



**MASSACHUSETTS**  
HEALTH POLICY COMMISSION

# ED Utilization for Preventable Oral Health Care Conditions in MA

April 6, 2016

## Summary of Key Findings

**4-7X**

More expensive to visit the ED for an oral health condition instead of a dental office

**6x**

rate of children covered by MassHealth visited the ED for preventable oral health conditions compared to the rate of commercially insured children

**7x**

rate of adults covered by MassHealth visited the ED for preventable oral health conditions compared to the rate of commercially insured children

**48.8**

percent of all preventable ED oral health visits paid for by MassHealth

**1/10<sup>th</sup>**

of MA population lives in a federally designated dental health professional shortage area

**53%**

low-income children

**56%**

low-income adults

saw a dentist in 2014

Young adults had the **highest rates** of ED visits for preventable oral health conditions

**~25**

percent of the population covered by MassHealth

**five-fold regional variation**

in the number of oral health ED visits per population, high: 13.1 visits per 1,000, Fall River

low: 2.6 visits per 1,000, West Merrimack/Middlesex



**26%**

of dentists billed at least \$10,000 to MassHealth in 2014

Highlighted interventions include

- (1) Mid-level dental providers
- (2) Teledentistry

## The HPC has identified ED visits and avoidable ED visits as an area of ongoing focus

Measure	MA time trend		Direction of change	US comparison	MA relative to US
5. ED utilization (per 1,000 beneficiaries)	361 (2010)	349 (2014)		MA ranked 35 out of 51 (2013)	

- While emergency departments are essential to the delivery system, some ED visits may be avoidable - either because the condition was preventable with earlier treatment or because the condition could be treated in an alternate setting
- ED use in MA is high relative to the US, although it dropped between 2013 and 2014
- HPC has conducted several studies of ED use and avoidable ED use
  - Avoidable ED use and growth in behavioral health-related ED visits – 2015 Cost Trends Report
  - Opioid-related hospital visits (including ED) – March 23 QIPP Meeting
  - **ED visits for preventable oral health conditions – April 6 CTMP/QIPP Meeting**
- Past work on ED use has highlighted regional variation, relationship to income and other patient characteristics, and relationship to provider supply

# Oral health care in the U.S. and Massachusetts

- Oral health is a key component of overall health
  - Studies have identified oral infections as a risk factor for heart and lung disease, osteoporosis, low-birthweight, and diabetes
  - Regular dental care has also been shown to decrease medical expenses and hospitalizations for some systemic conditions, such as rheumatoid arthritis
- Key elements of access to oral health care include: geographic availability of providers, insurance coverage, and affordability
- In Massachusetts the supply of dentists varies considerably by region
  - One tenth of the population lives in a federally-designated dental health professional shortage area
- While MassHealth covers some dental care, not all dentists accept MassHealth
  - In 2014, 35% of dentists treated a MassHealth patient and only 26% billed at least \$10,000 to the program
- Access to dental care varies with income
  - In a 2015 survey, 82% of high-income adults reported seeing a dentist in past year, compared to only 56% of low-income adults

## ED use for preventable oral health conditions in the U.S.

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- When access to dental care is limited, patients may seek care for preventable oral health conditions in EDs
- A visit to the ED for an oral health condition can range from \$400 to \$1,500 per visit, which is four to seven times more than a dental office visit, which average between \$90 and \$200 per visit
- Most EDs are not equipped to provide comprehensive dental care
  - One study found that, of children who used the ED for preventable oral health conditions, 80% subsequently had to go to a dentist for treatment

## Key definitions and methods

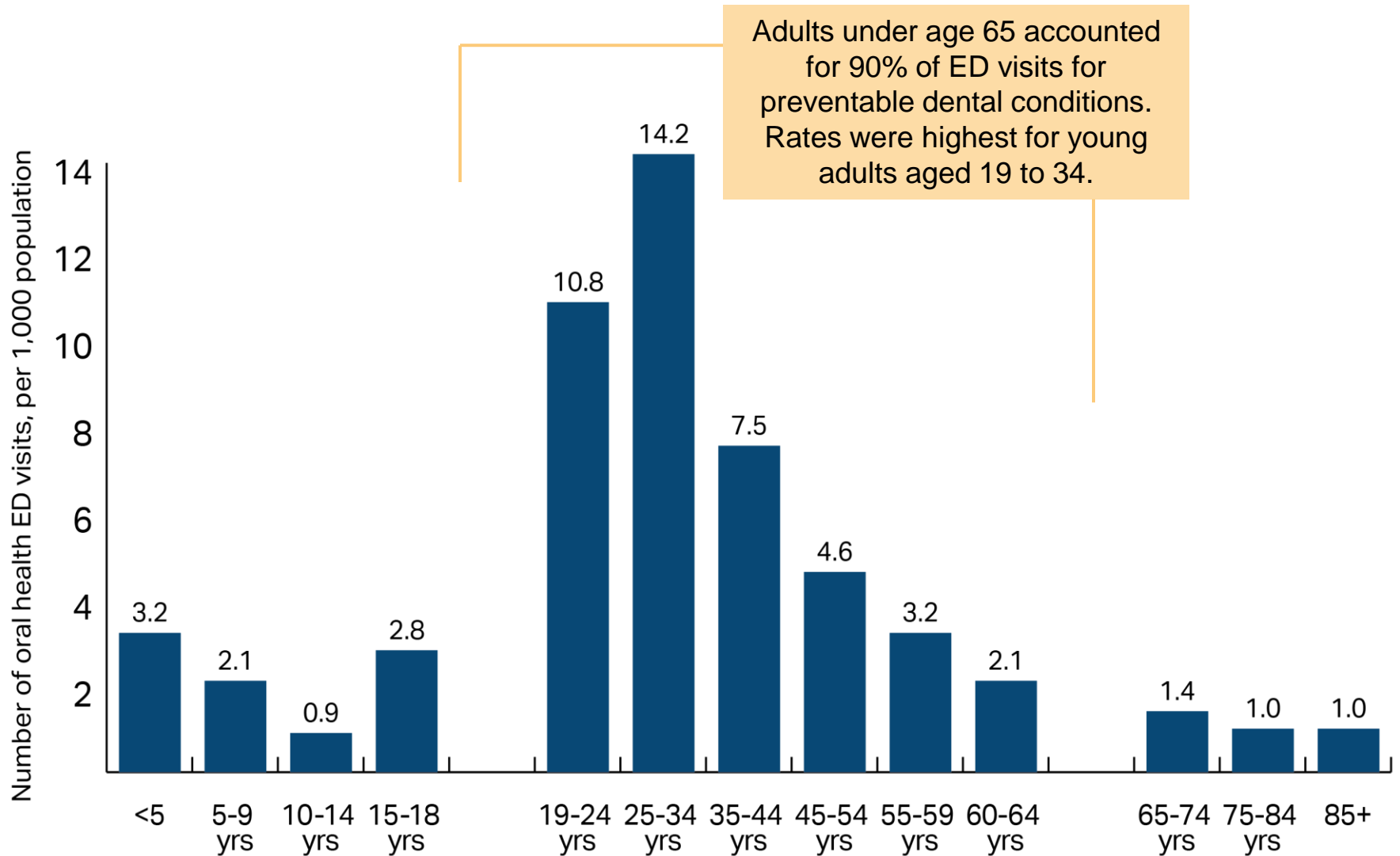
The HPC examined ED visits for preventable oral health conditions, using a method developed by the California HealthCare Foundation

- Preventable oral health conditions, also described as “ambulatory care-sensitive” dental conditions, were those for which “good outpatient care could potentially prevent the need for hospitalization or ... early intervention could prevent complications or more severe disease”

### Preventable oral health conditions

<b>Diseases of the hard tissues of teeth</b>	Tooth decay (ex: cavities, abrasion of teeth)
<b>Diseases of pulp and periapical tissues</b>	Inflammation of the dental pulp (blood vessels and nerves inside the tooth); often caused by bacterial invasion from tooth decay or, less commonly, cracked teeth
<b>Gingival and periodontal diseases</b>	Inflammation of the gums (caused by bacterial infection)
<b>Other diseases and conditions of the teeth and supporting structures</b>	Includes loss of teeth, complete or partial absence of teeth, and poor fillings. The loss of teeth due to trauma was not included in this analysis.
<b>Diseases of the oral soft tissues, excluding lesions specific for gingiva and tongue</b>	Including inflammation of the linings of the cheeks, lips, and tongue.

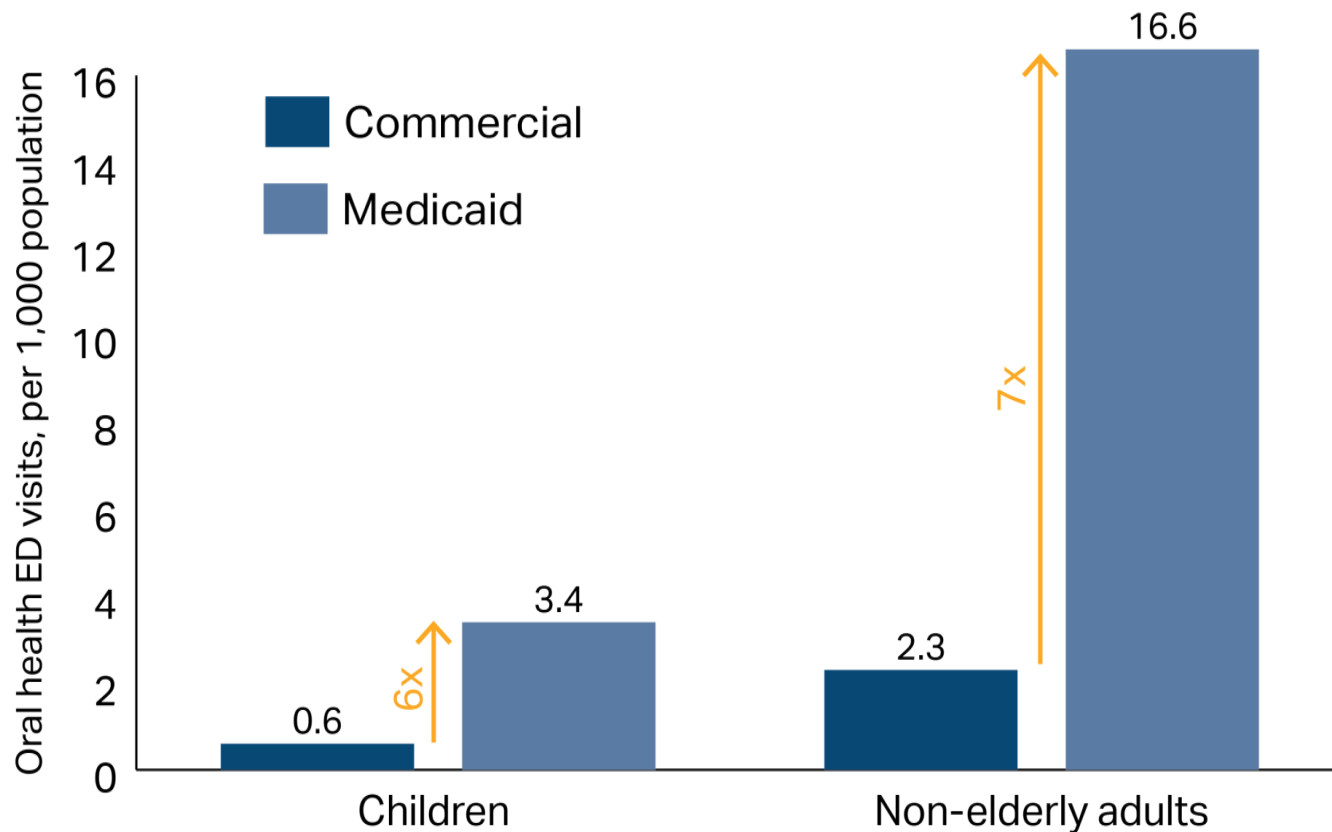
# Young adults had the highest rates of ED visits for preventable oral health conditions



Notes: Figure reports dental conditions defined based on ICD-9 primary diagnostic codes designated by the California HealthCare Foundation. These include ICD-9: 521, 522, 523, 525, and 528.

Source: HPC analysis of Center for Health Information and Analysis, Emergency Department Database, 2014; population counts from the Kaiser Family Foundation

## The rate of ED visits for preventable oral health conditions was higher among individuals with MassHealth



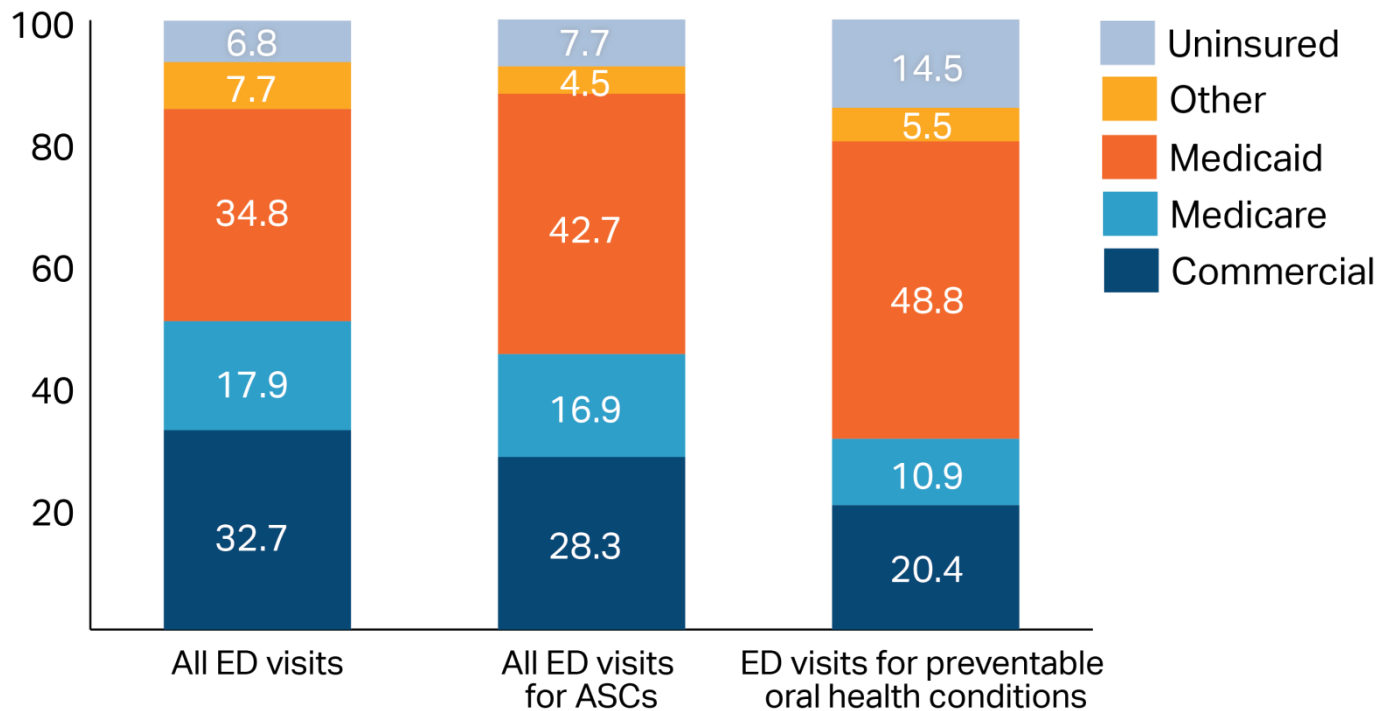
There could be many reasons for higher rates of preventable oral health ED visits among MassHealth enrollees, but likely contributing factors include: clinical risk factors, a low number of dentists accepting MassHealth patients, and patients' costs.

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Source: HPC analysis of Center for Health Information and Analysis, Emergency Department Database, 2014; population counts from the Kaiser Family Foundation

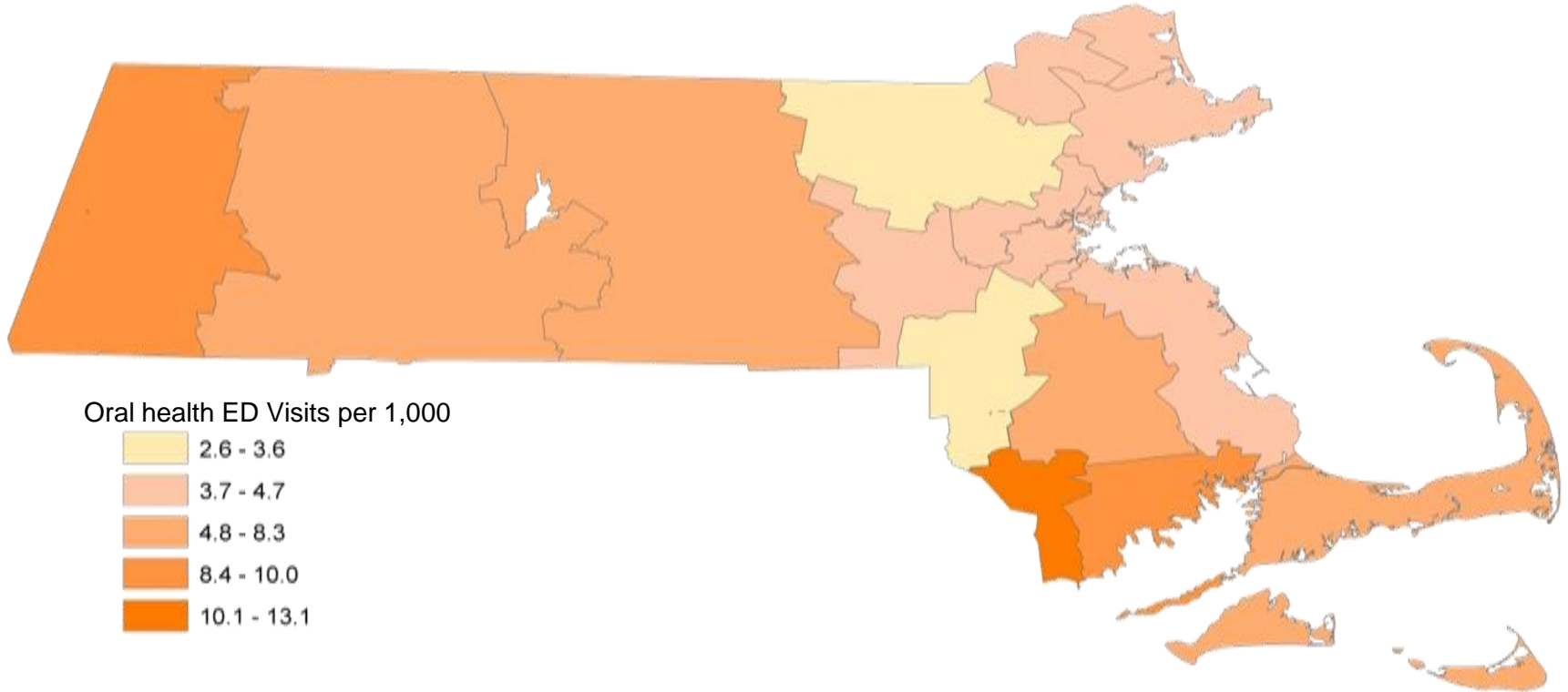


## Even relative to their high ED use overall, MassHealth members make up a large share of ED visits for preventable oral health conditions



MassHealth paid for a third of all ED visits, but almost half of all preventable oral health ED visits (despite only covering roughly a quarter of the state's residents).

# The rate of ED visits for preventable oral health conditions varied by region, with the highest rate in Fall River, followed by the Berkshires and New Bedford



Areas with more ED visits had lower median incomes and fewer full-time dentists relative to the population\*

\*The correlation coefficient was -.6 in both cases.

Notes: Figure reports dental conditions defined based on ICD-9 primary diagnostic codes designated by the California HealthCare Foundation. These include ICD-9: 521, 522, 523, 525, and 528.

Source: HPC analysis of Center for Health Information and Analysis, Emergency Department Database, 2014; population counts from the Kaiser Family Foundation

## Exemplar oral health interventions

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- The use of EDs for preventable oral health conditions suggests a clear opportunity to strengthen the Commonwealth's dental safety net and expand access to routine oral health care
- Exemplar oral health interventions to consider include:
  - Augmenting the oral health workforce by licensing mid-level dental providers
  - Supporting teledentistry initiatives
- Impact evaluations of these models show that they can increase access to oral health care by expanding the capacity of dental care teams and utilizing technology to extend the reach of the dental workforce
  - In both cases, the interventions can be focused on vulnerable populations

## Augmenting the oral health workforce by licensing mid-level dental providers

- These providers increase the capacity of dental workforce and they can make care more affordable
- Preliminary findings from Minnesota indicate that these providers have reduced ED utilization and wait times for dental appointments
- Three states currently employ mid-level dental providers and 15 other states, including Massachusetts, are considering similar legislation

State	Type of provider	Education/Training	Services provided
AK	Dental health aide therapist	18-to 24-months at a community college/ technical school program	Preventive, restorative (fillings and extractions) under standing orders and remote supervision by a dentist
MN	Dental therapist; advanced dental therapist	DT: bachelor's degree in dental therapy ADT: Master's degree in advanced dental therapy	DT: preventive services, some restorative (fillings/extractions), supervision of a dentist required for some procedures ADT: treatment plans, oral evaluations, extraction of permanent teeth. Some procedures require collaborative management agreement with dentist
ME	Dental hygiene therapist	Bachelor's degree in dental hygiene	Preventive, oral health assessments, simple extractions, prepare and replace crowns, referrals, local anesthesia under supervision of a dentist

# Supporting teledentistry initiatives

- Teledentistry enables dentists to remotely supervise staff through the use of mobile technology
  - Allows dental hygienists to provide care in schools, nursing homes, homeless shelters, prisons, and other community settings
  - Removes financial and logistical barriers that vulnerable populations face
- California and Colorado recently passed legislation authorizing state Medicaid programs to reimburse for teledentistry services

