Oral Health in America:
A Forthcoming Surgeon General’s Report

Tim Ricks, DMD, MPH
Rear Admiral, U.S. Public Health Service
Assistant Surgeon General
Chief Dental Officer
The views presented today are not the official views of the Office of the Surgeon General.
Oral Health in America: A Report of the Surgeon General

- First-ever report commissioned by the Surgeon General on oral health
- Available at:
  https://www.surgeongeneral.gov/library/reports/index.html
- Major Message: Oral Health means much more than healthy teeth, and is integral to the general health and well-being of all Americans.
Framework for Action

• Change perceptions regarding oral health and disease so that oral health becomes an accepted component of general health.

• Accelerate the building of the science and evidence base and apply science effectively to improve oral health.

• Build an effective health infrastructure that meets the oral health needs of all Americans and integrates oral health effectively into overall health.

• Remove known barriers between people and oral health services.

• Use public-private partnerships to improve the oral health of those who still suffer disproportionately from oral diseases.
Haven’t We Solved It By Now?

Global Burden of Disease

- Four oral health diseases ranked in the top 30 out of 328 conditions:
  - Untreated Dental Caries (tooth decay) in *permanent* teeth — 1\textsuperscript{st}
  - *Severe* Periodontitis — 11\textsuperscript{th}
  - Untreated Dental Caries (tooth decay) in *primary* teeth — 17\textsuperscript{th}
  - *Severe/Complete* Tooth Loss — 29\textsuperscript{th}

Surgeon General’s Priorities

- Opioids and Addiction
- Tobacco
- Community Health and Economic Prosperity
- Health and National Security
- Emerging Public Health Threats
- Oral Health

JEROME M. ADAMS, M.D., M.P.H.
Vice Admiral, U.S. Public Health Service
Surgeon General
Surgeon General’s Statement on Oral Health

https://youtu.be/snOxqakR2zk
Why do we need a

Surgeon General’s Report on oral health now?
Oral Health in America: Advances and Challenges

Developing the 2020 Surgeon General’s Report

Bruce A. Dye, DDS, MPH
Project Co-Director and Scientific Editor

April 17, 2019
National Oral Health Conference
Oral Health in America

The 2000 Report had 4 overarching themes:

– **Oral health** means much more than healthy teeth

– **Oral health** is integral to general health

– Safe and effective disease measures exist that everyone can adopt to improve **oral health** and prevent disease

– General health risk factors, such as tobacco use and poor dietary practices, also affect **oral and craniofacial health**
The National Call to Action (2003)

- Goals were:
  - To promote oral health
  - To improve quality of life
  - To eliminate oral health disparities
Five key action areas highlighted by the Surgeon General in the Call to Action:

- **Change perceptions of oral health**
  - Improving health literacy is the key

- **Replicate Effective Programs and Proven Efforts**
  - Innovative programs by States to expand Medicaid coverage

- **Build the science base**
  - Research will transform our knowledge of the prevention, diagnosis and treatment of oral disease

- **Increase Oral Health Workforce Diversity, Capacity, and Flexibility**
  - Diverse dental profession and culturally-competent messages important part of efforts to eliminate disparities

- **Increase collaborations**
Why is it time for a new Surgeon General’s Report on Oral Health?
The world we live in has changed greatly in the past 20 years

- **Digitization of everything**
  - Communication
  - Information management – data
  - Technology

- **Delivery of services**
  - Consolidation – convenience and economic efficiencies
  - Accountable care organizations

- **Demographic changes**
  - 45 million more of us
  - We are more diverse, more urban, and older
Sociodemographic factors are significant risk indicators for poor oral health

- **Sex**
  - Men have oropharyngeal cancer 3 times more often than women

- **Race/ethnicity**
  - Significant untreated dental caries disparities exist by race/ethnicity among children and working adults

- **Poverty**
  - Being poor increases the likelihood of increased tooth loss

- **Age**
  - Periodontitis in older adults (65+) is twice that of younger adults (30–44 years)
Substantial oral health disparities were identified in the first report for many disadvantaged socioeconomic groups

– “…there are profound and consequential disparities in the oral health of our citizens.”

Although oral health for many Americans has improved since 2000, oral health disparities persist

– Ongoing health disparities perpetuate oral health inequities
When we think of the possible impact of some of the major changes over the past 2 decades

- **Digitization of everything**
  - There is great potential for newer technologies to exacerbate health disparities

- **Delivery of services**
  - Consolidation and economic forces can negatively affect access to dental care

- **Demographic changes**
  - Sociodemographic risk indicators suggest more people are at risk of poor oral health
Aging of America is very important

Percent of the elderly population 1996–2014 among 35 OECD countries

Aging of America is very important

Percent of the working-age population 1996–2014 among 35 OECD countries

Aging of America is very important

Changing Dependency Ratio is a concern

- **In 2000:**
  - 20 older adults: 100 working adults
- **Today:**
  - 28 older adults: 100 working adults
- **In 2040:**
  - *Older adults increase to 38:100*

Source: Dependency ratio: the number of youths (<18 years) and older adults (≥65 years) for every 100 working-age adults (18-64 years). US Census Bureau, Current Population Reports, March 2018.
Aging of America is very important

By 2035, there may be more older adults than youth in the US.
Aging of America is very important

Life expectancy at age 65 Women/Men, in Years, 2017 (or latest available) among 35 OECD countries

Sex differential in older age profoundly affects prevalence of some chronic diseases

OECD (2019). Life expectancy at 65 (indicator). doi: 10.1787/0e9a3f00-en (Accessed on April 4, 2019.)
Age is also a very important determinant for periodontitis

In 2009–2014, prevalence of total periodontitis among adults aged 30 years and older in the United States = 42%

- 29.5% (aged 30–44 years)
- 46.0% (aged 45–64 years)
- 59.8% (aged 65 years and older)
Changes in functional dentition (≥21 teeth) among adults aged 65 years and older in the United States

Oral Health in America

Percentage of adults aged 65 years and older with no remaining natural teeth (2016)

Although edentulism continues to decline (11%) similar to tooth retention, disparities remain among lower income adults.

This can also disproportionately affect some adults more than others based on where they live.

Important Oral Health disparities exist by sex

Prevalence of total periodontitis = 42% for adults aged 30 years and older by sex in the United States, 2009–2014

- 50% (men)
- 35% (women)
Number of new cases and deaths from oropharyngeal cancer per 100,000 persons in the United States

Oropharyngeal cancer is now the most common HPV-associated cancer

Oral oncogenic HPV prevalence is 6.6% for men and 1.5% for women.

Men have 3½ times more oropharyngeal cancer than women.

Important Oral Health disparities exist by race/ethnicity

Prevalence of untreated caries in primary teeth for preschool children aged 2–5 years by race/ethnicity in the US

Although there are big improvements in untreated caries in preschool children overall, disparities remain.
Oral Health in America

Prevalence of dental caries in permanent teeth for adults aged 20–64 years by race/ethnicity in the United States

Important differences in dental caries prevalence exist between methamphetamine users and the US population.

Methamphetamine (MA) users were twice as likely to have 2 more decayed, missing, or filled teeth than NHANES participants.
Adults reporting illicit drug dependence or abuse in the past year (2016–2017)

6.7 million persons (3%) aged 18 years and older reported illicit drug dependence or abuse.

MA users are more likely to have poorer oral health, but little is known about effects from other illicit drug use.

Source: Kaiser Family Foundation. Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2016 and 2017. (Accessed April 10, 2019.)
Prescription opioid overdose deaths and death rate per 100,000 population (age-adjusted) in the US

Substance abuse and mental illness co-occur

Teenagers reporting mental illness in the past year (765,000)

Upwards of 60% of adolescents in community-based Substance Abuse Disorder treatment programs also meet diagnostic criteria for another mental illness.

Dentists are the leading prescriber of opioids to adolescents.

Source: Kaiser Family Foundation. Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2016 and 2017. (Accessed April 10, 2019.)
Substance abuse and mental illness co-occur

Adults reporting mental illness in the past year (18.2% or 45.6 million)

24% in Idaho
5.4 million in California

Source: Kaiser Family Foundation. Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2016 and 2017. (Accessed April 10, 2019.)
Oral Health in America

Health care expenditures are a concern

Health spending, US dollars/capita, 2017 (or latest available)

USA: $10,739/capita

Dental services accounts for 4% of total health expenditures in the US

Oral Health in America

Total dental expenditures in the United States

<table>
<thead>
<tr>
<th>Year</th>
<th>Nominal</th>
<th>Adjusted Inflation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

$ billions

Personal dental expenses have increased

Out of pocket dental expenses have increased ~$70 overall

But have remained unchanged for those under 21 years

Percent of people who did not get selected health care services they needed in the past 12 months because of cost

Cost is not the only barrier affecting access to dental care — Dental Health Professional Shortage Areas

5,833 Dental HPSAs affecting 58 million

Cost is not the only barrier affecting access to dental care — Dental Health Professional Shortage Areas

10,635 dental practitioners needed to remove HPSA designation

Oral Health in America

The costly paradox of health care technology

In every industry but one – technology makes things better and cheaper

Innovation increases the cost of health care
Oral Health in America

The paradox of too much data and not enough information

“Biomedical sciences juxtaposes the term ‘precision’ to medicine and public health with companion words like big data, data science, and deep learning.”

Barriers remain for precision medicine/public health interventions to effect change that benefits individuals and population groups.
What does this all mean for a new Surgeon General’s Report on Oral Health?
Oral Health in America

Contemporary issues to consider in the 2020 Report

- *Oral health* has improved for many but not for all

- Changes across the lifespan substantially influence *oral health*

- More needs to be known about the effect of addiction and substance use disorders on *oral health* and the role of dental providers
Modern issues to consider in the 2020 Report

- Changes in the delivery of oral health services, including integration with primary health care, are accelerating.

- Ongoing technological and scientific advances have the potential to transform oral health, but concerns persist they will not equally benefit all.

- Oral health impacts overall well-being, the economy, and national security.
Oral Health in America

What is the status of the 2020 report today?
Oral Health in America
Advances and Challenges

Developing the 2020 Surgeon General’s Report

Judith Albino, PhD
Project Co-Director and Scientific Editor

April 17, 2019
National Oral Health Conference
“The report will describe and evaluate oral health and the interaction between oral health and general health throughout the lifespan, considering advances in science, healthcare integration, and social influences to articulate promising new directions for improving oral health and oral health equity across communities.”
Assess Knowledge

Write

Edit

Review and Revise
What Topics will be Included?

• Effect of oral health on the community, overall well-being, the economy, and military readiness
  – **Section Editor:** Robert Weyant
  – **Associate Editors:** Carlos Quiñonez, Scott Tomar, and Marko Vujicic
What Topics will be Included?

• Oral Health in children and adolescents
  – **Section Editor:** Paul Casamassimo
  – **Associate Editors:** Jessica Lee, Belinda Borrelli, Margherita Fontana, and Norman Tinanoff
What Topics will be Included?

- Oral Health in working adults and older adults
  - Section Editor: Jocelyne Feine
  - Associate Editors: Linda Niessen, Judith Jones, Eliza Chavez, and Susan Reisine
What Topics will be Included?

- Oral health integration, workforce, practice
  - **Section Editor:** Kathy Atchison
  - **Associate Editors:** Nadeem Karimbux, Jeff Fellows, and Jeff Chaffin
What Topics will be Included?

- Substance use disorders, the opioid epidemic, high-risk behaviors, and mental health
  - **Section Editor:** Christian Stohler
  - **Associate Editors:** Israel Agaku, Linda Fried, and Jon-Kar Zubieta
What Topics will be Included?

• Emerging technologies and promising science to transform oral health
  – **Section Editor:** Laurie McCauley
  – **Associate Editors:** Wenyan Shi, William Giannobile, and Michelle Robinson
How are we Gathering Input?

- SG Listening Session (November 2018) elicited input from more than 150 health professionals, researchers, educators, and other experts

- Overview Webinar (January 2019) to invite public input
  - More than 1700 Views
  - 168 Comments, including 40 descriptions of programs and 57 individuals volunteering to contribute to the SGR

- Asked the Association of State and Territorial Dental Directors (March 2019) to share exemplary private-public partnerships for improving oral health (18 responses)
Using the Input to Shape Content

• Six Section Editors and 20 Associates outline and expand topics and content
• 250+ researchers and health professionals review science and practice and write text
• More than 50 experts critically read and revise
• Federal clearance procedures ensure that standards of the Surgeon General and the US Department of Health and Human Services are met
Available in Fall 2020, the Surgeon General’s Report will provide:

- Information that will impact population health, the economy, national security, health professions education, and public policy
- Guidance for research, education, practice, and individual health
- Promising approaches to achieving oral health equity for our country’s diverse communities
- A road map to optimal oral health for all
Questions

E-mail to: NIDCR-SGROH@nidcr.nih.gov

Free – Ask for one today