Surgeon General’s Report on Oral Health

Oregon Oral Health Authority

September 23, 2019
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.
Goals were:

- To promote oral health
- To improve quality of life
- To eliminate oral health disparities
Five Key Actions

1. Change perceptions of oral health
2. Replicate Effective Programs and Proven Efforts
3. Build the science base
4. Increase Oral Health Workforce Diversity, Capacity, and Flexibility
5. Increase collaborations
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 — 1st
  - Severe Periodontitis — 11th
  - Untreated Dental Caries (tooth decay) in primary teeth — 17th
  - Severe/Complete Tooth Loss — 29th

Why do we need a Surgeon General’s Report on Oral Health now?
Surgeon General’s Priorities

“Better Health Through Better Partnerships”

- Substance Misuse: Opioids, Tobacco, E-cigarettes
- Community Health and Economic Prosperity
- Health & National Security: Military Eligibility and Readiness
- Vaccinations
- Oral Health: [https://youtu.be/snOxqakR2zk](https://youtu.be/snOxqakR2zk)
How has the U.S. changed in the last 20 years?

• Oral health disparities
• Aging of the population
• A changing workforce
• Mental illness & substance abuse
• Healthcare expenditures
• Emerging public health threats
• Advances in research and technology
How has the world changed in the last 20 years?

- Digitation of everything
- Demographic changes
- Delivery of services

Global Population Growth & Internet Usage, 2000-2019, in millions

Internet World Stats.  [www.internetworldstats.com/emarketing.htm](http://www.internetworldstats.com/emarketing.htm)
How has the U.S. changed in the last 20 years?

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Untreated tooth decay by race/ethnicity and family income among children age 2 to 5 years: NHANES 1999-2004 vs. 2011-2016

Prevalence

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>All</th>
<th>Non-Hispanic White</th>
<th>Non-Hispanic Black</th>
<th>Mexican-American</th>
<th>≥200% FPL</th>
<th>&lt;200% FPL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-2014</td>
<td>20.5%</td>
<td>10.4%</td>
<td>6.7%</td>
<td>14.8%</td>
<td>12.9%</td>
<td>6.0%</td>
</tr>
<tr>
<td>2011-2016</td>
<td>16.9%</td>
<td></td>
<td></td>
<td>24.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011-2016</td>
<td>14.8%</td>
<td></td>
<td></td>
<td>30.8%</td>
<td>15.1%</td>
<td>13.9%</td>
</tr>
</tbody>
</table>

Oral Health Disparities: Adults 20-64 Years, Caries

Prevalence of dental caries in permanent teeth for adults age 20-64 by race/ethnicity in the United States

Caries Experience (DMFT>0) and Untreated Caries (DT>0) for NHW, NHB, Hisp, and Asian in 2011-2012. Non-Hispanic White (NHW); Non-Hispanic Black (NHB); Hispanic (Hisp); and Non-Hispanic Asian (Asian).

Oral Health Disparities: Adults 30 Years +, Periodontitis

Prevalence of periodontitis among adults 30 years and older, 2009-2014

- **All**: 42.2%
- **Age 30-44**: 29.5%
- **Age 45-64**: 46.0%
- **Age 65 and Older**: 59.8%
- **Male**: 50.2%
- **Female**: 34.6%
- **Non-Hispanic White**: 37.0%
- **Non-Hispanic Black**: 56.6%
- **Mexican-American**: 59.7%
- **<100% FPL**: 60.4%
- **100-199% FPL**: 53.6%
- **200-399% FPL**: 44.6%
- **Former Smoker**: 45.8%
- **Current Smoker**: 62.4%

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Projected Population Growth for Adults 65 and over, U.S., 2000 to 2030

The Aging Population: Perspective

• Our current population of seniors is more than the population of 25 states combined

• Causes:
  – People are living longer
  – The Baby Boomers

The Aging Population: Perspective

An Aging Nation
Projected Number of Children and Older Adults

For the First Time in U.S. History Older Adults Are Projected to Outnumber Children by 2035

Projected percentage of population
- Adults 65+: 23.5%
- Children under 18: 19.8%
- Projected percentage of population: 15.2%

Projected number (millions)
- 2016: 49.2
- 2020: 73.6
- 2025: 78.0
- 2030: 76.4
- 2035: 94.7
- 2040: 79.8

Source: National Population Projections, 2017
www.census.gov/programs-surveys/popproj.html

Note: 2016 data are estimates, not projections.
The Aging Population: Dependency Ratio

Changing Dependency Ratio

• 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.
The Aging Population: Oral Health Disparity

Changes in functional dentition (≥21 teeth) among adults aged 65 and older in the United States

Disparity has doubled in the past 2 decades

The Aging Population: Self-Reported Oral Health

Overall Condition of Mouth and Teeth among Seniors

- **33%** VERY GOOD
- **39%** GOOD
- **21%** FAIR
- **7%** POOR

How has the U.S. changed in the last 20 years?

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• Aging of the population
• A changing workforce
• Mental illness
• Substance abuse
• Healthcare expenditures
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A Changing Workforce: Dentist ShortageAreas

- 58 million people
- 5,862 dental health professional shortage areas (HPSAs)
- 10,593 practitioners needed

Health Resources and Services Administration. www.data.hrsa.gov/topics/health-workforce/shortage-areas
A Changing Workforce: Supply and Demand

Supply of Dentists, 2001-2018

Dentists per 100,000 population, 2001-2018

A Changing Workforce: Changes in Dentists’ Practices

Percentage of Dentists in Solo Practices, 1999 to 2017

- **Solo Practice, 2016**: 65.0%
- **DSO-Affiliated Practice, 2016**: 63.70%
- **Non-DSO-Affiliated Group Practice, 2016**: 58.9%
- **Other, 2016**: 5.8%

American Dental Association, Health Policy Institute. Fewer dentists are practicing solo. October 10, 2018, ADA News.

A Changing Workforce: The Rise of Dental Therapy

- Begun in 2000
- No universal model
- Authorized
How has the U.S. changed in the last 20 years?

- Oral health disparities
- Aging of the population
- A changing workforce
  - Mental illness & substance abuse
  - Healthcare expenditures
  - Emerging public health threats
Teenagers reporting mental illness in the past year (765,000)

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 10 April 2019)

Mental Illness and Substance Abuse: Opioids & Teens

Number of Opioid Prescriptions Written by Dentists per 1,000 Dental Patients Ages 11-18, U.S., 2010-2015

## Mental Illness & Substance Abuse: Opioid Prescribing

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Opioid Rx $n$, millions (%)</th>
<th>Total Rx $n$, millions (%)</th>
<th>Opioid Rx/Total Rx %*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family practice</td>
<td>52.5 (18.2)</td>
<td>946.9 (22.3)</td>
<td>5.6</td>
</tr>
<tr>
<td>Internal medicine</td>
<td>43.6 (15.1)</td>
<td>913.9 (21.5)</td>
<td>4.8</td>
</tr>
<tr>
<td>General practice</td>
<td>32.2 (11.2)</td>
<td>431.2 (10.1)</td>
<td>7.5</td>
</tr>
<tr>
<td>Surgery</td>
<td>28.3 (9.8)</td>
<td>77.6 (1.8)</td>
<td>36.5</td>
</tr>
<tr>
<td>Dentistry</td>
<td>18.5 (6.4)</td>
<td>64.0 (1.5)</td>
<td>29.0</td>
</tr>
<tr>
<td>Pain Medicine</td>
<td>14.5 (5.0)</td>
<td>29.8 (0.7)</td>
<td>48.6</td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>12.5 (4.3)</td>
<td>60.5 (1.4)</td>
<td>20.7</td>
</tr>
</tbody>
</table>

Mental Illness & Substance Abuse: Opioid Overdose Deaths

3 Waves of the Rise in Opioid Overdose Deaths

- Wave 1: Rise in Prescription Opioid Overdose Deaths
- Wave 2: Rise in Heroin Overdose Deaths
- Wave 3: Rise in Synthetic Opioid Overdose Deaths

Other Synthetic Opioids
- e.g., Tramadol and Fentanyl, prescribed or illicitly manufactured

Commonly Prescribed Opioids
- Natural & Semi-Synthetic Opioids and Methadone

Heroin

Deaths per 100,000 population

Among 15–49 year-olds in the United States, 19% of all deaths were attributed to SUDs in 2017

- Canada: 9%
- Mexico: 0.5%

https://vizhub.healthdata.org/gbd-compare/
Drug Use Disorders, Mortality-percent of total deaths, Both Sexes, aged 15-49 years, 2017
I, Surgeon General of the United States Public Health Service, VADM Jerome Adams, am emphasizing the importance of the overdose-reversing drug naloxone. For patients currently taking high doses of opioids as prescribed for pain, individuals misusing prescription opioids, individuals using illicit opioids such as heroin or fentanyl, health care practitioners, family and friends of people who have an opioid use disorder, and community members who come into contact with people at risk for opioid overdose, knowing how to use naloxone and keeping it within reach can save a life.

BE PREPARED. GET NALOXONE. SAVE A LIFE.
Surgeon General’s Postcard on Opioid Misuse

WHAT CAN YOU DO TO PREVENT OPIOID MISUSE?

**TALK ABOUT IT.**
Opioids can be addictive and dangerous. We all should have a conversation about preventing drug misuse and overdose.

**BE SAFE.**
Only take opioid medications as prescribed. Always store in a secure place. Dispose of unused medication properly.

**UNDERSTAND PAIN.**
Treatments other than opioids are effective in managing pain and may have less risk for harm. Talk with your healthcare provider about an individualized plan that is right for your pain.

**KNOW ADDICTION.**
Addiction is a chronic disease that changes the brain and alters decision-making. With the right treatment and supports, people do recover. There is hope.

**BE PREPARED.**
Many opioid overdose deaths occur at home. Having naloxone, an opioid overdose reversing drug, could mean saving a life. Know where to get it and how to use it.

For help, resources, and information:
https://www.hhs.gov/opioids/
1-800-662-HELP (4357)
Mental Illness & Substance Abuse: Adults

- 45.6 million adults (18.2%)
- 6.7 million persons (3%) age 18 and older reported illicit drug dependence or abuse

Prescription opioid overdose deaths and death rate per 100,000 population (age-adjusted) in the US

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 10 April 2019)

How has the U.S. changed in the last 20 years?

• Oral health disparities
• Aging of the population
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• Mental illness & substance abuse
• Healthcare expenditures
• Emerging public health threats
In 2016, the United States spent **3.3 Trillion** dollars on Health care

- China: $600 Billion
- Canada: $177 Billion

https://vizhub.healthdata.org/gbd-compare/
Financing Global Health, All cause total health care spending
Healthcare Expenditures: Per capita spending, global

Healthcare Expenditures: Dental Expenditures

Total dental expenditures in the United States

Adjusted Inflation

Healthcare Expenditures: Out-of-Pocket and Oral Health

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

Community Health and Economic Prosperity

An Initiative of the Office of the Surgeon General

Engaging businesses
To be community change-makers and forces for health in their communities

Implementing solutions
To help improve and sustain the health of communities, such as comprehensive smoke-free policies and affordable housing

Strengthening communities
To be places of opportunity for health and prosperity for all
How has the U.S. changed in the last 20 years?

- Oral health disparities
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Vaccinations:  
Measles Outbreak

As of September 12, 2019: **1,241 MEASLES CASES ACROSS 31 STATES**

- This is the greatest number of cases reported in the U.S. since 1992 and since measles was declared eliminated in 2000.

- Measles can cause serious complications. As of September 12, 2019, 130 of the people who got measles this year were hospitalized, and 65 reported having complications, including pneumonia and encephalitis.

- The majority of cases are among people who were not vaccinated against measles.

- More than 75% of the cases this year are linked to outbreaks in New York and New York City. Measles is more likely to spread and cause outbreaks in U.S. communities where groups of people are unvaccinated.
## Rise in Oropharyngeal-HPV Cancers

### Number of HPV-Associated and HPV-Attributable Cancer Cases per Year

<table>
<thead>
<tr>
<th>Cancer site</th>
<th>Average number of cancers per year in sites where HPV is often found (HPV-associated cancers)</th>
<th>Percentage probably caused by any HPV type&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Number probably caused by any HPV type&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervix</td>
<td>11,866</td>
<td>91%</td>
<td>10,751</td>
</tr>
<tr>
<td>Vagina</td>
<td>846</td>
<td>75%</td>
<td>635</td>
</tr>
<tr>
<td>Vulva</td>
<td>3,934</td>
<td>69%</td>
<td>2,707</td>
</tr>
<tr>
<td>Penis</td>
<td>1,269</td>
<td>63%</td>
<td>803</td>
</tr>
<tr>
<td>Anus</td>
<td>6,530</td>
<td>91%</td>
<td>5,957</td>
</tr>
<tr>
<td>Female</td>
<td>4,333</td>
<td>93%</td>
<td>4,008</td>
</tr>
<tr>
<td>Male</td>
<td>2,197</td>
<td>89%</td>
<td>1,949</td>
</tr>
<tr>
<td>Oropharynx</td>
<td>18,226</td>
<td>70%</td>
<td>12,885</td>
</tr>
<tr>
<td>* Female</td>
<td>3,412</td>
<td>63%</td>
<td>2,160</td>
</tr>
<tr>
<td>* Male</td>
<td>14,814</td>
<td>72%</td>
<td>10,725</td>
</tr>
<tr>
<td>TOTAL</td>
<td>42,671</td>
<td>79%</td>
<td>33,737</td>
</tr>
</tbody>
</table>

<sup>a</sup> Female

<sup>a</sup> Male

[https://www.cdc.gov/cancer/hpv/statistics/cases.htm](https://www.cdc.gov/cancer/hpv/statistics/cases.htm)
Emerging Public Health Threats: E-Cigarettes

• Record increase in vaping from 2017 to 2018 among teens

• Prompting first-ever SG Advisory on E-Cigarettes among Youth

• Nearly 1 in 11 students reported using cannabis in e-cigarettes in 2016
I, Surgeon General of the United States Public Health Service, VADM Jerome Adams, am emphasizing the importance of protecting our children from a lifetime of nicotine addiction and associated health risks by immediately addressing the epidemic of youth e-cigarette use. The recent surge in e-cigarette use among youth, which has been fueled by new types of e-cigarettes that have recently entered the market, is a cause for great concern. **We must take action now to protect the health of our nation's young people.**

**KNOW THE RISKS. TAKE ACTION. PROTECT OUR KIDS.**
• 9/20/19: The CDC announced the updated number of confirmed and probable cases of lung disease associated with e-cigarette product use, or vaping. The new case count is the first national aggregate based on the new CDC case definition developed and shared with states in late August.

• As of September 20, 2019, 530 confirmed and probable cases of lung disease associated with e-cigarette product use, or vaping, were reported by 36 states and the U.S. Virgin Islands. Two-thirds of cases are people 18 to 34 years of age, and 16% are under 18 year of age. Of these, 72% are males.

• Message: Any tobacco use, including e-cigarettes, is unsafe, especially for youth. Nicotine can harm the developing adolescent brain. We must do everything we can to reduce the use of e-cigarettes among middle and high school students to protect them from immediate lung injury and a lifetime of nicotine addiction.

• Deaths (as of 9/12/19): Six total deaths have been confirmed in six states: California, Illinois, Indiana, Kansas, Minnesota, and Oregon.
Military Readiness

• 15-20% of all disease and non-battle injuries

• DoD total force dental readiness rates <50%

• Barodontalgia affects 11% of aircrews

• Substantial costs with MEDEVAC

COL Ender Ozgul, Medical Recruitment and Force Sustainment Division, U.S. Air Force Dental Corps HQ USAF/SG1/BD
**Unfit to Serve**

**Obesity is impacting national security**

**The Problem**
- Approximately 1 in 5 children and 2 in 5 adults in the U.S. struggle with obesity.
- Only half of adults and about one quarter of youth get recommended amounts of aerobic physical activity.
- About 1 in 4 young adults is too heavy to serve in our military.

**Ineligible to Serve**

71% of young people in the U.S. would not be able to join the military if they wanted to.

3 most common reasons young people are ineligible:
- Overweight or obesity
- Educational deficits
- Criminal or drug abuse record
What does this all mean for this Surgeon General’s Report on Oral Health?
“The report will describe and evaluate oral health and the interaction between oral health and general health throughout the life span, considering advances in science, healthcare integration, and social influences to articulate promising new directions for improving oral health and oral health equity across communities.”
“Big” questions to answer

– Where we are now?
– Where we have made advances since 2000?
– What challenges persist since the last report?
– What new threats are emerging?
– What are some promising new directions for research and improvement in oral health?
Framework for the Report

• Oral Health Across the Lifespan
  – Neonatal, Infant, and Child Life Stage
  – Adolescent and Teenager Life Stage
  – Young Adult and Adult Life Stage
  – Older Adult Life Stage

• Effect of Oral Health on the Community, Overall Well-being, and the Economy

• Effects of Addiction and Mental Health Disorders on Oral Health

• Oral Health Integration, Workforce, and Practice

• Emerging Technologies and Promising Science to Transform Oral Health
Using the input to shape content

- Six Section Editors and 20 Associates outline and expand topics and content
- 300 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 DHHS are met
Current Status – September 1, 2019

- First drafts received
- Initial review by editorial teams occurring
- Scientific and technical review begins in October/November
- Federal review after that
Expectations for the 2020 Report

It is anticipated that the 2020 Report will:

– Emphasize the importance of poor oral health as a public health issue
– Reinforce the importance of oral health throughout life
– Describe important contemporary issues affecting oral health
– Outline a vision for future research and policy directions, and
– Educate, encourage, and call upon all Americans to take action
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

– Information providing guidance for research, education, and practice related to oral health

– Promising approaches to achieving oral health equity for our country’s diverse communities

– A road map to optimal oral health for all
Global Oral Health and the 2020 Report

How can the 2020 SGR Influence Global Oral Health?

- Learning
- Workforce Issues
- OH Inequities
- Shared Disease Burden and Shared Cost

Image from NASA
Dental Practice and the 2020 Report

How can the 2020 SGR Influence Dental Practice?

– Identify changes in disease patterns
– Identify trends and changes that impact the Oral Health workforce
– Highlight new directions in science and technology that can improve practice
– Clarify how patient populations are changing
– Raise awareness of practices that impact oral health inequities

Image from WSJ
Questions

Follow-up questions or requests for speaking engagements, please contact:

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E-mail: sginvitations@hhs.gov
Link to Invitations Form:
https://www.hhs.gov/webforms/surgeon-general-invitation-form/index.html

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