

OFFICE OF THE CHIEF DENTAL OFFICER



The Surgeon General's Report on Oral Health



Missouri Oral Health Policy Conference
March 5, 2020



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Assistant Surgeon General, USPHS Chief Dental Officer



Mission and Core Values

- Protect, promote, and advance the health and safety of our Nation
 - Rapid and effective response to public health needs
 - Leadership and excellence in public health practices
 - Advancement of public health science
- Core values:
 - Leadership
 - Service
 - Integrity
 - Excellence



Where Dentists Work



Current Openings

- BOP: <https://www.bop.gov/jobs/positions/index.jsp?p=Dentist>
- CDC: <https://www.usajobs.gov/>
- FDA: <https://www.usajobs.gov/>
- HRSA: <https://www.hrsa.gov/hr>
- IHS: <https://www.ihs.gov/dentistry/index.cfm/currentopenings/search/>
- IHSC: <https://www.usajobs.gov/>
- NIH: <https://www.usajobs.gov/>
- USCG: <https://www.gocoastguard.com/active-duty-careers/officer-opportunities/programs/dental-officer>





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.**



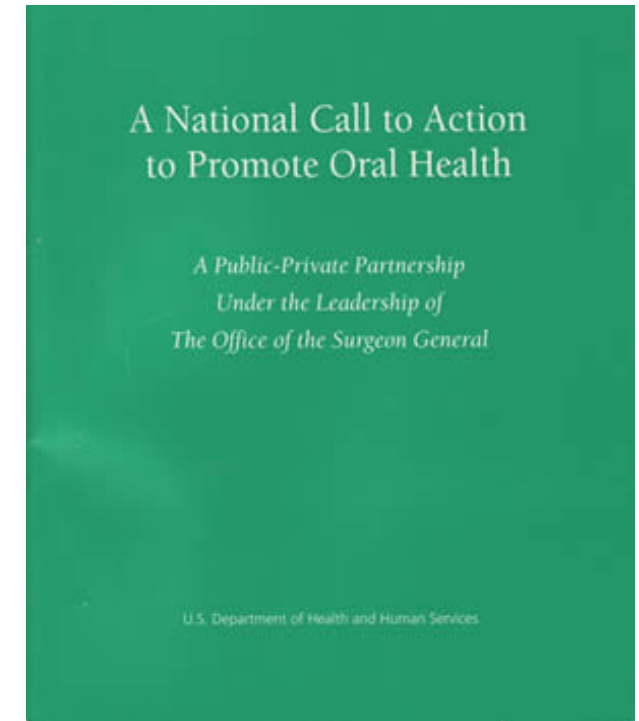


Oral Health in America: Call to Action (2003)



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

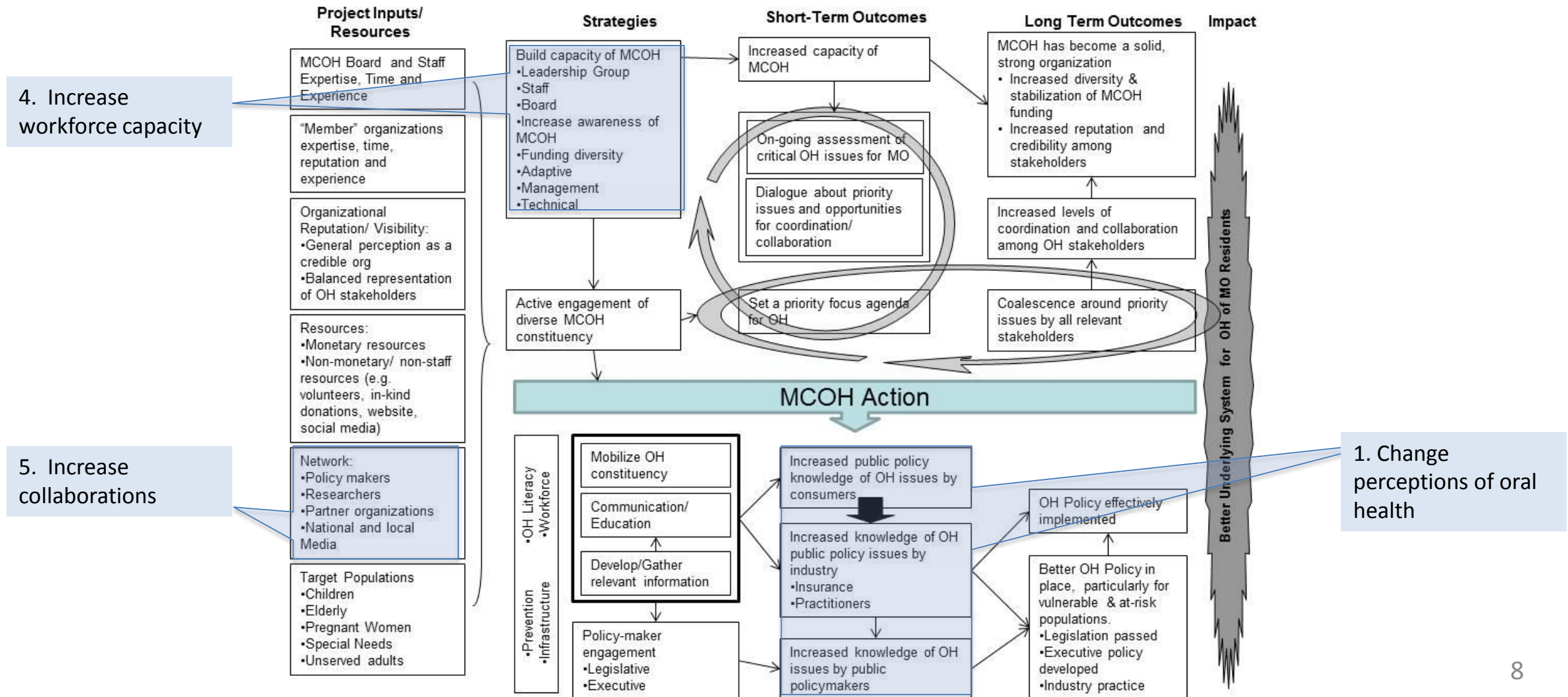




Key Actions: Missouri Coalition for Oral Health



MCOH Logic Model

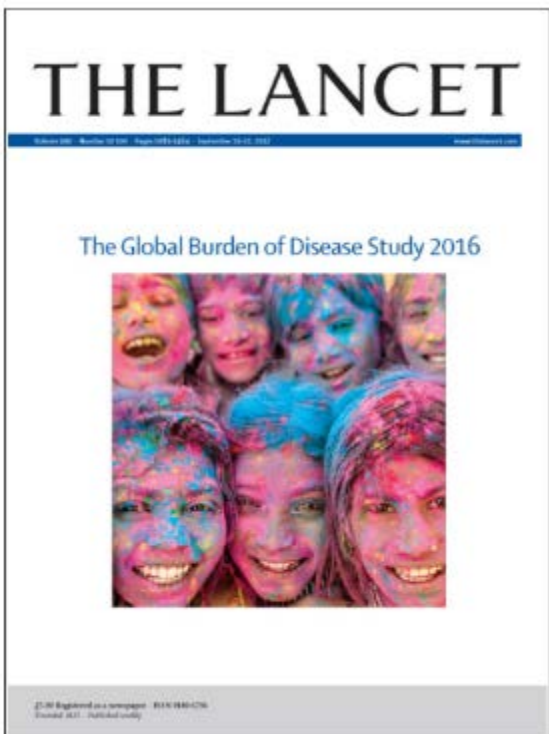




Haven't We Solved It By Now?



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
- Oral Health: <https://youtu.be/snOxqakR2zk>



JEROME M. ADAMS, M.D., M.P.H.
Vice Admiral, U.S. Public Health Service
Surgeon General



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

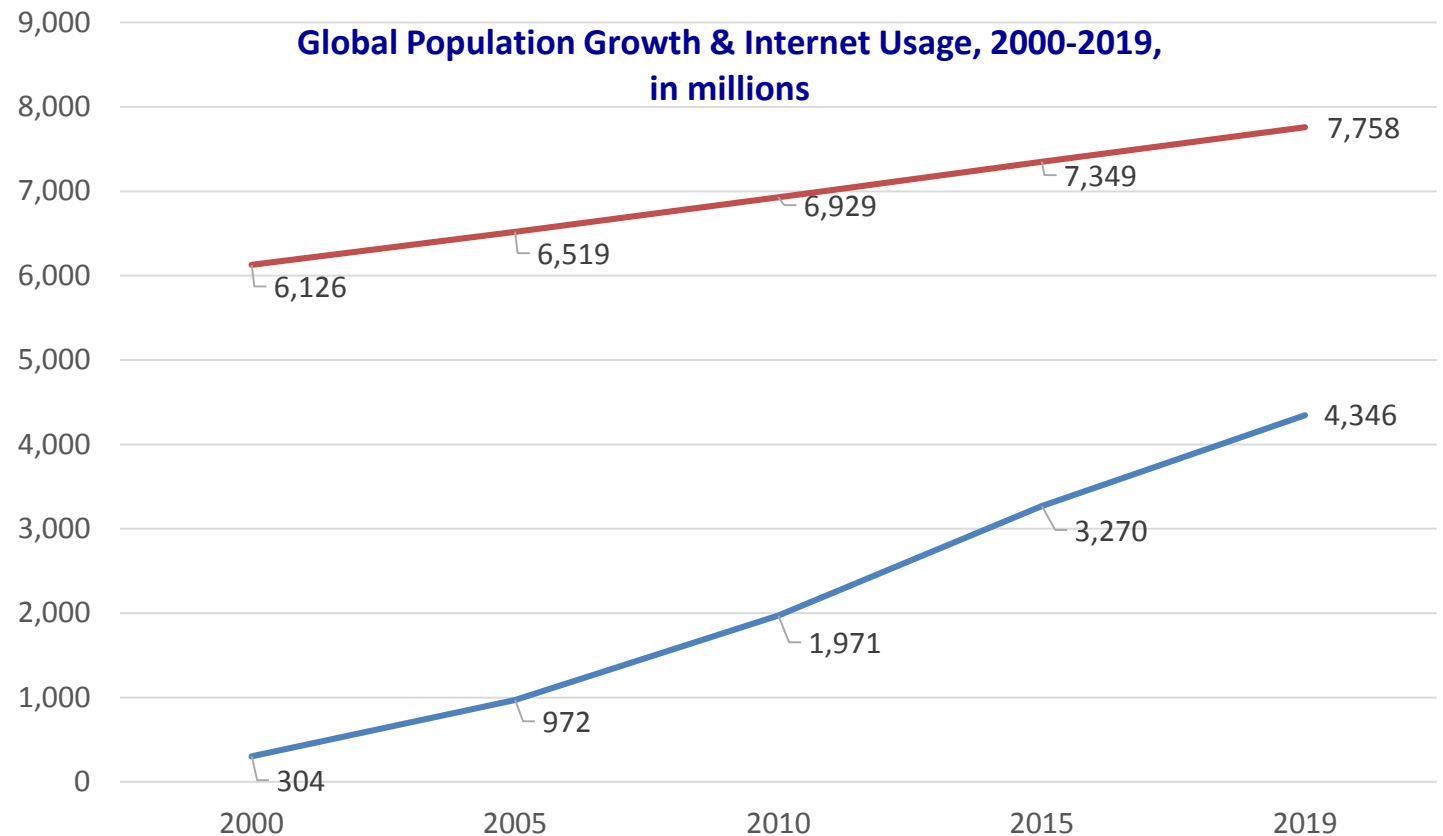




How has the world changed in the last 20 years?



- Digitation of everything
- Demographic changes
- Delivery of services



Internet World Stats. www.internetworldstats.com/emarketing.htm

Population Pyramid. www.populationpyramid.net/world/2019/



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



- **Oral health disparities/inequities**
- Aging of the population
- A changing workforce
- Mental illness & substance abuse
- Healthcare expenditures
- Emerging public health threats



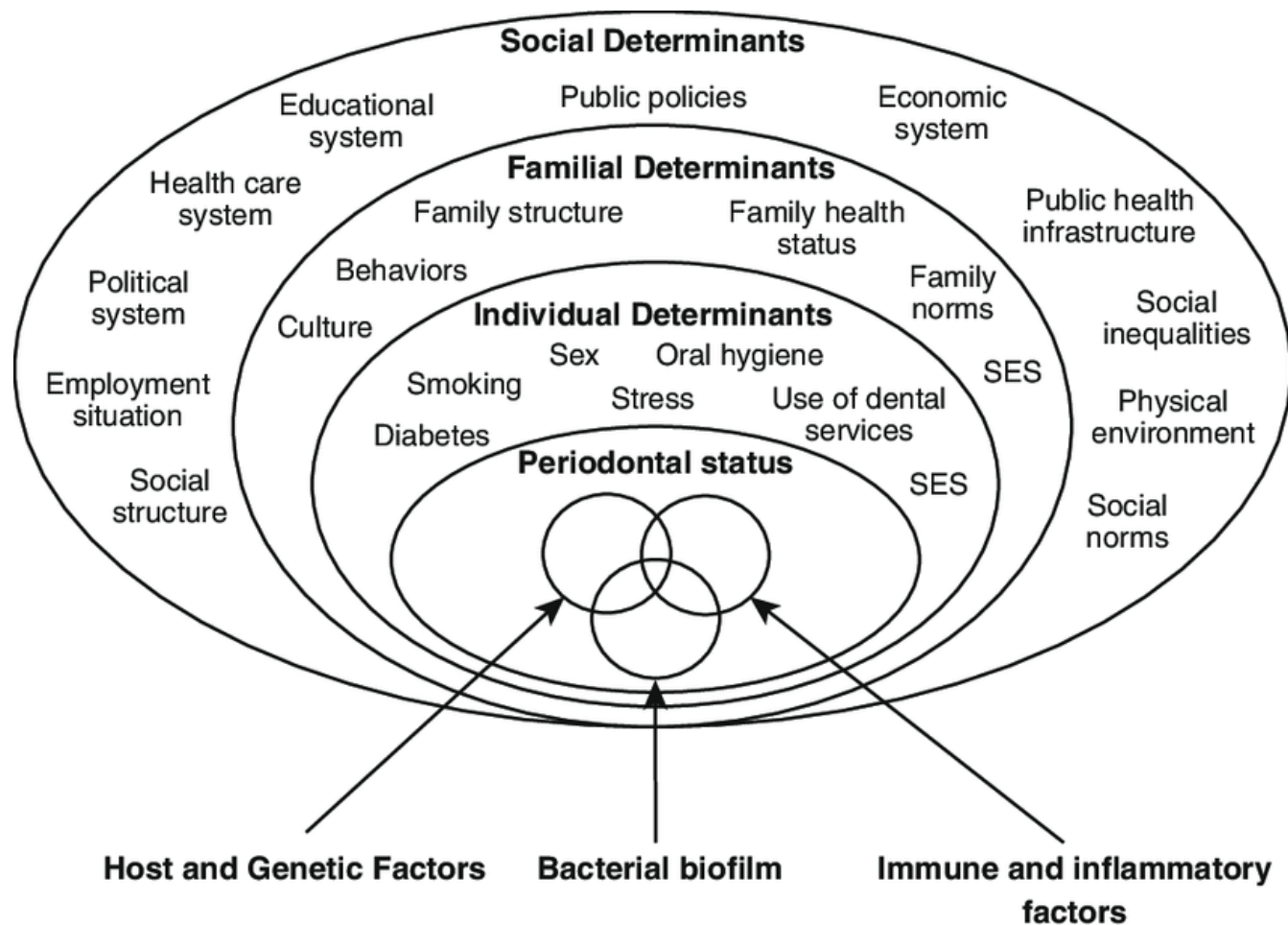


Oral Health: Persistent Disparities/Inequities

	Caries Prevalence, 2-5 years	Untreated Decay, 2-5 years	Caries Prevalence, 6-11 years	Untreated Decay, 6-11 years	Caries Prevalence, 12-19 years	Untreated Decay, 12-19 years	Untreated Decay, 65+ years	Total tooth loss 65+ years
Male	24.0%	11.1%	15.6%	4.9%	55.9%	17.7%	18.0%	17.7%
Female	22.4%	9.5%	19.0%	5.5%	57.7%	15.4%	14.2%	16.9%
White, non-Hispanic	17.9%	6.7%	13.4%	4.3%	54.3%	15.6%	13.4%	15.2%
Black, non-Hispanic	28.0%	14.8%	21.6%	7.1%	57.1%	20.4%	29.1%	30.7%
Mexican American	32.9%	15.1%	24.5%	7.5%	68.9%	20.8%	35.9%	16.7%
≤200% FPL	29.6%	13.9%	22.0%	6.9%	65.0%	21.6%	28.6%	28.6%
≥200% FPL	15.7%	6.0%	12.0%	3.5%	48.7%	11.1%	9.9%	10.7%



Oral Health: Social Determinants & Disparities





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



- ~~Oral health disparities~~
- **Aging of the population**
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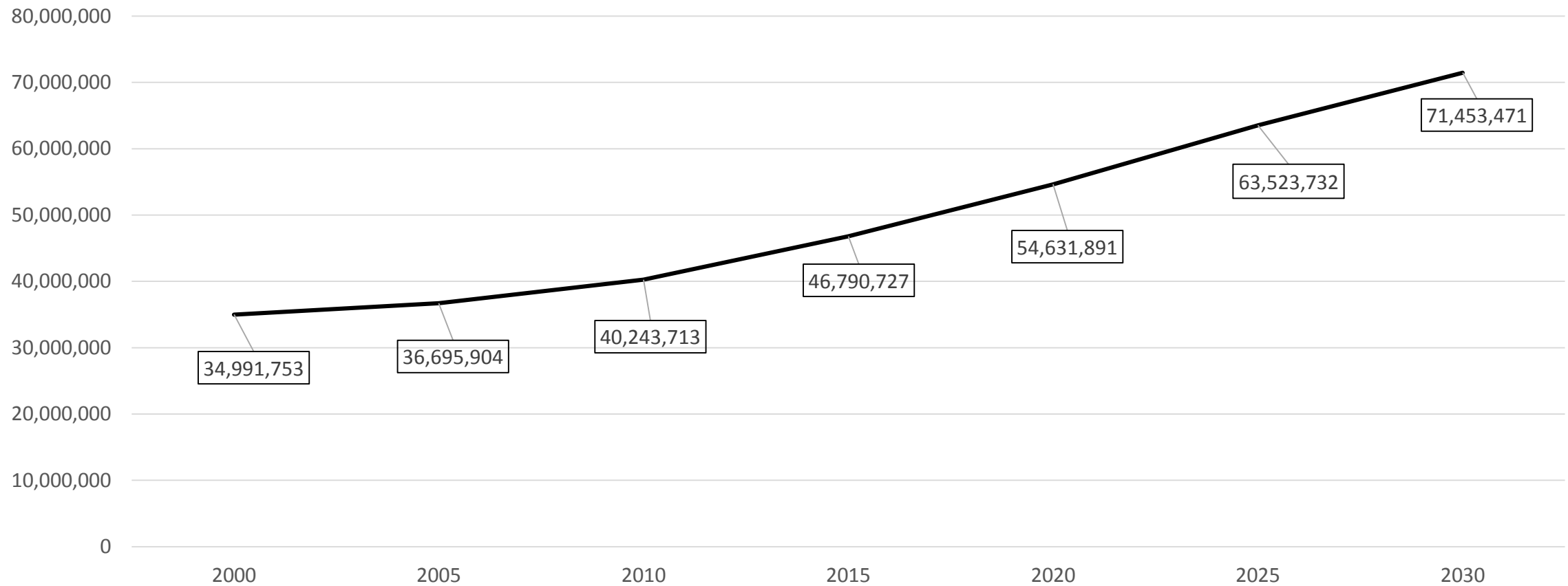




The Aging Population: Population Growth



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

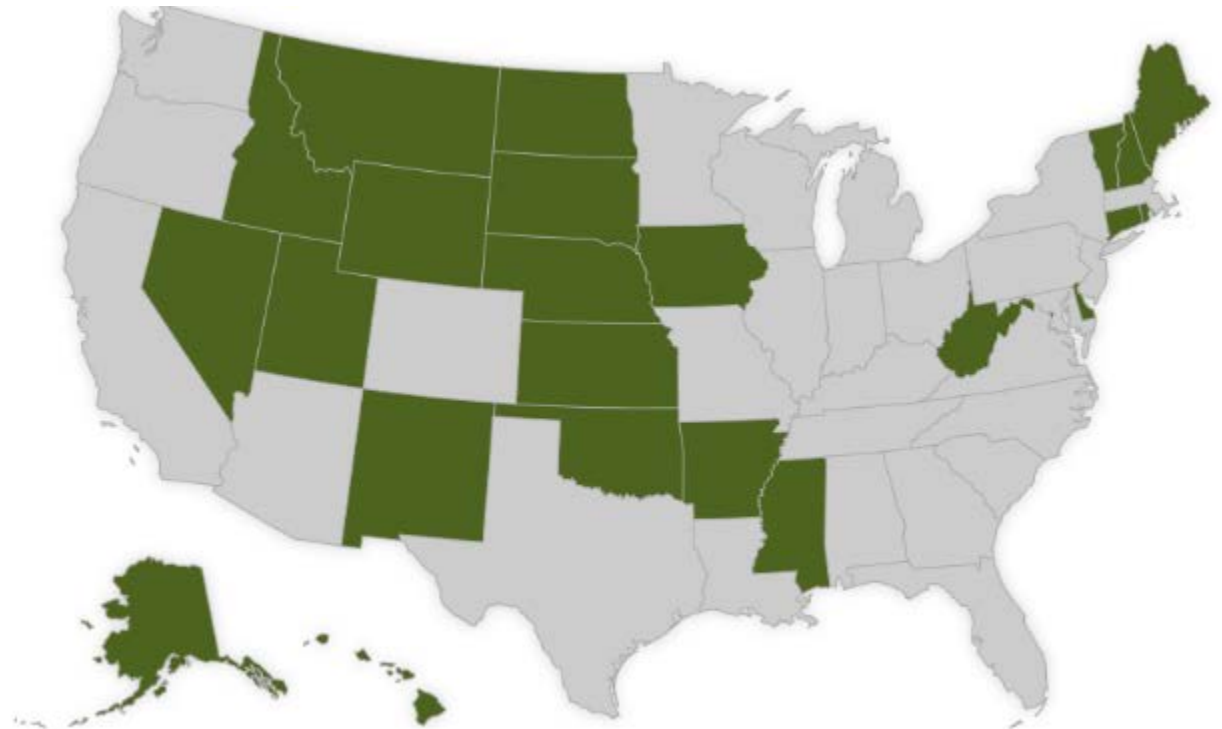




The Aging Population: Perspective

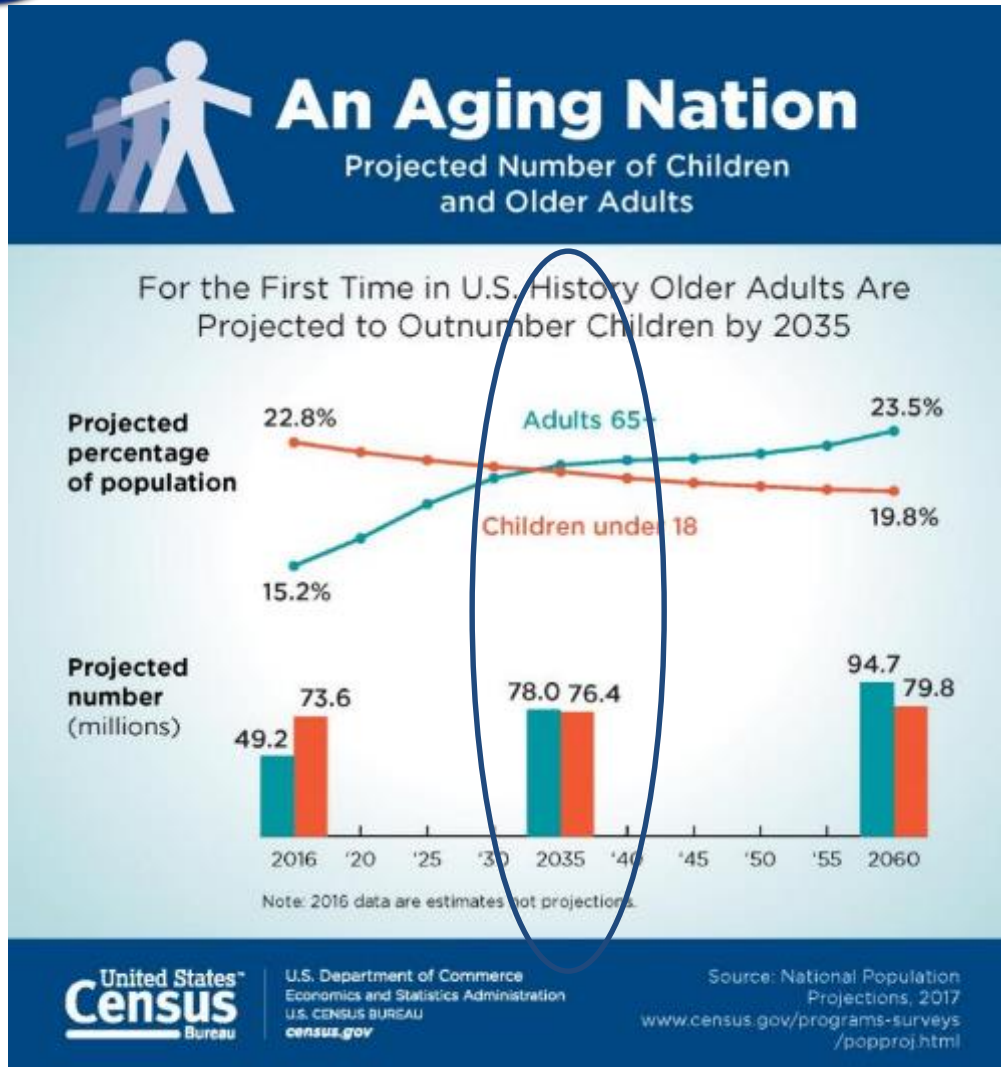


- Our current population of seniors is more than the population of 25 states combined
- Causes:
 - People are living longer
 - The Baby Boomers





The Aging Population: Perspective



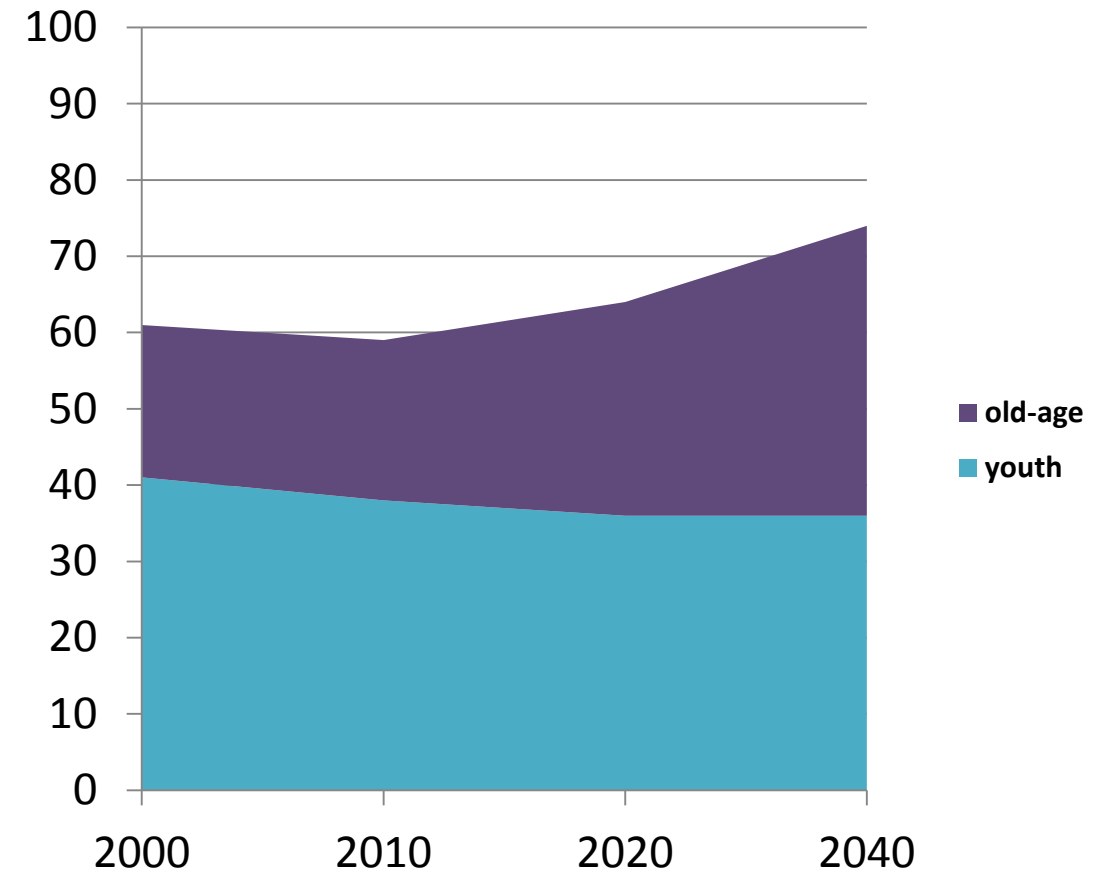


The Aging Population: Dependency Ratio



Changing Dependency Ratio

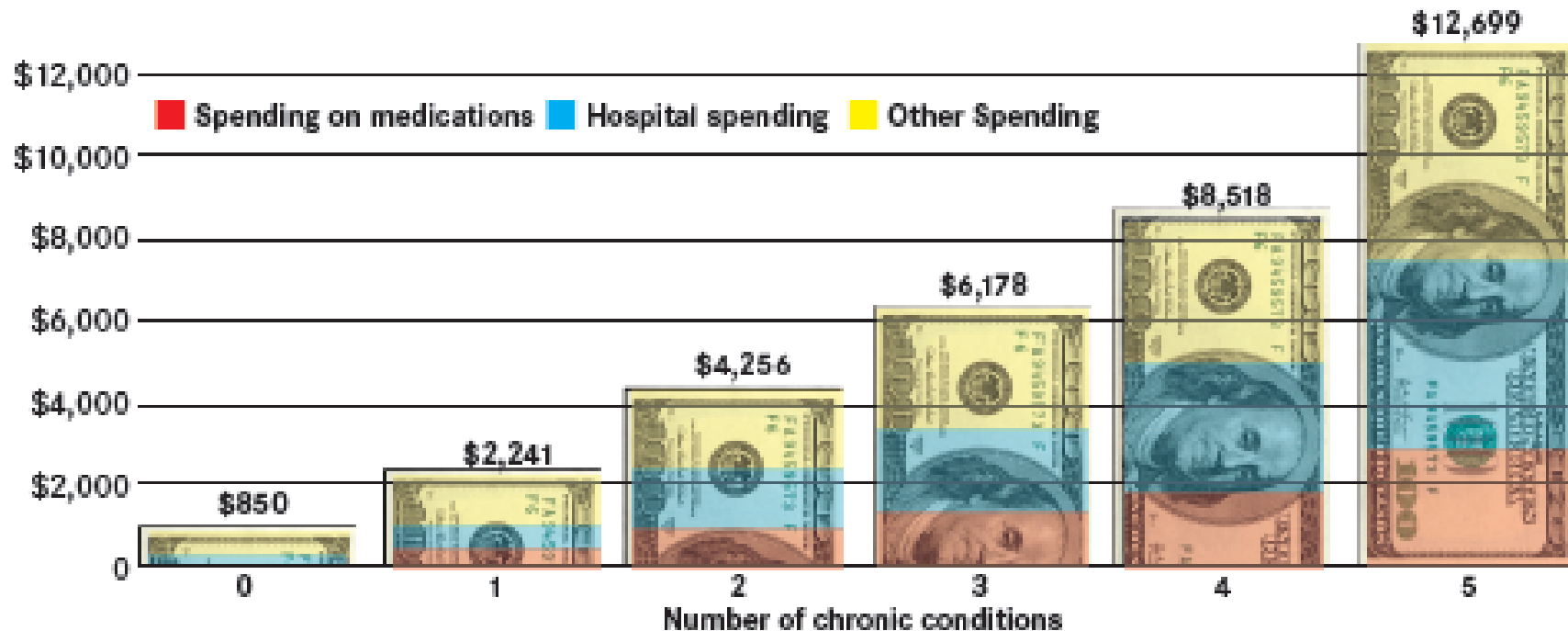
- 2000: 20 older adults: 100 working adults
- Today: 28 older adults: 100 working adults
- In 2040: *Older adults increase to 38:100*





The Aging Population: Healthcare Expenditures

FIGURE 2: ANNUAL HEALTH CARE COSTS PER PERSON BY NUMBER OF CHRONIC CONDITIONS (BOOMER AND NON-BOOMER)



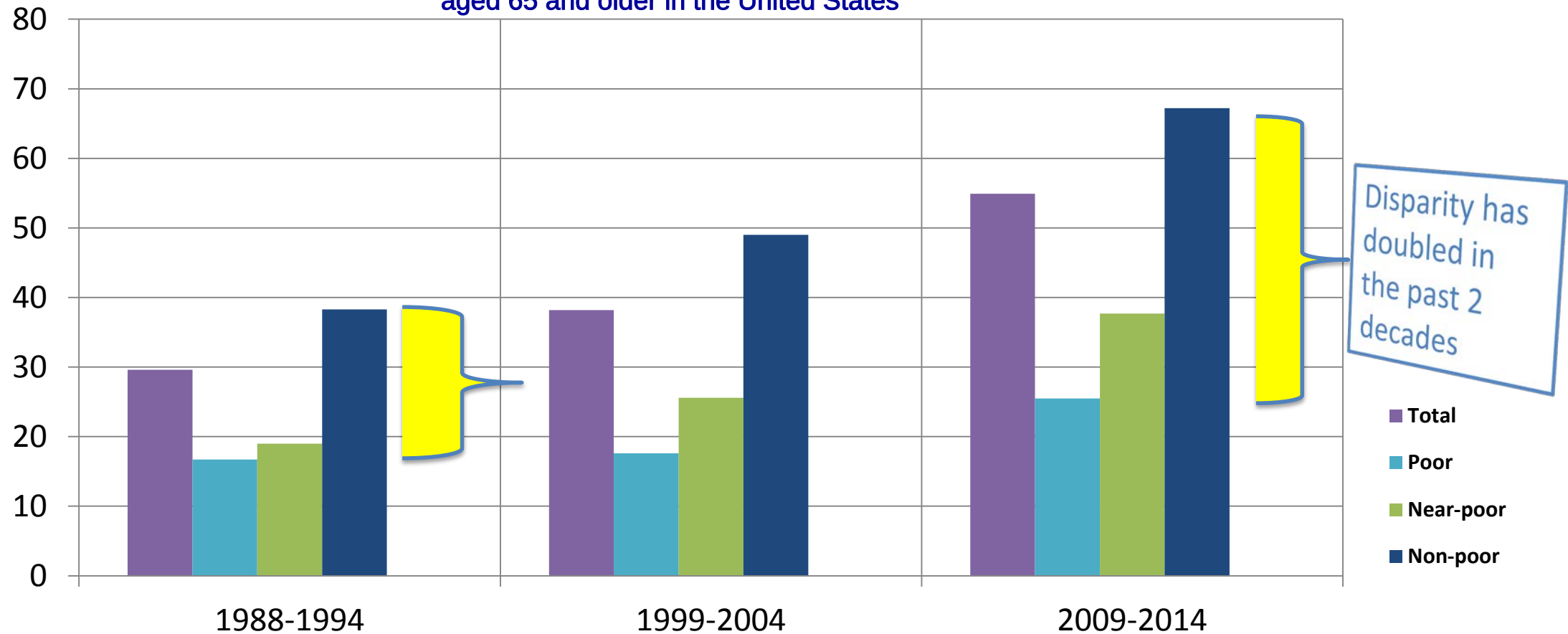
Adapted from *When I'm 64: How Boomers Will Change Health Care*, American Hospital Association, 2007.



The Aging Population: Oral Health Inequities



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



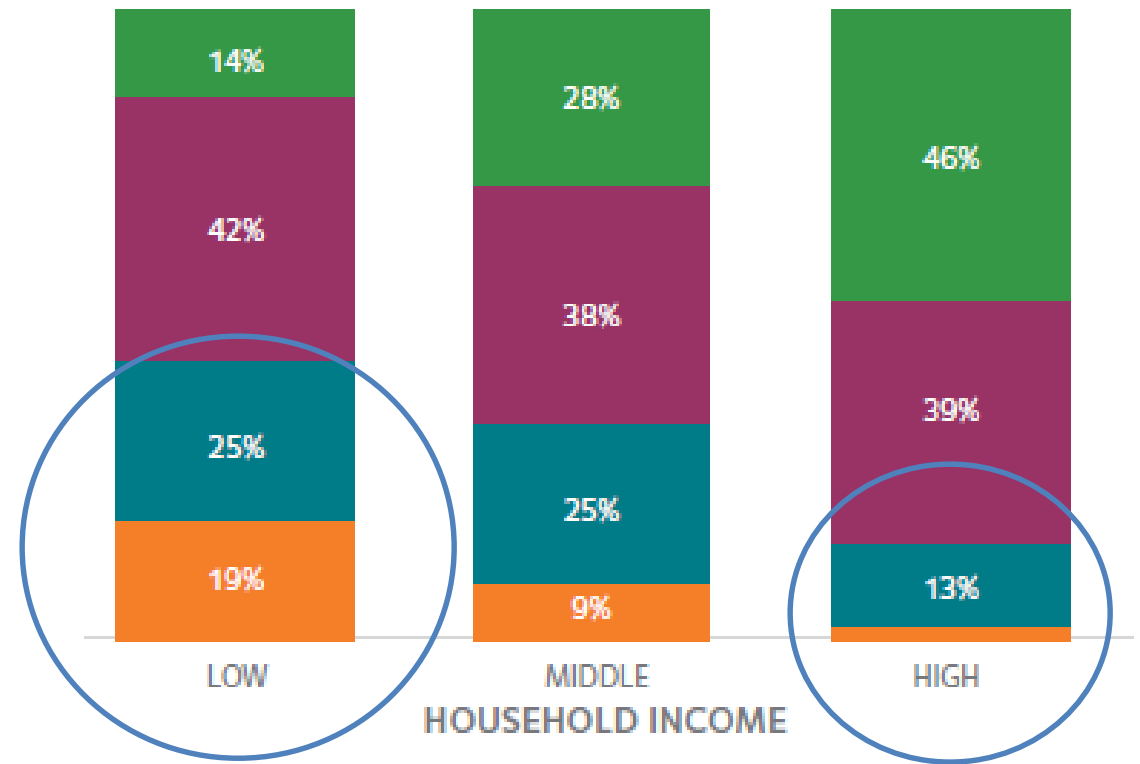
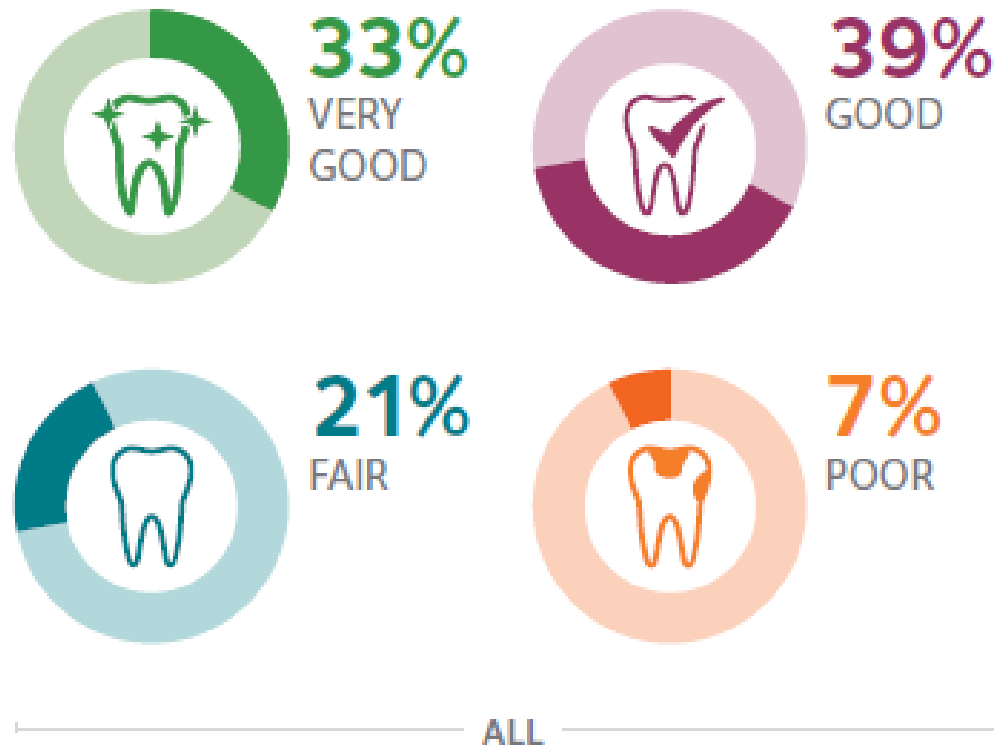
Source: Dye BA, Tan S, Smith V, et al. Trends in Oral Health Status—United States, 1988-1994 and 1999-2004. Vital and Health Statistics. Series 11, Number 248 (April 2007). Dye BA, Lopez Mitnik G, Weatherspoon DJ. Tooth loss among older adults according to poverty status in the United States from 1999 through 2004 and 2009 through 2014. JADA 2018;150(1):9-23.



The Aging Population: Self-Reported Oral Health



OVERALL CONDITION OF MOUTH AND TEETH AMONG SENIORS





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
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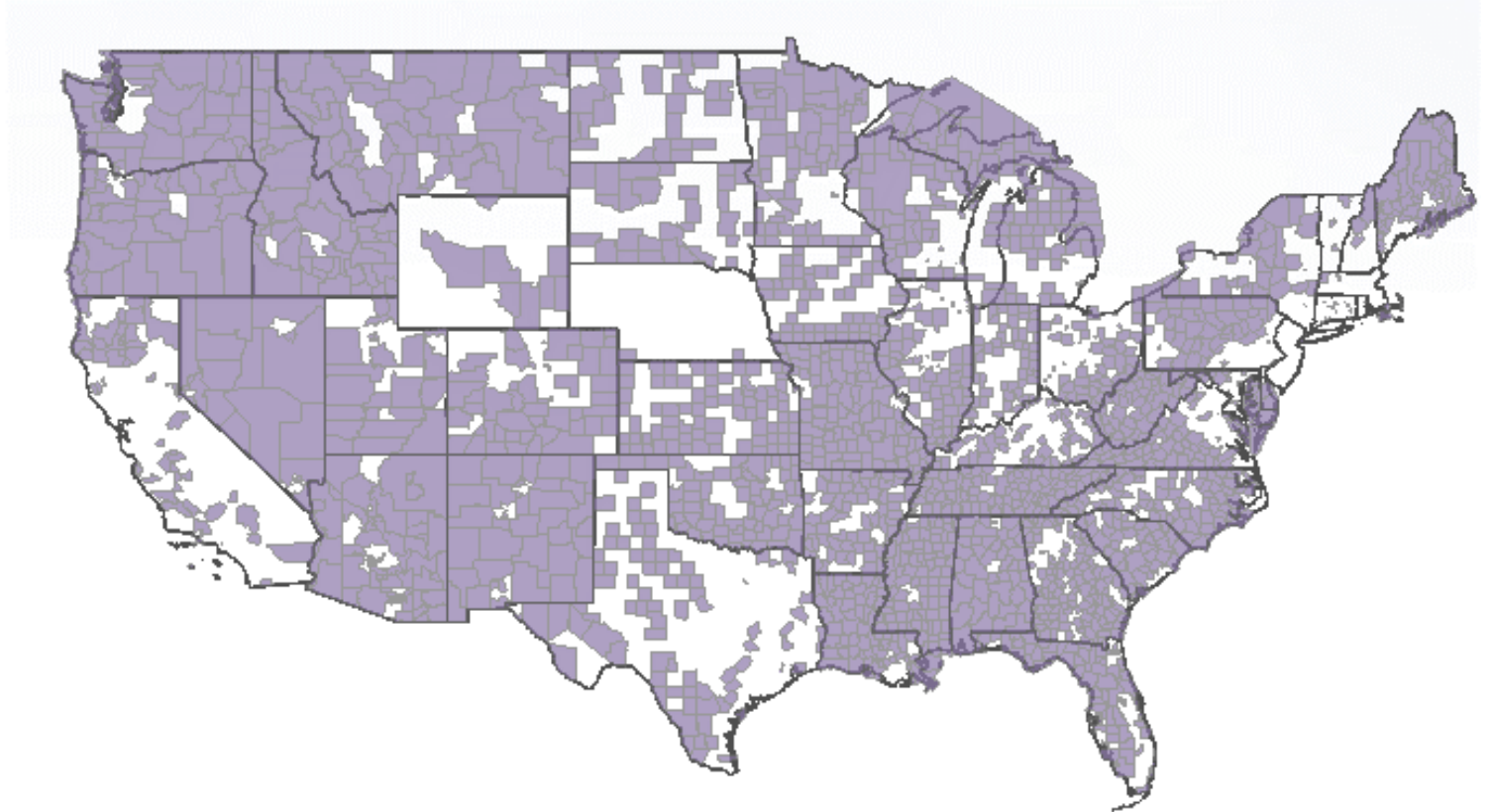




A Changing Workforce: Dentist Shortage Areas



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

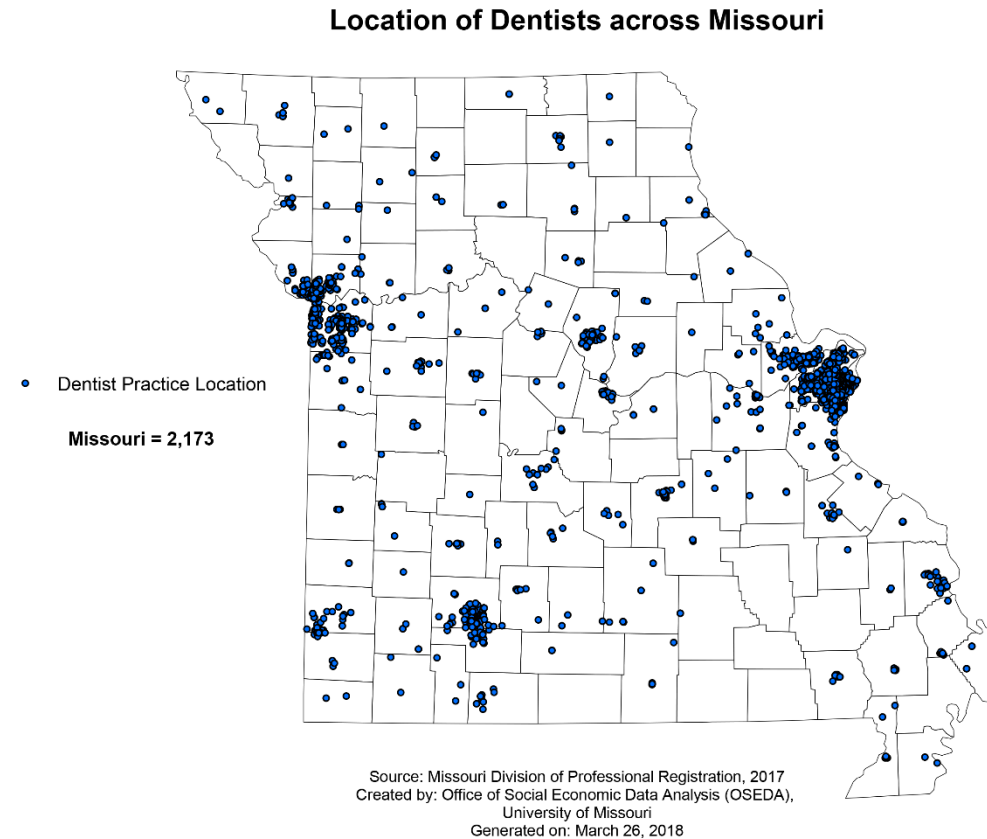




Dentist Shortage Areas: Missouri



- Overall ratio of dentists to population: 1:1,846 (ranging from 1:563 in Marion County to 1:**17,823** in Pemiscot County)
- Disparities in disease (untx decay) related to access:
 - Hispanics ≤ 18 = 16.9%
 - African Americans ≤ 18 = 16.3%
 - Caucasians ≤ 18 = 14.1%

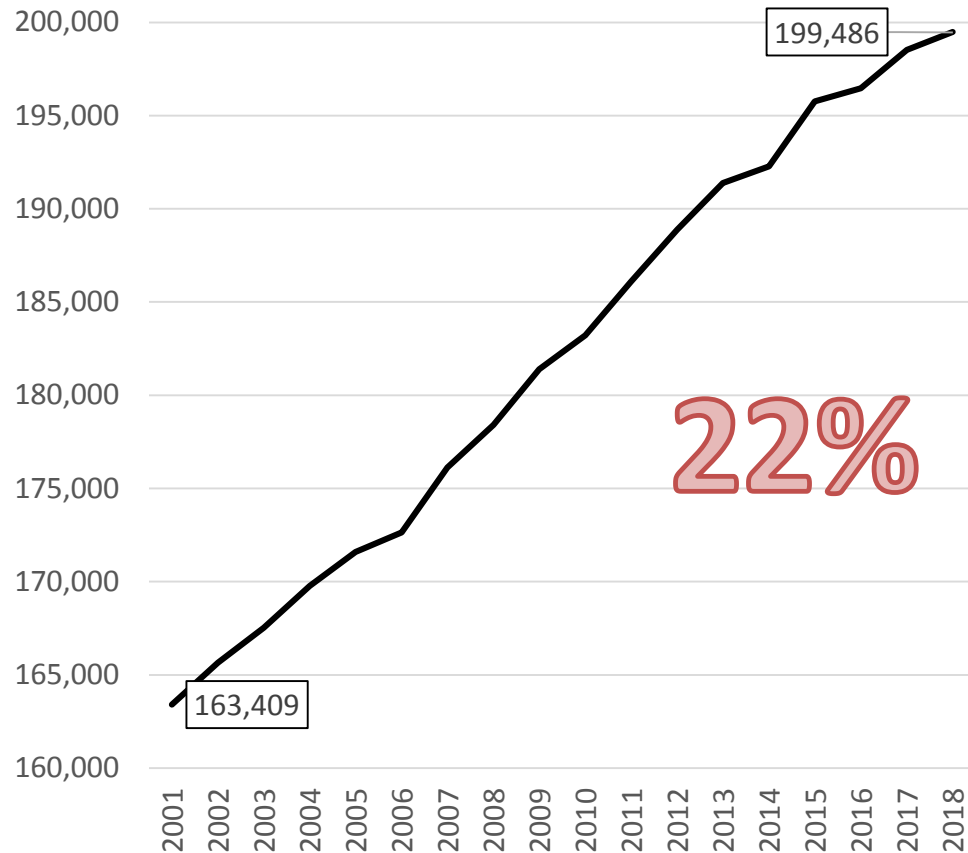




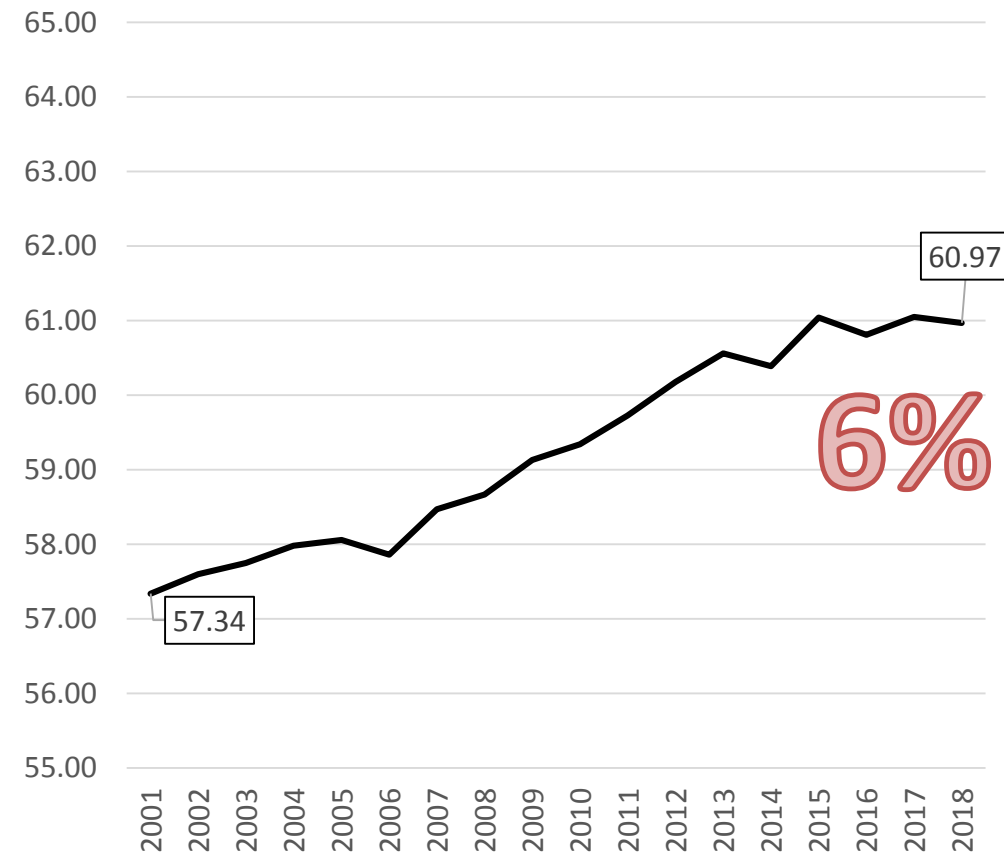
A Changing Workforce: Supply and Demand



Supply of Dentists, 2001-2018



Dentists per 100,000 population, 2001-2018



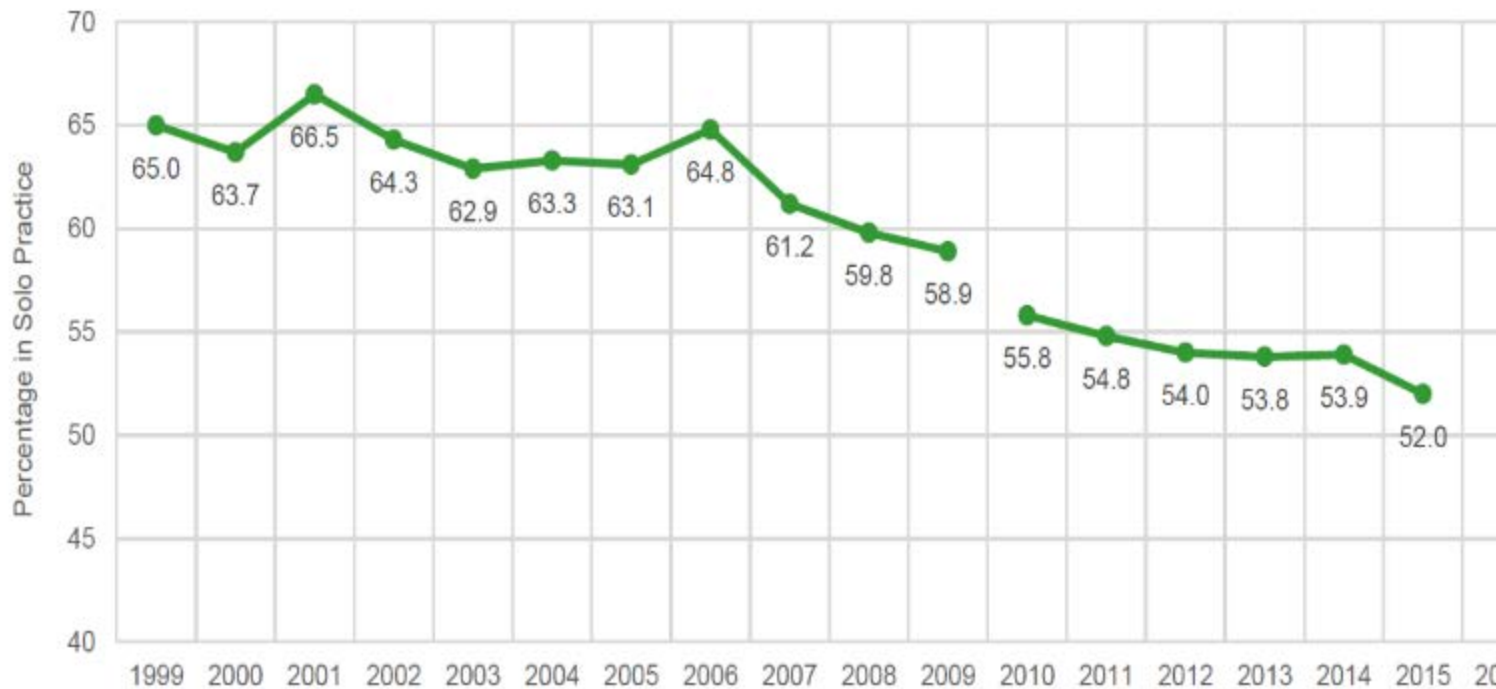


A Changing Workforce: Changes in Dentists' Practices

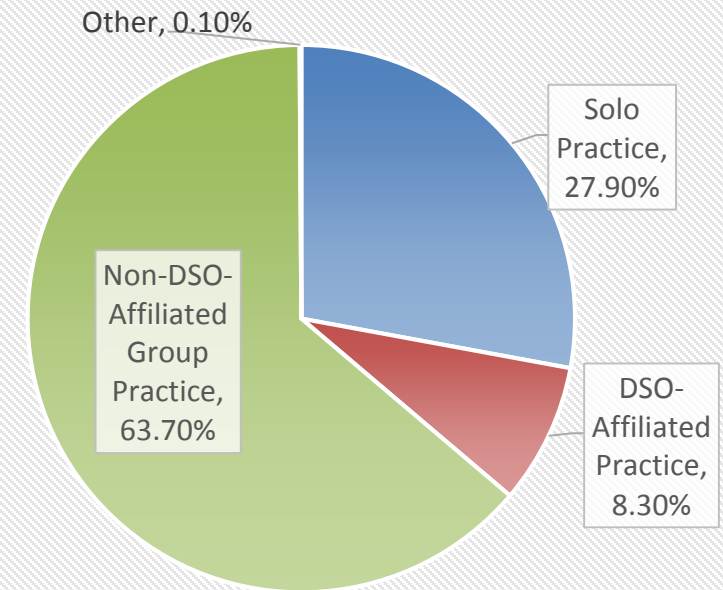


ALL DENTISTS

Percentage of Dentists in Solo Practices, 1999 to 2017



Dentist Practice Type, 2016

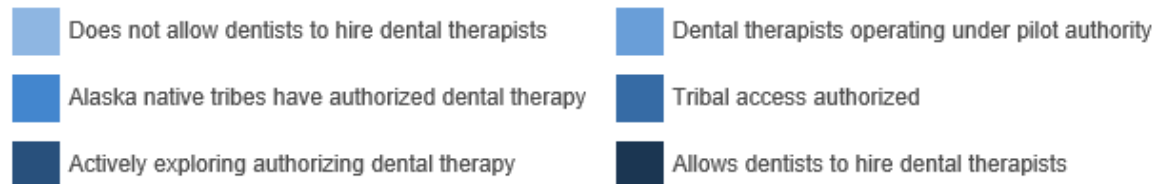
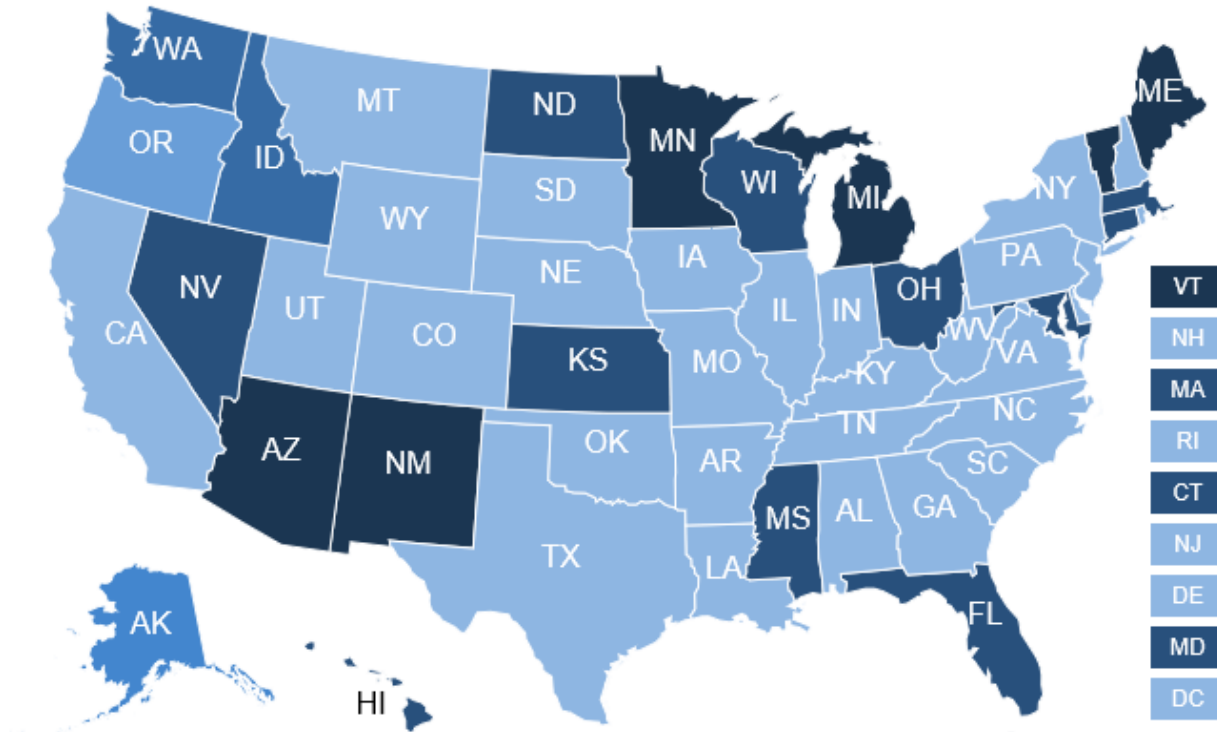


American Dental Association, Health Policy Institute. Fewer dentists are practicing solo. October 10, 2018, ADA News.

American Dental Association, Health Policy Institute. Supply of Dentists in the U.S.: 2001-2018, February 2019.



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

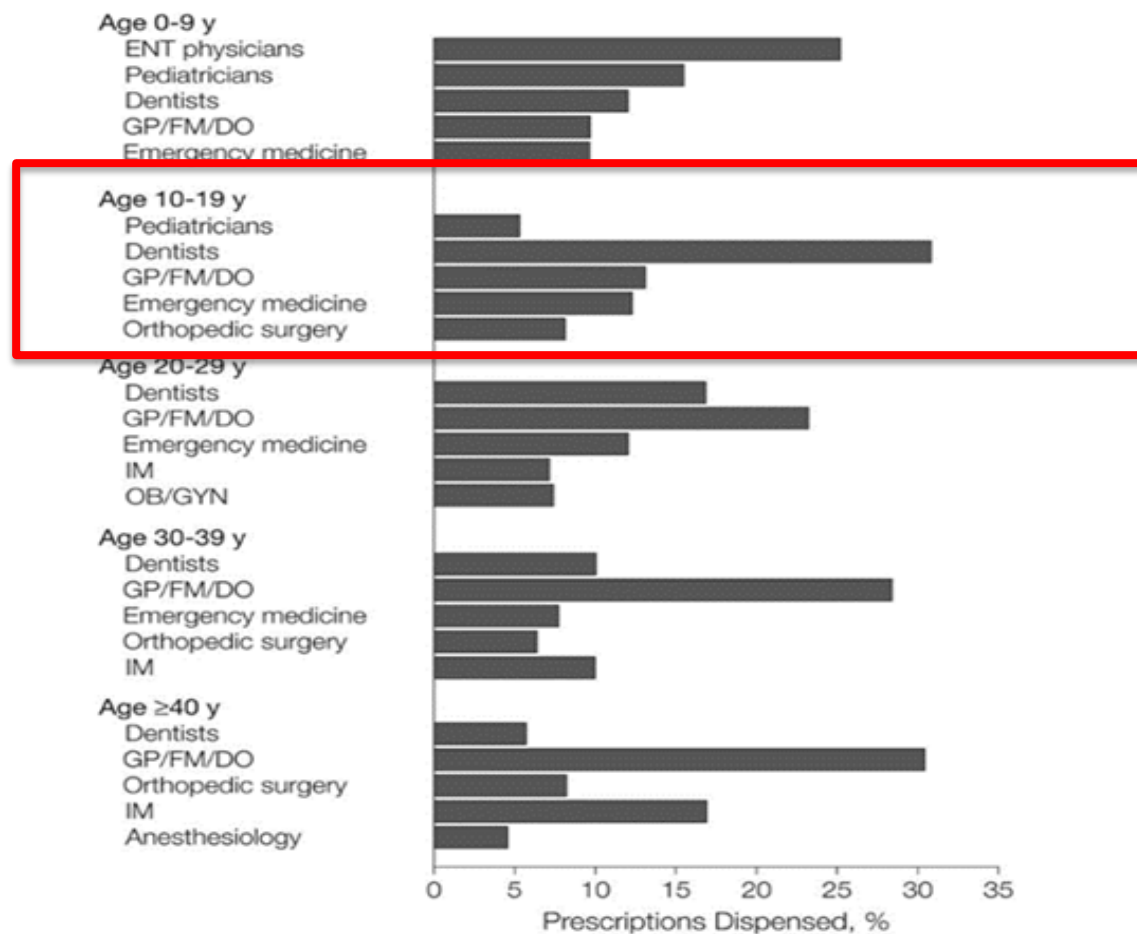




Mental Illness and Substance Abuse: Teenagers



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

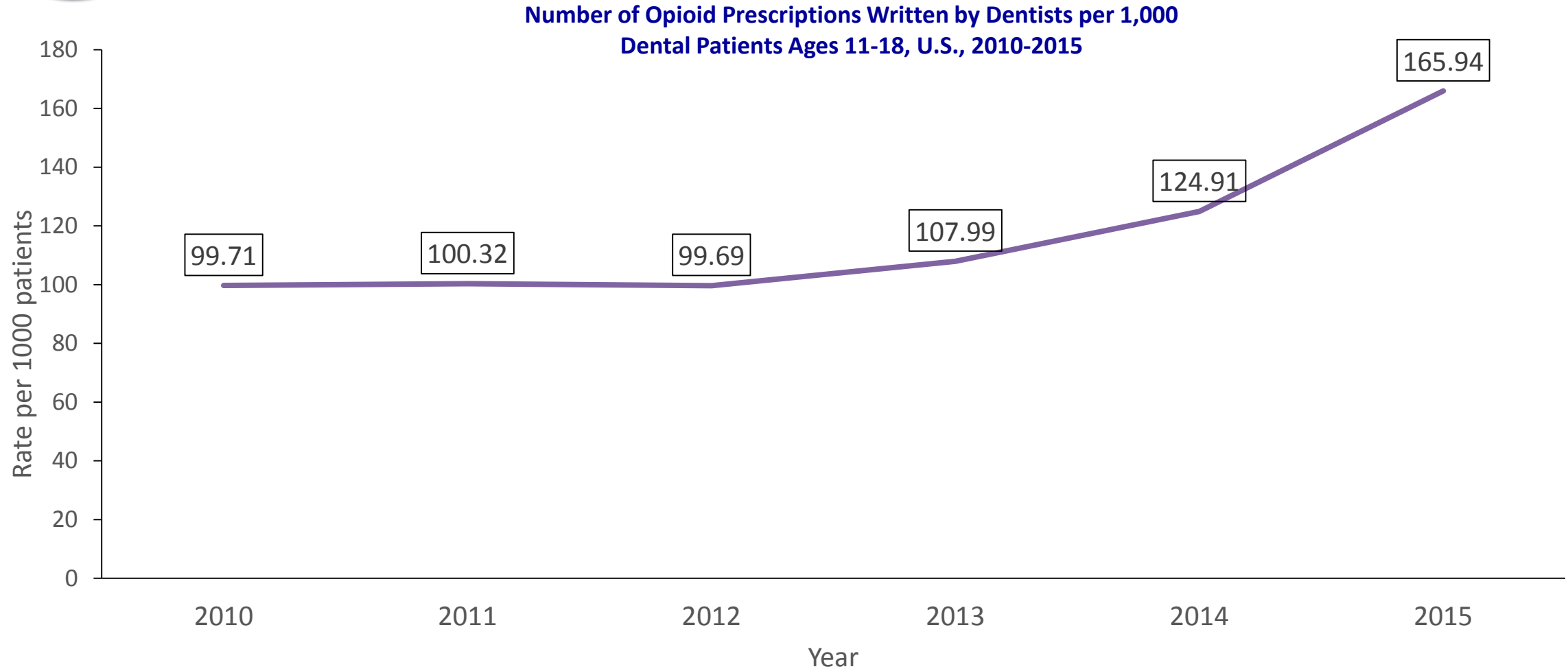


Kaiser Family Foundation. Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, National Survey on Drug Use and Health (NSDUH), 2016 and 2017. (Accessed 10 April 2019)

Characteristics of Opioid Prescriptions in 2009 – Journal of American Medical Association -- April, 2011



Mental Illness and Substance Abuse: Opioids & Teens



Gupta et al. *J Am Dent Assoc* 2018;149(4):237-45



Mental Illness & Substance Abuse: Opioid Prescribing



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



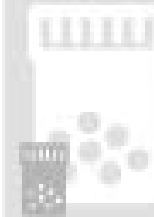
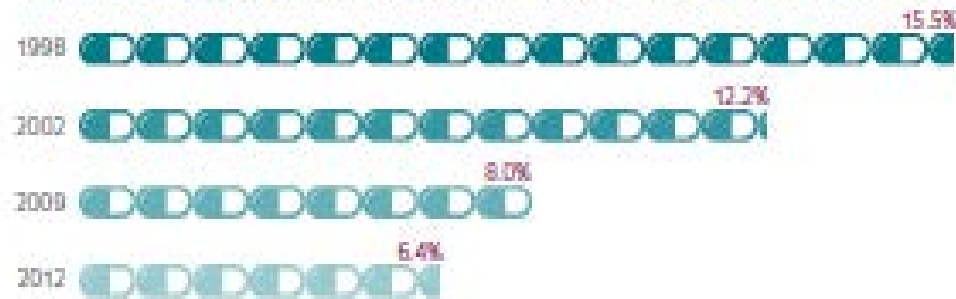
Mental Illness & Substance Abuse: Opioid Prescribing



HPI Health Policy Institute
ADA American Dental Association

Opioid Prescribing by Dentists

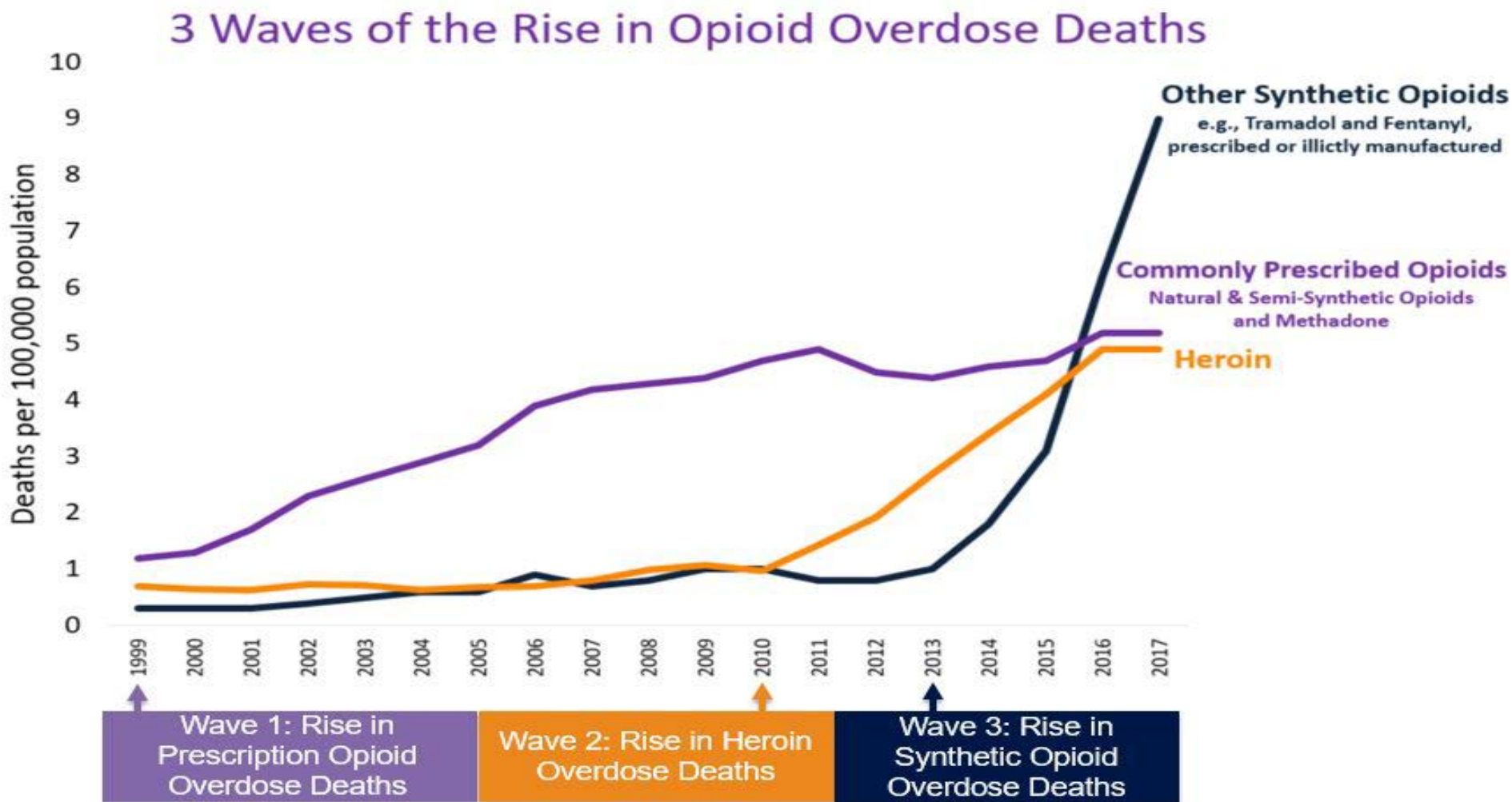
PERCENTAGE OF TOTAL U.S. OPIOID PRESCRIPTIONS THAT ARE PRESCRIBED BY DENTISTS^{1,2}



In 2012, dentists accounted for **6.4%** of total U.S. opioid prescriptions, or 18.5 million.²



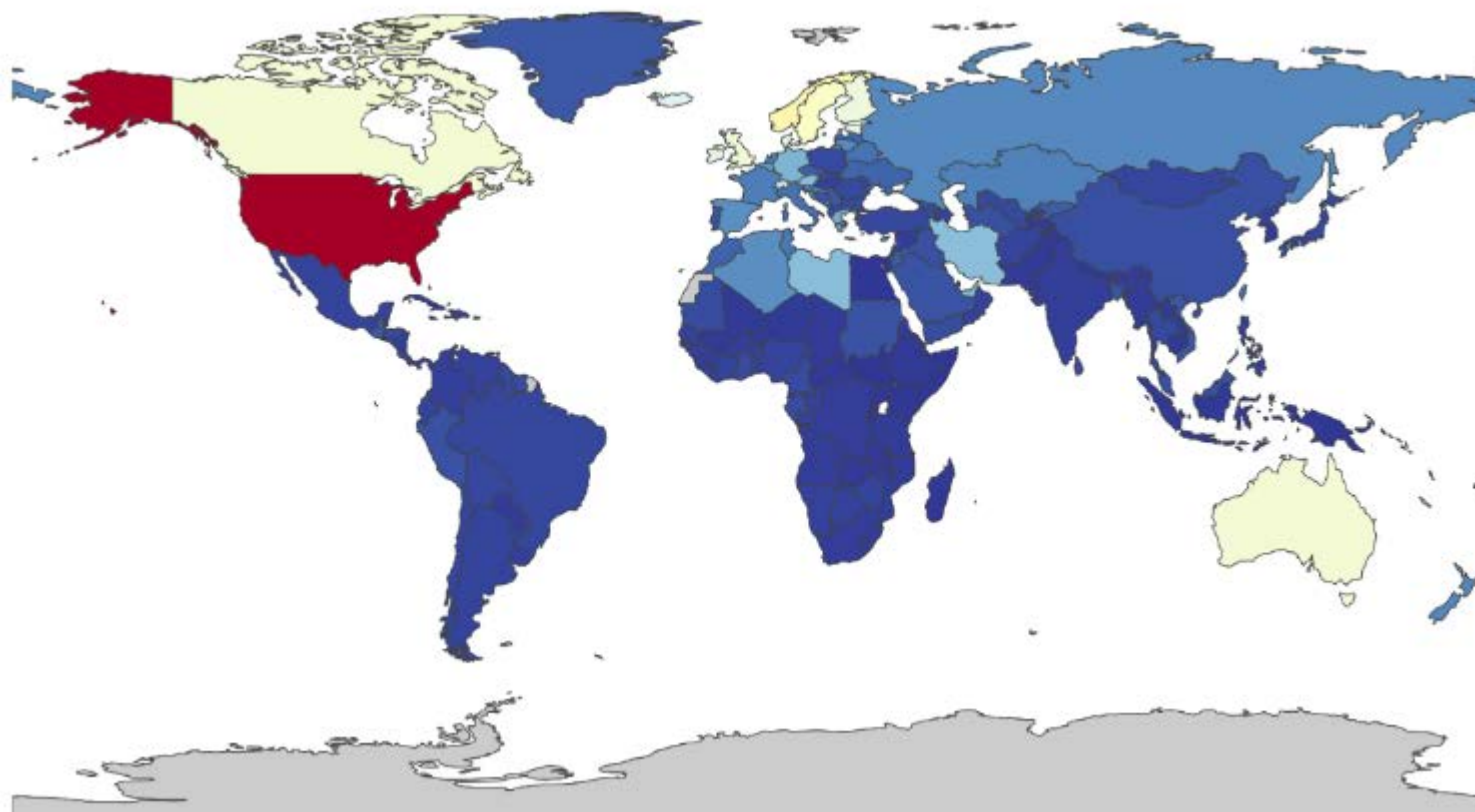
Mental Illness & Substance Abuse: Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.



Mental Illness and Substance Abuse: Deaths attributed to SUDs



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

- Canada: **9%**
- Mexico: **0.5%**



Surgeon General's Advisory on Naloxone and Opioid Overdose



*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)



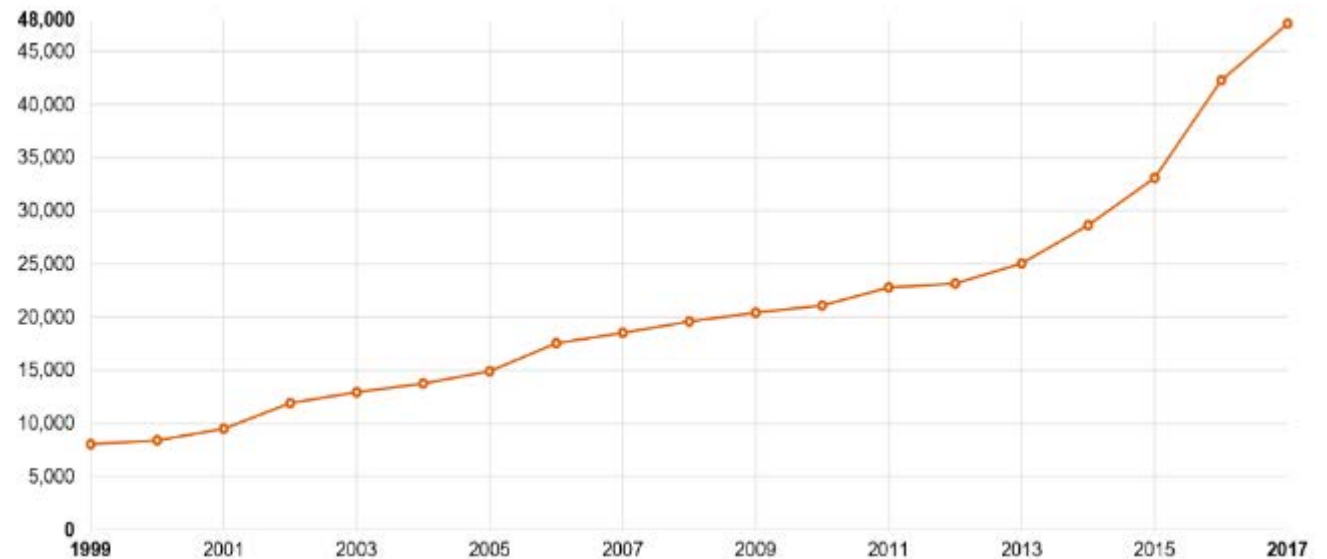


Mental Illness & Substance Abuse: Adults



- 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)

Kaiser Family Foundation analysis of Centers for Disease Control and Prevention (CDC), National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released 2018. Data are from the Multiple Cause of Death Files, 1999-2017, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program. Accessed at <http://wonder.cdc.gov/mcd-icd10.html> on January 10, 2019.



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





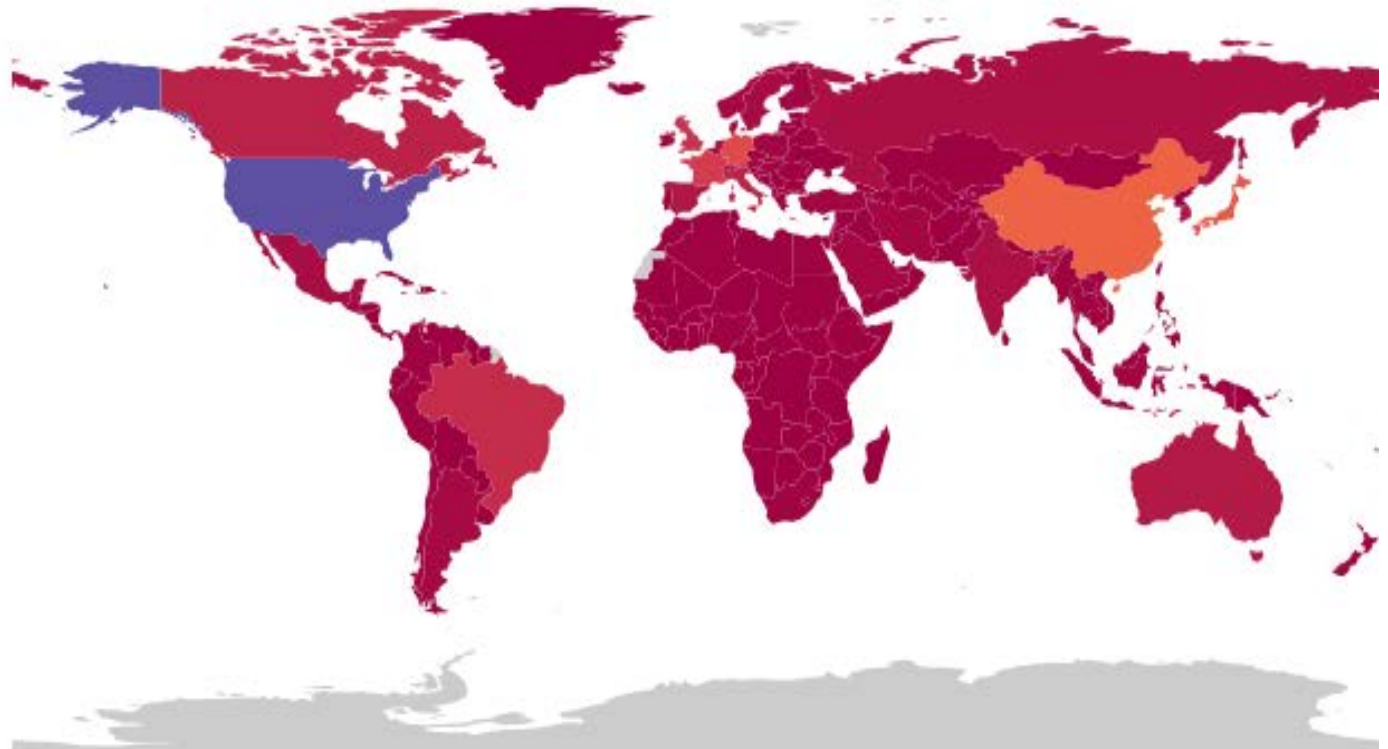
Global All Cause Total Health Spending



Total Health Spending by Country, 2016

In 2016, the United States spent **3.3 Trillion** dollars on Health care

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

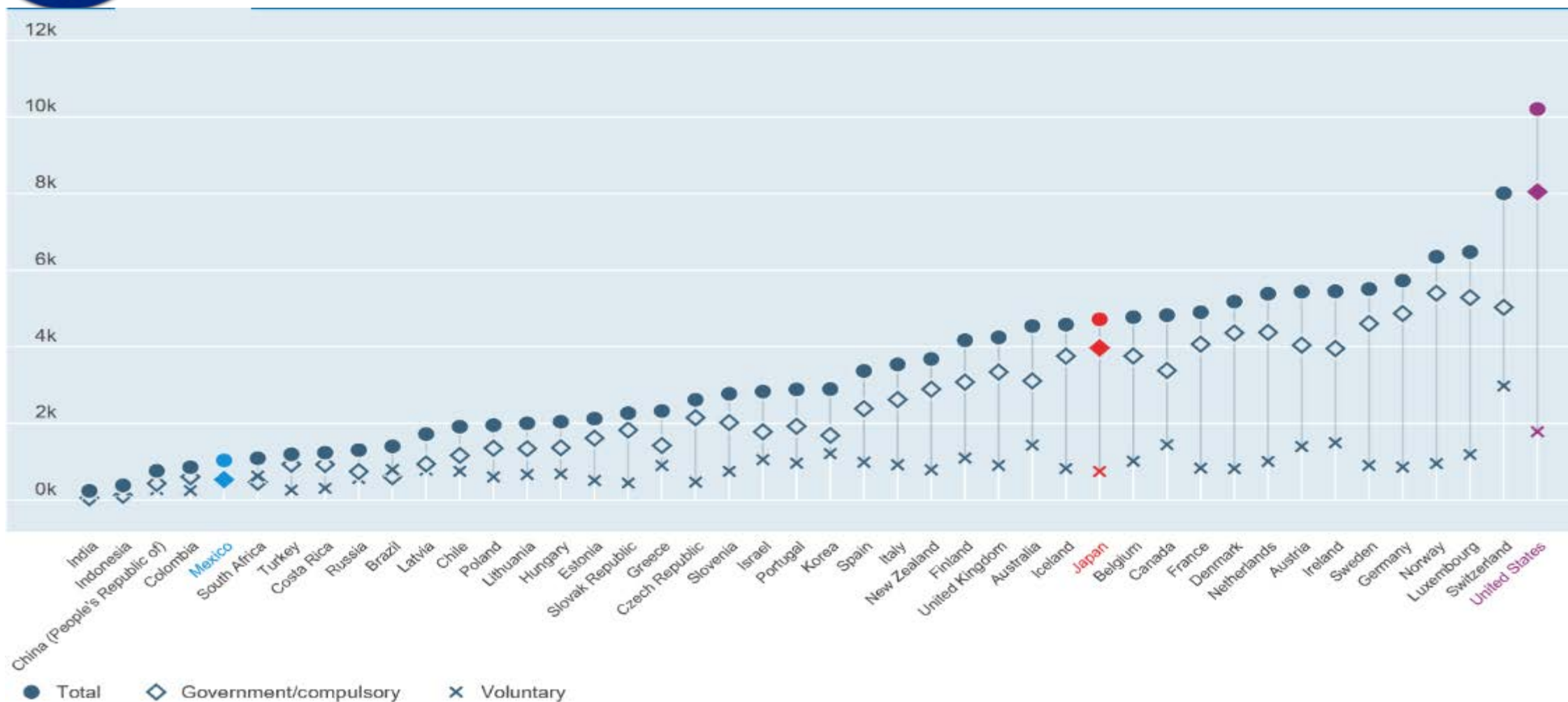


<https://vizhub.healthdata.org/gbd-compare/>

Financing Global Health, All cause total health care spending



Healthcare Expenditures: Per capita spending, global

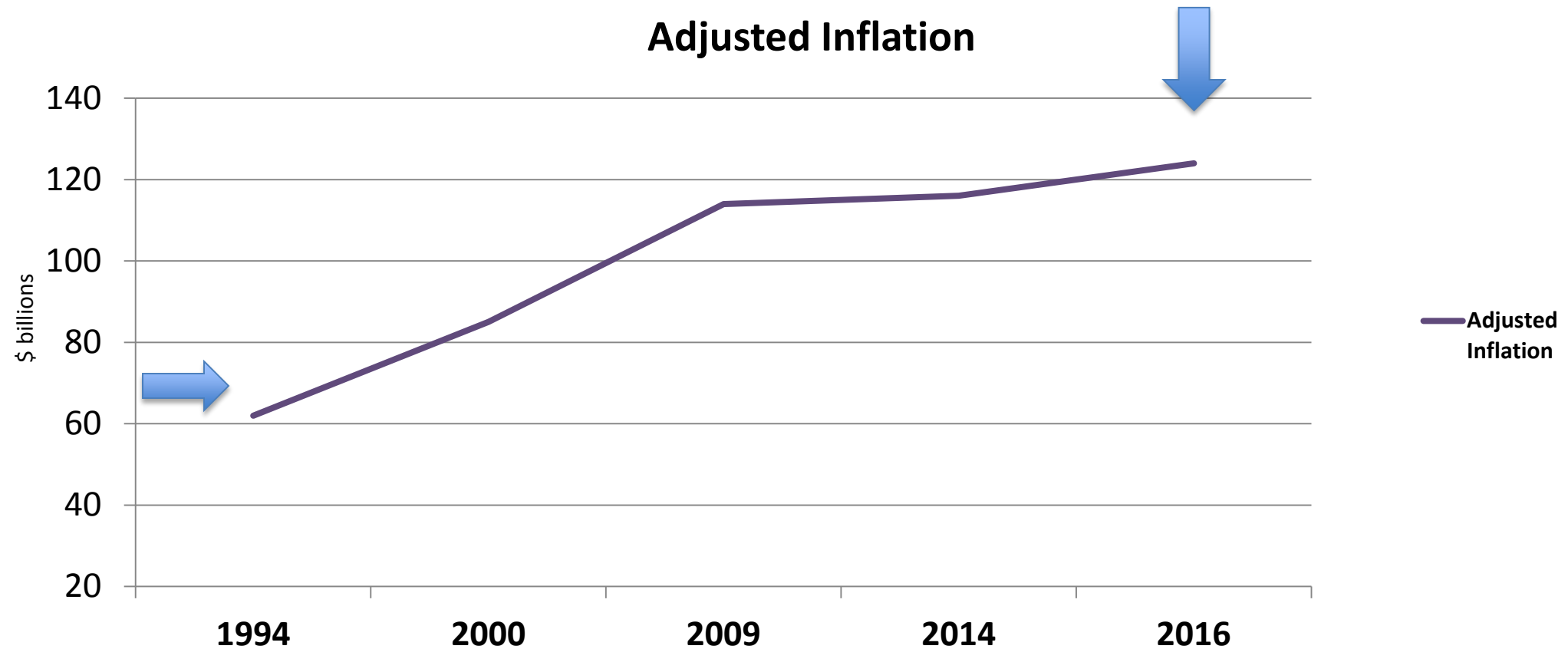




Healthcare Expenditures: Dental Expenditures



Total dental expenditures in the United States

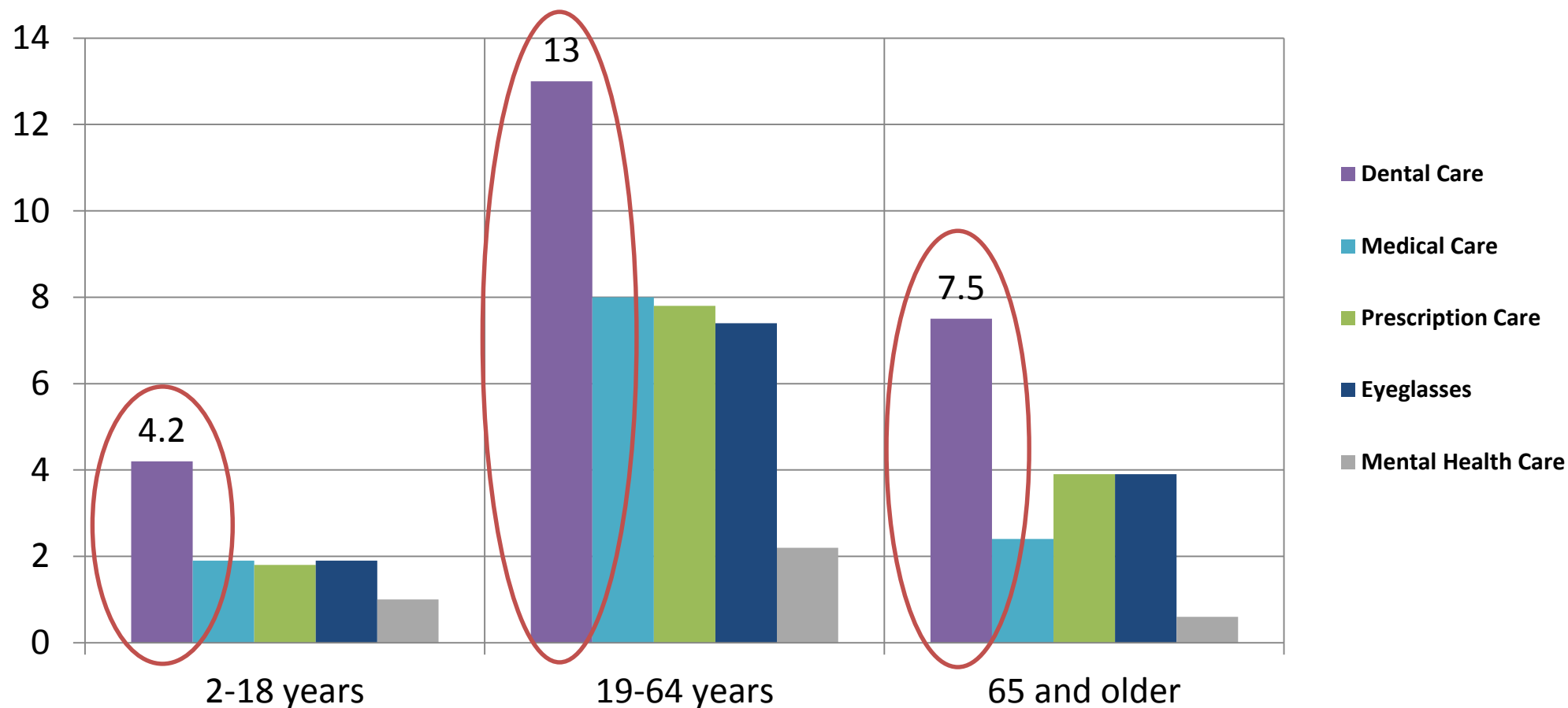




Healthcare Expenditures: Out-of-Pocket and Oral Health



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





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- **Emerging public health threats**



<https://www.everydayhealth.com/oral-head-neck-cancer/hpv-related-oral-cancers-on-rise/>



Rise in Oropharyngeal-HPV Cancers

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

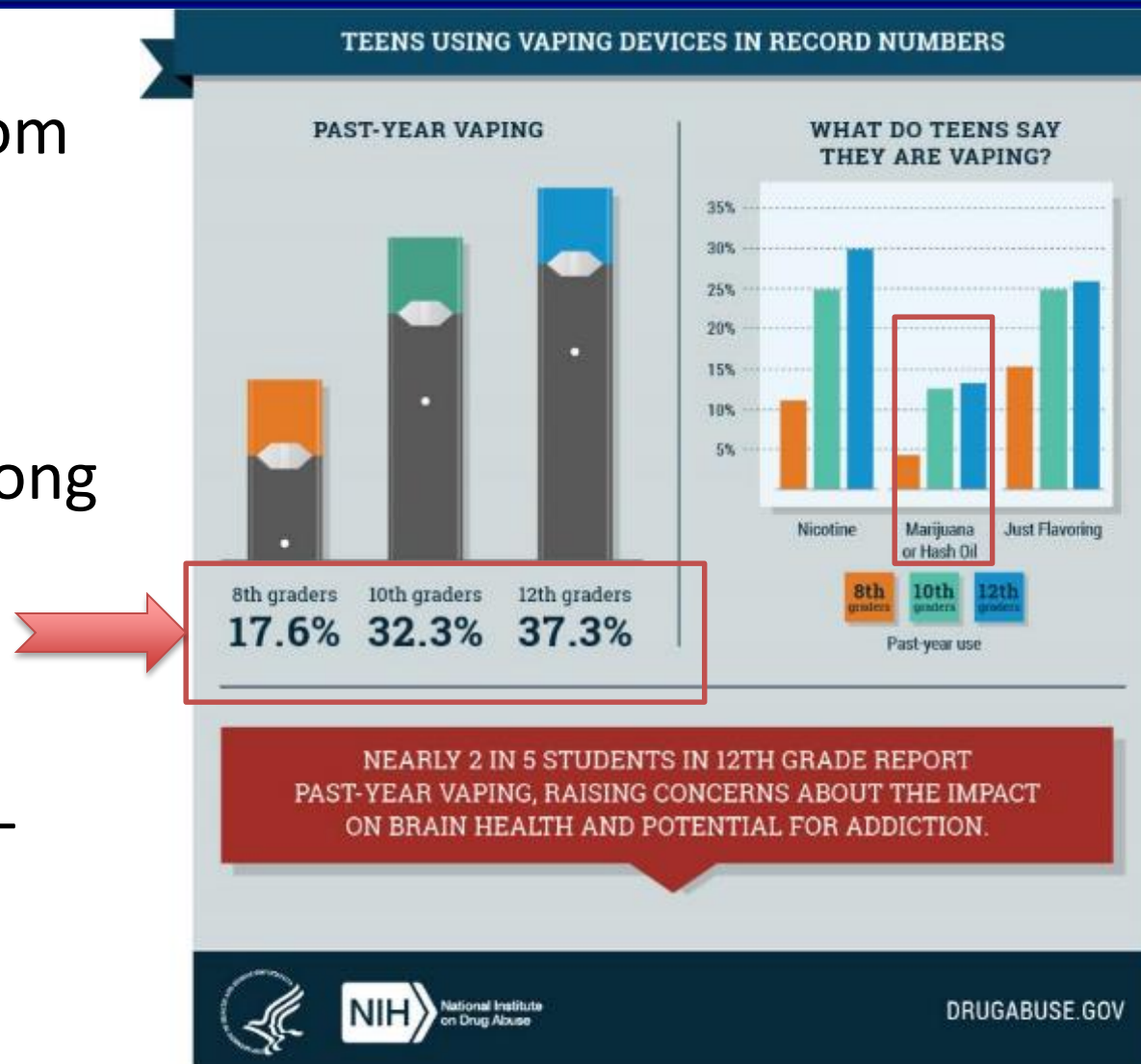
Cancer site	Average number of cancers per year in sites where HPV is often found (HPV-associated cancers)	Percentage probably caused by any HPV type ^a	Number probably caused by any HPV type ^a
Cervix	11,866	91%	10,751
Vagina	846	75%	635
Vulva	3,934	69%	2,707
Penis	1,269	63%	803
Anus	6,530	91%	5,957
Female	4,333	93%	4,008
Male	2,197	89%	1,949
Oropharynx	18,226	70%	12,885
* Female	3,412	63%	2,160
* Male	14,814	72%	10,725
TOTAL	42,671	79%	33,737
Female	24,391	83%	20,260
Male	18,280	74%	13,477



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





Surgeon General's Advisory on E-Cigarette Use Among Youth



*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.



E-Cigarette, or Vaping, Product Use Associated Lung Injury - EVALI



As of February 18, 2020:

- **2,807** cases of hospitalized EVALI in 50 states, 2 U.S. territories, and D.C.
- **68** total deaths confirmed in 29 states and D.C.
- Median age: 24 years, with 15% < 18 years of age
- Since the sharp rise in August 2019 and a peak in September 2019, there has been a gradual and persistent decline since then. CDC is no longer providing an update on hospitalized EVALI cases and deaths nationally.
- **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.**





What does this all mean for this Surgeon General's Report on Oral Health?



The Surgeon General's Charge



“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.”



Focus: The 2020 Report



“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



- Effect of Oral Health on the Community, Overall Well-being, and the Economy
- Oral Health Across the Lifespan – Children & Adolescents
- Oral Health Across the Lifespan – Adults & Older Adults
- Oral Health Integration, Workforce, and Practice
- Effects of Addiction and Mental Health Disorders on Oral Health
- 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.
- Approximately 400 researchers and health professionals are contributing to the report either as authors or reviewers.
- Federal clearance procedures ensure that standards of the Surgeon General and the DHHS are met.





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



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



Questions



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

USPHSCDO@ihhs.gov