (2007).4

$5 million
More than 10,000 visits to hospital EDs for dental reasons cost Medicaid or other public programs almost $5 million (2007).10

$4.7 million
The 10,000-plus dental-related ER visits to seven hospitals in the state’s largest urban area cost more than $4.7 million (2005).9

$6.9 million
ER charges for dental-related visits to Kansas City hospitals totaled about $6.9 million (2001–2006).7

$4 million
The cost of dental visits to hospitals was estimated at nearly $4 million (2009).1

$31 million
The cost of treating young children for decay-related ailments in hospital emergency rooms or ambulatory surgery centers jumped from $18.5 million to more than $31 million (2006–2008).3

$7 million
More than 35,000 emergency room visits resulting from dental ailments cost nearly $7 million (2009).4
ER visits for NTDCs and Opioid Prescriptions

- Using a nationally representative data, we found that 65% of ER visits for toothache led to a prescription for opioids (Singhal, 2016)

- Another study found 55% of all ER visits for dental problems received an opioid prescription (Okunseri, 2014)
Reducing ER visits for NTDCs: Breaking the Cycle

PREVENTABLE DENTAL EMERGENCIES

Up to 1.65 million ER visits can be referred to dental clinics

Potentially saving the healthcare system $1.7 billion

Reducing ER visits for NTDCs: Breaking the Cycle

- ER/Dental Referral Program
  - Dental Schools
  - Residents
  - Local dentist network
  - Community health center

- Improving access to dental care
  - Incentivizing dentists to relocate to underserved areas
  - Enhanced dental benefits coverage
  - Increasing dentist reimbursement
Coverage Policies and their Effect on Dental ER Use

- Medicaid Adult Dental Coverage
- Medicaid Expansion
- Dependent Care Coverage under ACA
Medicaid Adult Dental Coverage

- Although all 50 states provide dental benefits to children under Medicaid, adult dental benefits are optional

Source: ADA Health Policy Institute
Medicaid Expansion

- About 37 states have expanded their Medicaid program under the ACA (up to 133% FPL or more). Only some provide dental benefits to newly enrolled population.
- Mixed evidence on impact of Medicaid expansion on ER/dental visits:
  - Expansion associated with increase in dental visits among newly eligible low-income childless adults in states that provide an adult dental benefit (Singhal, 2017)
  - In Kentucky, Medicaid expansion was associated with an increase in dental ER visits (Chalmers, 2016)
Dependent Care Coverage

- Under the ACA, children became eligible to remain on their parents’ policy until they turned 26 years.
- “The dependent coverage policy was associated with an increase in private dental benefits coverage and dental care utilization, and a decrease in financial barriers to dental care among young adults aged 19–25” (Vujicic, 2014)
DENTAL ER VISITS IN CALIFORNIA
Medicaid Policy Changes in CA

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MEDICAID EXPANSION (ACA)
What we know from previous studies

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<th>Medicaid Expansion</th>
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**Maryland**
- 1993
- ED visits increased 12%
- 21-44 year olds

**Massachusetts**
- Qualitative Study
- Enrollees reported a negative impact on QOL

**Oregon**
- 2003
- Eliminated dental benefits for OHP Standard, retained for OHP Plus
- OHPS-3 times odds of unmet dental need and 1/3 odds of dental visit

**California**
- 2009
- Qualitative
- Dental safety net providers-overwhelmed
- Shifting to treat children & privately insured
- ITS-immediate increase in rate of ED visits
- 1800+ visits attributed to benefit cuts

• Kentucky ➔ 3 fold increase in dental ED visits by Medicaid adults
• Minnesota ➔ Overall reduction, but a greater share of ED dental visits paid for by Medicaid
• Multi-state ➔ Dental visits increased among expansion population in states with adult dental benefits
Objectives

- Examine the impact of restoring partial dental benefits (May 2014)
- Examine the impact of Medicaid expansion on Dental ED visits (Jan 2014)

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Problem with pre-post aggregate comparison
Methods

- Quasi-experimental Interrupted Time Series Analyses

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Methods: Interrupted Time Series

$t_0 = \text{start of time series}$
$t_i = \text{an interruption point}$
$t_p = \text{end of time series}$
Methods

- **Data Source:**
  - California’s Non-Public Emergency Department Databases (EDD) provided by OSHPD, CADHCS
  - California’s Medicaid program enrollment and reimbursement data provided by California Department of Health Care Services

- **Time-Period:**
  - January 2006 – December 2017
  - \( n = 144 \) monthly observations: 42+58+44

- **Primary Outcome:** No. of ED dental visits/100,000 Medicaid adult enrollees

- **Population:** Medicaid enrolled adults aged 21-64 years
Results

- Over 12 years → 394,039 ED visits for dental problems
- Average rate of Dental ED visits/ 100,000 enrollees/ month:
  
  - T1: 43
  - T2: 58 (35.6% increase)
  - T3: 58 (0% change)


- Full Dental Benefits
- No Dental Benefits
- Partial Dental Benefits Restored
- Full Dental Benefits

40% more reimbursement

MEDICAID EXPANSION (ACA)
Results: Crude # of Dental ED visits/ month
Results: Rate of Dental ED visits/ 100,000 enrollees per month
Comparison with Asthma ED Visits

Dental ED Rate vs Asthma ED Rate

Year:
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
Conclusions

- The increase in dental ED visits attributable to elimination of Medicaid dental benefits in July 2009 was partially reversed in 2014, likely due to a combination of these factors:
  - *Partial restoration of adult dental benefits*
  - *Medicaid expansion*
  - Possibly, *in anticipation of an increase in reimbursement rates*
Future Directions

- Examine the effect of full dental benefits restoration
- Examine the effect of increased reimbursement rates in longer-term
- Examine how pediatric ED visits/ inpatient hospitalizations due to dental disease have changed with increase in reimbursement rates
Questions?

Thank you!

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