Oral Health: An Evidence and Data-Driven Approach to Achieve Better Health, Equity, and Fiscal Responsibility

The State of Oral Health: Increasing Access & Reducing Disparities

The National Institute for Health Care Management Foundation
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Office of the Administrator
Centers For Medicare & Medicaid Services
CMS Vision Statement

CMS serves the public as a trusted partner and steward, dedicated to advancing health equity, expanding coverage, and improving health outcomes.

- **Advance Health Equity** by addressing the health disparities that underline our health system.
- **Build on the Affordable Care Act** and expand access to quality affordable health coverage and care.
- **Engage our partners and the communities** we serve throughout the policymaking and implementation process.
- **Drive innovation** to tackle our health system challenges and promote value-based, person centered care.
- **Protect our programs’ sustainability** for future generations by serving as a responsible steward of public funds.
- **Foster a positive and inclusive workplace and workforce**, and promote excellence in all aspects of CMS operations.
“You’re Not Healthy Without Good Oral Health.”
– Surgeon General C. Everett Koop
Oral Health is About Equity, Fiscal Responsibility and Inflammation

Equity

Fiscal Responsibility

Inflammation (Clinical Outcomes)
# Prevalence of Untreated Tooth Decay In Primary Teeth Among Children Aged 2–5 Years

<table>
<thead>
<tr>
<th></th>
<th>Racial Disparities</th>
<th>Income Disparities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>10.4</td>
<td>9.9</td>
</tr>
<tr>
<td>Male</td>
<td>11.1</td>
<td>6.0</td>
</tr>
<tr>
<td>Female</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>14.8</td>
<td></td>
</tr>
<tr>
<td>Mexican American</td>
<td>15.1</td>
<td></td>
</tr>
<tr>
<td>&lt;100% FPL</td>
<td>17.2</td>
<td></td>
</tr>
<tr>
<td>100%–199% FPL</td>
<td>17.2</td>
<td></td>
</tr>
<tr>
<td>≥200% FPL</td>
<td></td>
<td>6.0</td>
</tr>
</tbody>
</table>

Prevalence of Periodontitis in Adults

Increases with age
Racial Disparities
Income Disparities

Prevalence of Complete Tooth Loss (Edentulism) among Adults Aged 65 and Over

Percent

Total | 18.6 |
65–74 | 13  |
75 and over | 25.8 |
Men | 17.5 |
Women | 19.4 |
Non-Hispanic white | 16.9 |
Non-Hispanic black | 29.2 |
Hispanic | 14.9 |
Non-Hispanic Asian | 24.2 |

Increases with age

Racial Disparities

Dental Visit in the Past Year By Poverty

Source: Yarbrough and Vujicic Oral health trends for older Americans  JADA 2019

Income Disparities
Poor Oral Health, Infection and Inflammation

Total inflammation surfaces are approximately the same.

Chronic periodontal disease

Nonhealing Ulcer over the Ulnar Aspect of the Left Forearm

Fitzgerald Arch Dis Child 2005

The New England Journal of Medicine, 2002
Periodontal Disease and Associated Inflammatory Comorbidities

**Periodontitis Inflammatory Comorbidities**
- Cardiovascular disease
- Type 2 diabetes mellitus
- Rheumatoid arthritis
- Inflammatory bowel disease
- Alzheimer disease
- Nonalcoholic fatty liver disease
- Cancers

**Dissemination**
- Bacteremia, hematogenous
- Oro-pharyngeal dissemination
- Oro-digestive dissemination

Source: Hajishengallis and Chavakis Nat Rev Immunol 2021
Poor Oral Health Has Impacts Beyond Healthcare

- Poor oral health is linked to all-cause mortality.
- Poor oral health impacts children's school attendance and performance.
- Poor oral health is linked to substance use disorders.
- Poor oral health is an obstacle to employment.
Where Patients Present with Oral Health Needs

Health Information Technology Divide
Diagnostic Coding
Integration and Coordination of Care
Percentage of Medicaid Eligibles Ages 1 to 20 Who Received Preventive Dental Services

Source: medicaid.gov Children's Health Care Quality Measures
Annual Dental or Medical Visits

<table>
<thead>
<tr>
<th>Age of Beneficiaries</th>
<th>Any Dental Service</th>
<th>Medical Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>49.7%</td>
<td>51.6%</td>
</tr>
<tr>
<td>&lt; 1</td>
<td>4.1%</td>
<td>91.7%</td>
</tr>
<tr>
<td>1-2</td>
<td>27.9%</td>
<td>79.4%</td>
</tr>
<tr>
<td>3-5</td>
<td>54.6%</td>
<td>62.5%</td>
</tr>
<tr>
<td>6-9</td>
<td>62.8%</td>
<td>46.1%</td>
</tr>
<tr>
<td>10-14</td>
<td>58.8%</td>
<td>47.4%</td>
</tr>
<tr>
<td>15-18</td>
<td>49.2%</td>
<td>38.7%</td>
</tr>
<tr>
<td>19-20</td>
<td>30.2%</td>
<td>18.1%</td>
</tr>
</tbody>
</table>

Source: 2018 Annual Early and Periodic Screening, Diagnostic and Treatment (EPSDT), National
Oral Health Services by a Non-Dentist Provider

Source: 2018, Early and Periodic Screening, Diagnostic and Treatment (EPSDT) 1- to 2-Year-Old; Hatched overlay over states in Medicaid and CHIP Learning Collaborative “Advancing Prevention and Reducing Childhood Caries”
Dental is 4% of all Health Expenditures, $124 Billion

Source: National Health Expenditure, Centers for Medicare and Medicaid Services
### 2016 Health Care Spending

<table>
<thead>
<tr>
<th>Public insurance</th>
<th>Private insurance</th>
<th>Out-of-pocket payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Diabetes ($55.4 billion)</td>
<td>1 Low back and neck pain ($76.9 billion)</td>
<td>1 Oral disorders ($30.5 billion)</td>
</tr>
<tr>
<td>2 Ischemic heart disease ($48.2 billion)</td>
<td>2 Other musculoskeletal disorders ($73.3 billion)</td>
<td>2 Well dental ($21.1 billion)</td>
</tr>
<tr>
<td>3 Other musculoskeletal disorders ($46.9 billion)</td>
<td>3 Pregnancy and postpartum care ($52.8 billion)</td>
<td>3 Dementias ($19.4 billion)</td>
</tr>
<tr>
<td>4 Low back and neck pain ($45.3 billion)</td>
<td>4 Skin and subcutaneous diseases ($49.3 billion)</td>
<td>4 Low back and neck pain ($12.4 billion)</td>
</tr>
<tr>
<td>5 Hypertension ($44.9 billion)</td>
<td>5 Diabetes ($49.1 billion)</td>
<td>5 Falls ($11.9 billion)</td>
</tr>
<tr>
<td>6 Dementias ($44.4 billion)</td>
<td>8 Ischemic heart disease ($37.9 billion)</td>
<td>6 Other musculoskeletal disorders ($9.7 billion)</td>
</tr>
<tr>
<td>8 Falls ($40.7 billion)</td>
<td>9 Falls ($34.8 billion)</td>
<td>8 Diabetes ($6.7 billion)</td>
</tr>
<tr>
<td>11 Skin and subcutaneous diseases ($29.8 billion)</td>
<td>11 Oral disorders ($34.4 billion)</td>
<td>11 Skin and subcutaneous diseases ($6.0 billion)</td>
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<tr>
<td>23 Pregnancy and postpartum care ($14.9 billion)</td>
<td>12 Well dental ($32.9 billion)</td>
<td>12 Hypertension ($5.2 billion)</td>
</tr>
<tr>
<td>34 Oral disorders ($11.5 billion)</td>
<td>15 Hypertension ($28.9 billion)</td>
<td>19 Pregnancy and postpartum care ($3.6 billion)</td>
</tr>
<tr>
<td>47 Well dental ($6.5 billion)</td>
<td>29 Dementias ($15.4 billion)</td>
<td>21 Ischemic heart disease ($3.2 billion)</td>
</tr>
</tbody>
</table>

Health Care Service Expenditures per Capita for Selected Service Types Among Medicare Beneficiaries Living Only in the Community, in Dollars, 2018

Total Out-of-Pocket as a Proportion of Total Expenditures

Prescription Drugs: $689 (19%)
Physician/Supplier Services: $598 (14%)
Dental Services: $460 (77%)
Outpatient Hospital Services: $134 (6%)
Inpatient Hospital Services: $50 (2%)

Dental services have the highest out-of-pocket rate.

Source: Centers for Medicare & Medicaid Services, Medicare Current Beneficiary Survey, Survey File, 2018 and Cost Supplement File, 2018
EMERGENCY DEPARTMENT VISITS FOR DENTAL CONDITIONS

Equity  Fiscal Responsibility  Readmissions  Mortality  Opioids  Antibiotics
Emergency Department Visits for Dental Conditions

Source: ADA Health Policy Institute
Percentage of Emergency Department Visits by Adults at which Opioids were Prescribed

Source: National Center for Health Statistics Report 135, 2020
Medicaid Adult Beneficiaries Emergency Department Visits for Non-Traumatic Dental Conditions
Oral Health: Challenges and Opportunities

- System Capacity
- Increased Enrollment
- PPE
- Forgone Care

- Vaccines and Vaccination
- Telehealth
- Pandemic
- School-based Programs