

Oral Health Disparities

**PROFESSOR SUSAN H. DAVIDE, RDH, MS, MSED
DEPARTMENT OF DENTAL HYGIENE
PHIL 2203 HEALTH CARE ETHICS
NOVEMBER 27, 2023**

Learning Objectives

- ▶ Become familiar with disparities in oral health
- ▶ Discuss impacts of oral health on quality of life
- ▶ Oral health of U.S. and NY populations
- ▶ Initiatives to improve oral health equity

Background

- ▶ AAS Dental Hygiene
- ▶ BS Nutrition
- ▶ MS Environmental & Occupational Safety and Health
- ▶ MEd Education

- ▶ [Bylaws & Code of Ethics \(adha.org\)](http://adha.org)

CODE OF ETHICS FOR DENTAL HYGIENISTS

Core Values

We acknowledge these values as general for our choices and actions.

Individual autonomy and respect for human beings

People have the right to be treated with respect. They have the right to informed consent prior to treatment, and they have the right to full disclosure of all relevant information so that they can make informed choices about their care.

Confidentiality

We respect the confidentiality of client information and relationships as a demonstration of the value we place on individual autonomy. We acknowledge our obligation to justify any violation of a confidence.

Societal Trust

We value client trust and understand that public trust in our profession is based on our actions and behavior.

Non-maleficence

We accept our fundamental obligation to provide services in a manner that protects all clients and minimizes harm to them, and others involved in their treatment.

Beneficence

We have a primary role in promoting the well-being of individuals and the public by engaging in health promotion/disease prevention activities.

Justice and Fairness

We value justice and support the fair and equitable distribution of health care resources. We believe all people should have access to high-quality, affordable oral healthcare.

Veracity

We accept our obligation to tell the truth and expect that others will do the same. We value self-knowledge and seek truth and honesty in all relationships.

Research Background

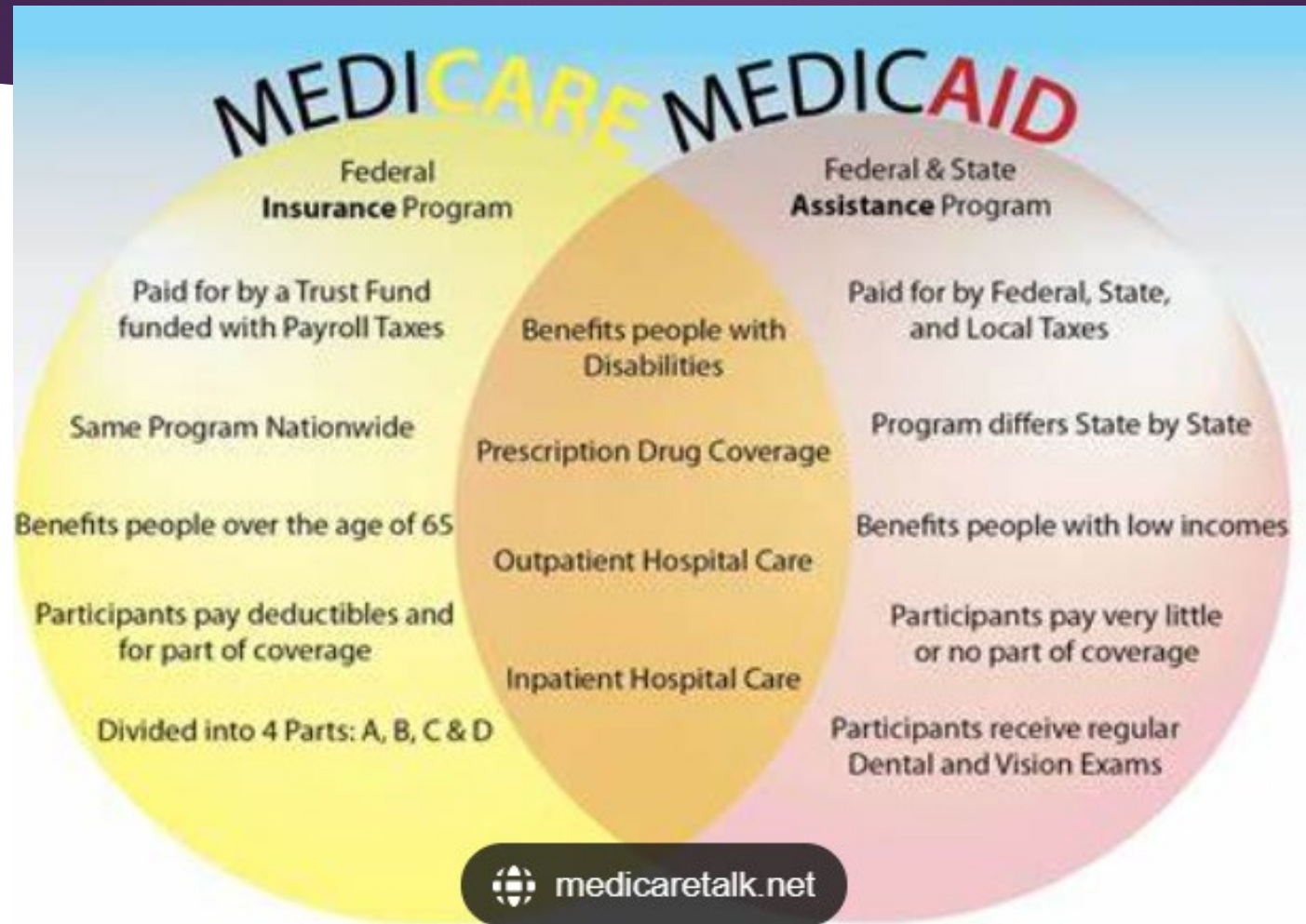
- ▶ [2012 JournalofDentalHygieneArticle.pdf](#)
- ▶ [2013 Dental Hygienists' Knowledge of HIV, Attitudes Towards People with HIV and Willingness to Conduct Rapid HIV Testing \(cuny.edu\)](#)
- ▶ [2017 Dec2017 PatientswillingnessHIVtest final.pdf](#)
- ▶ [2019 Oral Rapid HIV Testing in the Dental Setting: Experiences from Three Dental Hygiene Clinics \(cuny.edu\)](#)

Scenario

Weekend Mouth Pain

Imagine it's Saturday evening at 6 pm, and you find yourself in pain—a pain not from a hurt foot or shoulder, but a throbbing, radiating pain in your mouth that feels as if your head and ears are on fire. You cannot sleep or eat. Previously, the pain was dull and only bothered you when you ate something sweet or cold. But now, at 6 pm on a Saturday, you find yourself in extreme pain and unable to function. While you are employed, your minimum wage job does not provide dental insurance and you live in a state that does not provide comprehensive, adult dental benefits through Medicaid. Consider also that when you saw your physician 3 months ago for your check-up to renew your blood pressure prescription, you mentioned the tooth bothering you. It is likely that your physician did not examine your mouth or refer you to a dentist for care. You thought the tooth could wait! To make things worse, because of your lack of dental coverage and your inability to pay for the out-of-pocket expense of dental care in a private practice office, you do not have a dental home to call for an emergency appointment. The last time you saw a dentist was at a charity dental event in the local college's gymnasium several years ago. In the United States, **where should you go and what should you do?**

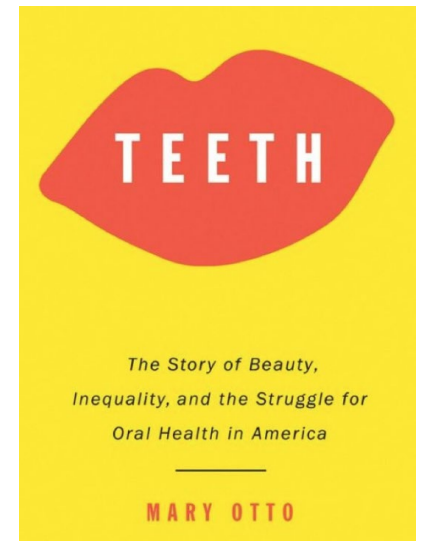
What's the Difference?



Health Inequality

- ▶ Historical - Health differentials between groups defined based on race¹
- ▶ *Teeth* - Mary Otto – Interview 2017

[Teeth": The Story of Beauty, Inequality, and The Struggle of Oral Health in America](#)



1. Bastos, et al. Racial Inequalities in Oral Health. J Dent Research. 2018. DOI:10.1177/002034518768536.

What's the difference?

HEALTH EQUITY is when everyone has the opportunity to be as healthy as possible.

HEALTH DISPARITIES are differences in health outcomes and their causes among groups of people.

EXAMPLE: African American children are more likely to die from asthma compared to non-Hispanic White children.

Learn more about these programs at:
<http://www.cdc.gov/minorityhealth/strategies2016/>



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

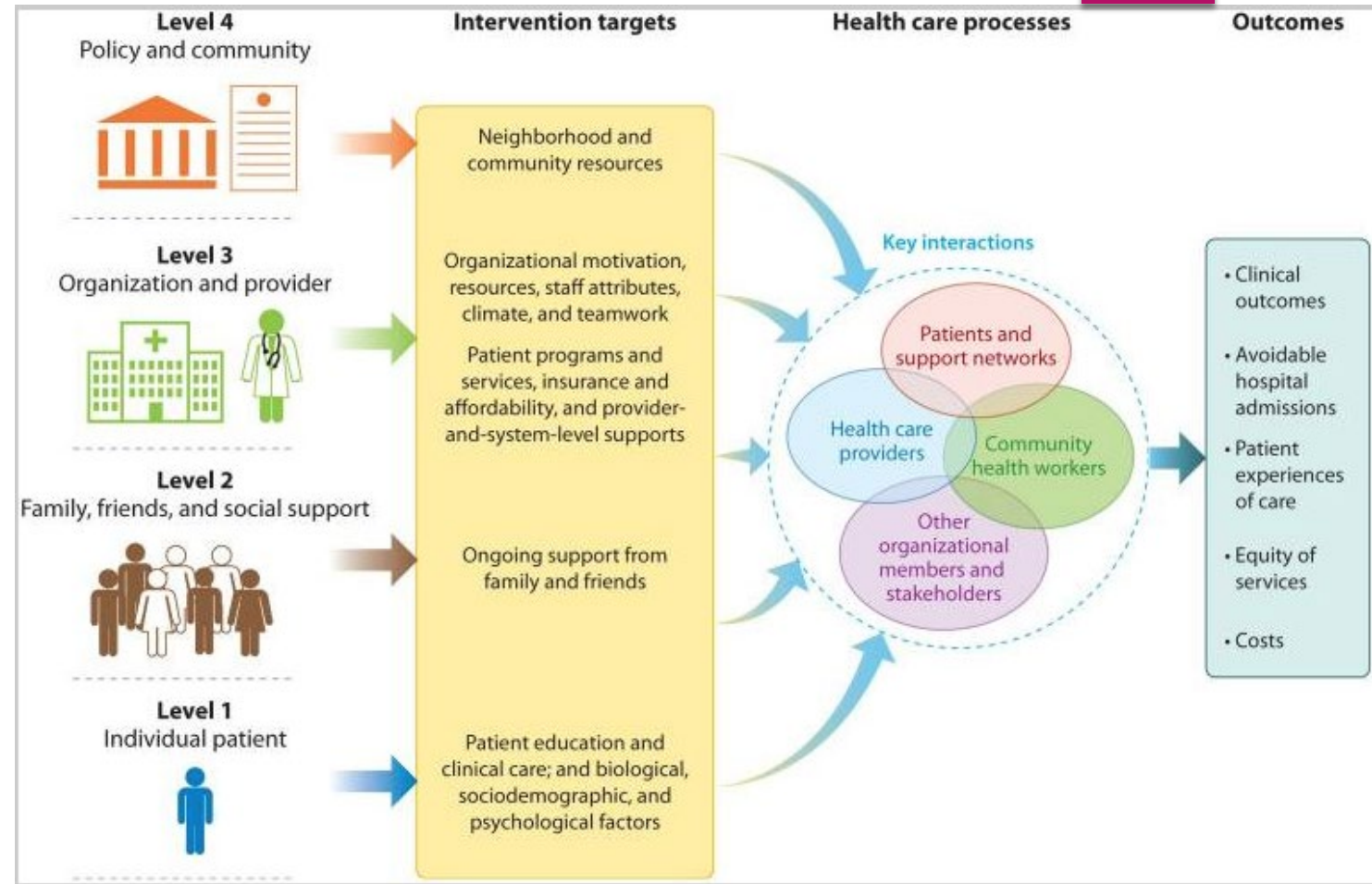
Social Determinants of Health

- ▶ Racial/ethnic groups
- ▶ SES (Education, Occupation, Income)
- ▶ Gender
- ▶ Sexual identity and orientation
- ▶ Disability status or special health care needs
- ▶ Geographic location



Factors that Influence Disparities in Access to Health Care

Concept Model



World Health Organization (WHO)

Developed Countries

- ▶ Preventive & treatment services
- ▶ Public or private systems
- ▶ Shortage in rural areas
- ▶ Dentist to population ratio 1:2,000

Developing Countries

- ▶ Minimal or no preventive or restorative dental care
- ▶ Regional or central hospitals in urban areas
- ▶ Shortages of oral health personnel
- ▶ Africa: dentist to population ratio is 1:150,000

Health Inequality & U.S. Population

- ▶ 2008 - 33% or more than 100 million people, identified them selves as belonging to a racial of ethnic minority group¹
- ▶ 2014 - 37.9% of the population was identified to be racial or ethnic minorities²
- ▶ 2021 – Dental Insurance Coverage
[National Trends in Dental Care Use, Dental Insurance Coverage, and Cost Barriers \(ada.org\)](#)

1. U.S. Census Bureau, American FactFinder. American Community Survey. 2008 American Community Survey 1-year estimates [Internet]. ACS demographic and housing estimates: 2008 [cited 2010 November 7]. Available from: <http://factfinder.census.gov>.

2. . https://www.ncbi.nlm.nih.gov/books/NBK425844/?report=reader#ref_000298

U.S. Population Forecasts

- ▶ Minority populations, which already constitute majorities in some cities and states will become the majority nationwide within 30 years
- ▶ 2044, they will account for more than half of the total U.S. population
- ▶ 2060, nearly one in five of the nation's total population will be foreign born

U.S. Department of Health and Human Services (HHS)

- ▶ **Public Health Service** <https://www.minorityhealth.hhs.gov/>
- ▶ **Funding** [HHS FY 2024 Budget in Brief | HHS.gov](#)
- ▶ **Leadership** <https://www.nidcr.nih.gov/news-events/2020-surgeon-generals-report-oral-health>

Agencies within HHS



National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP)

- ▶ Oral and craniofacial diseases, conditions, and injuries
- ▶ Improve access to preventive services and dental care
- ▶ How?
 - ▶ Fluoridation
 - ▶ Sealants

HealthyPeople.gov



Other Agencies



Medicaid.gov
Keeping America Healthy

- ▶ Medicare and Medicaid Act
- ▶ Children's Health Insurance Program (CHIP)
- ▶ Basic Health Program - ACA

ADA American Dental Association®
America's leading advocate for oral health

▶ **HPI Health Policy Institute**
ADA American Dental Association®



- ▶ [https://www.adha.org/resources-docs/Community Health Center Handout.pdf](https://www.adha.org/resources-docs/Community_Health_Center_Handout.pdf)

Barriers to Services

- ▶ Limited access to and availability of dental services
- ▶ Lack of awareness of the need for care
- ▶ Cost
- ▶ Fear of dental procedures



True or False?

- ▶ Adults are twice as likely to have untreated tooth decay

Some adults were twice as likely to have untreated tooth decay



Nearly half of adults aged 20–64 years who were:

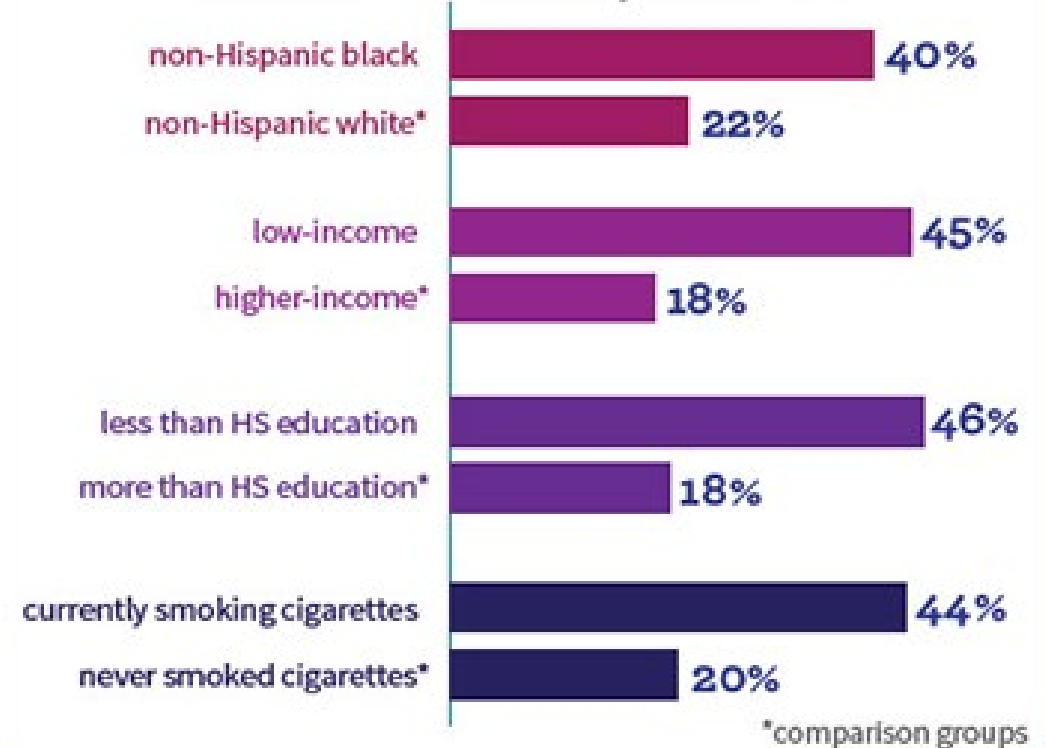
- non-Hispanic black
- low-income
- had less than a high school education
- currently smoking cigarettes

had untreated tooth decay

This is **2x the amount** of untreated decay as the comparison groups.

<http://bit.ly/OralHealthReport>

Percentage of adults aged 20–64 with untreated tooth decay, 2011–2016



Some older adults were more than twice as likely to have untreated tooth decay



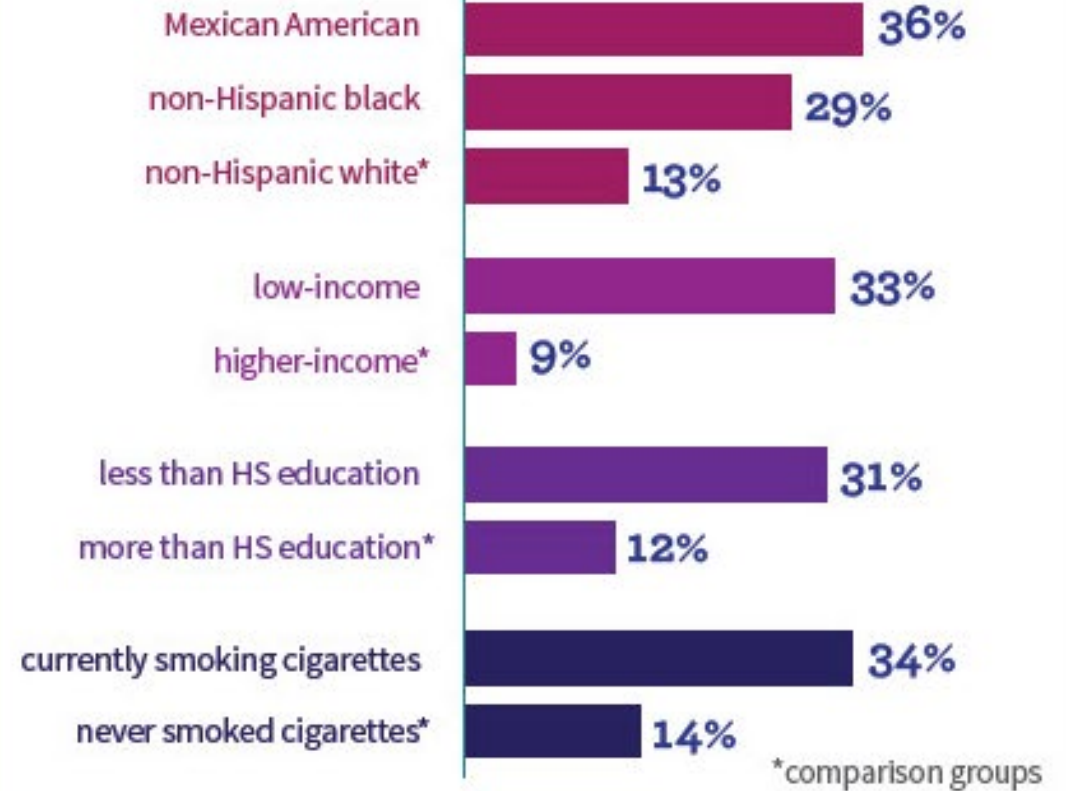
About 1 in 3 adults aged 65 or older who were:



- **Mexican American**
- **non-Hispanic black**
- **low-income**
- **had less than a high school education**
- **currently smoking cigarettes**

had untreated tooth decay

Percentage of adults aged 65 or older with untreated tooth decay, 2011–2016



This is **2x to 3x the amount** of untreated decay as comparison groups.

<http://bit.ly/OralHealthReport>



True or False?

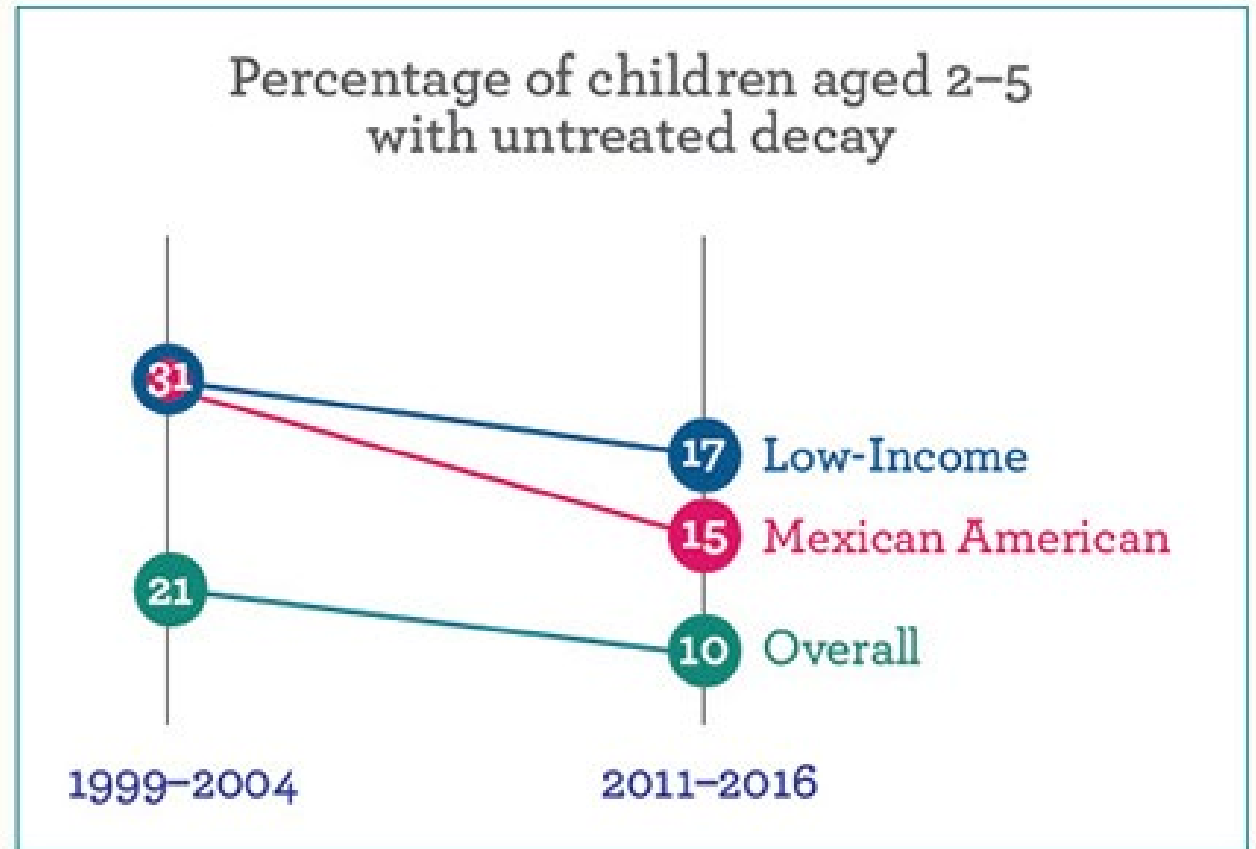
- ▶ Untreated cavities decreased in young children.



Untreated tooth decay declined in young children



Since 1999–2004, the prevalence of **untreated tooth decay** in primary teeth of children aged 2–5 years **has dropped by half.**



Mexican American and **low-income** children saw the **greatest declines.**

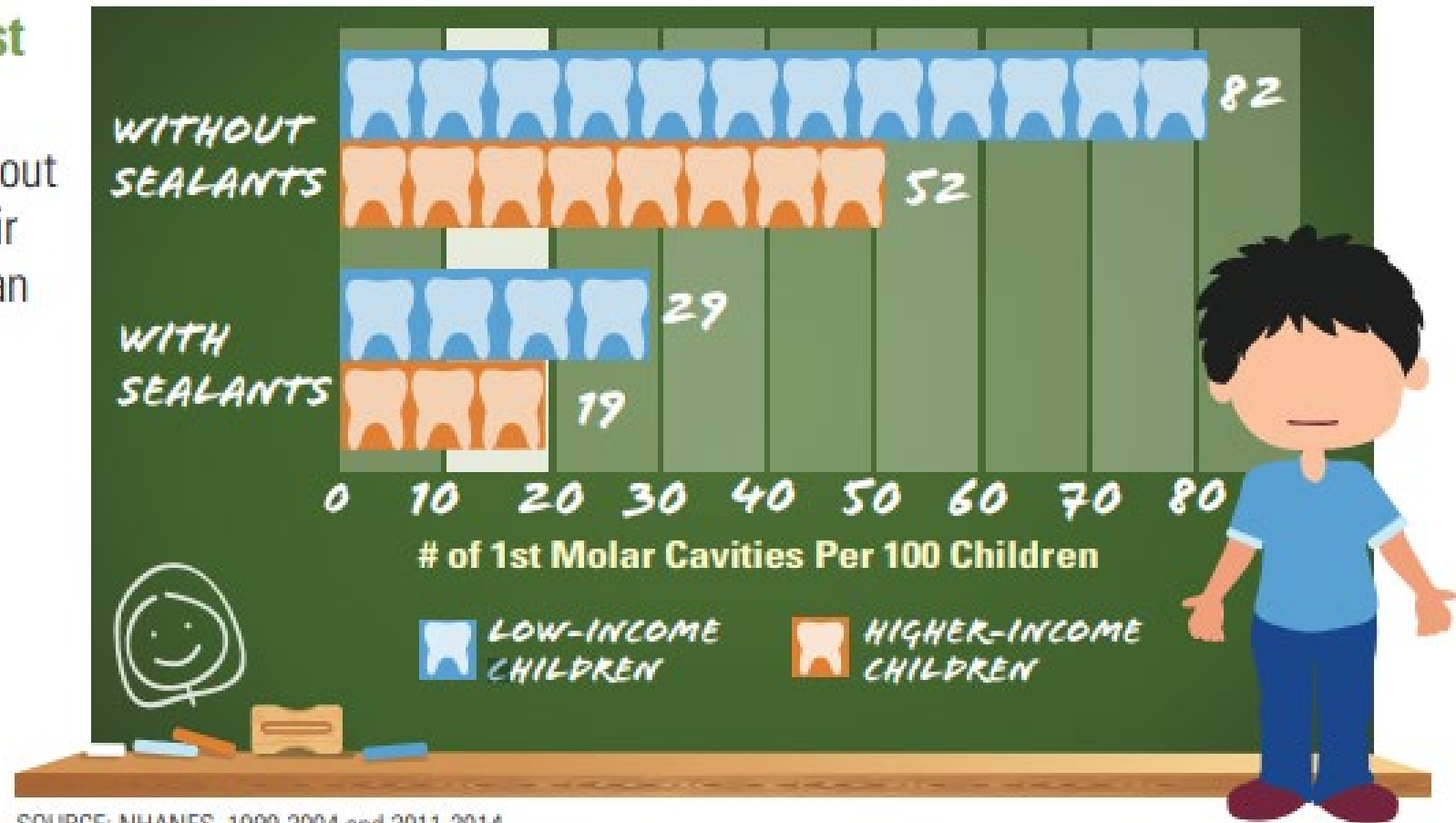
<http://bit.ly/OralHealthReport>



Cavities

Disparities still exist

Low-income children without sealants have about 60% more cavities in their 1st permanent molars than higher-income children.

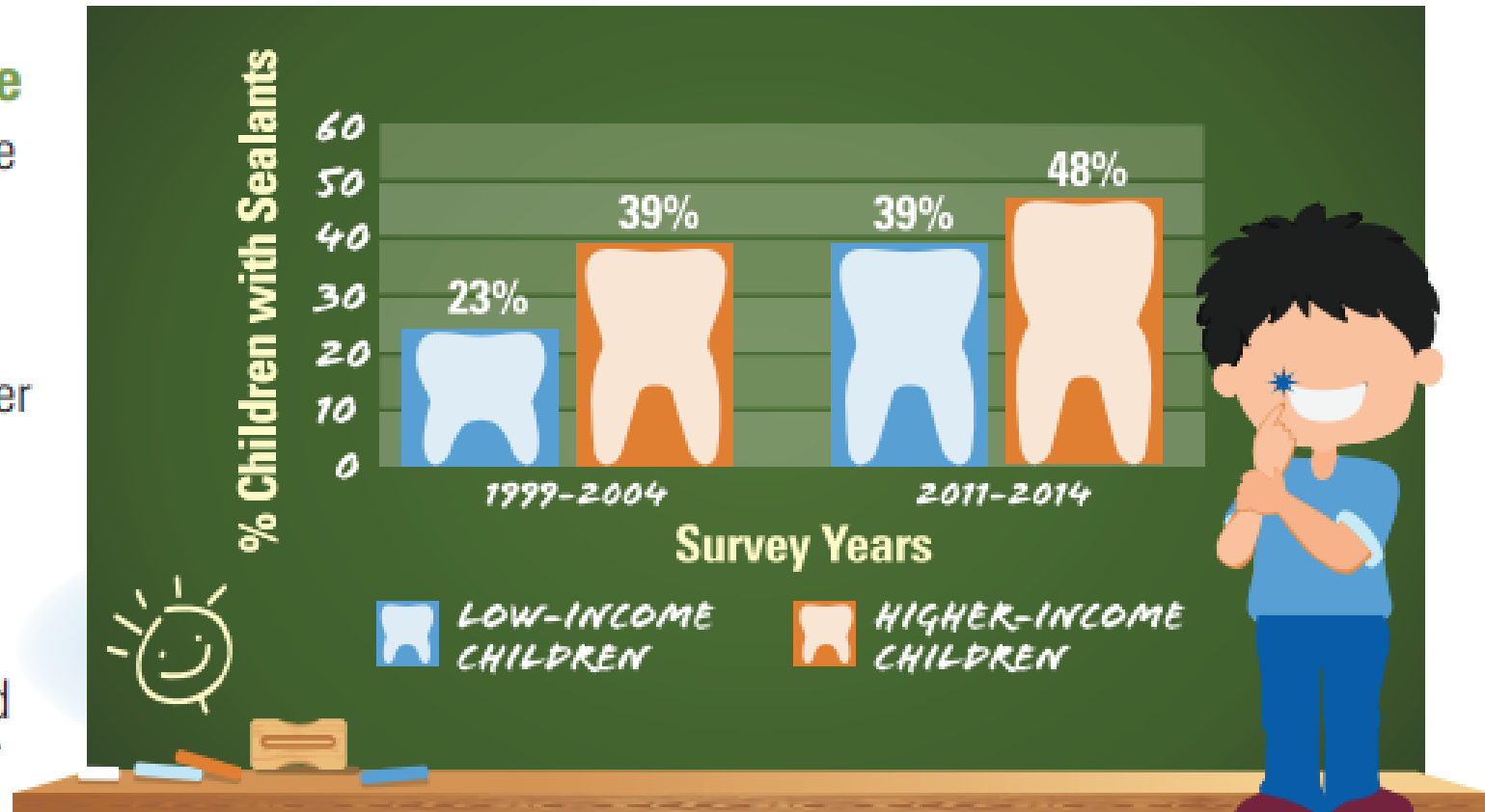


SOURCE: NHANES, 1999-2004 and 2011-2014.

Sealant Use

Disparities are decreasing over time

The number of low-income children with sealants increased by about 70% from 1999-2004 to 2011-2014, and the number of higher-income children with sealants increased by 23%. The increase in sealants among low-income children prevented almost 1 million cavities.*



SOURCE: NHANES, 1999-2004 and 2011-2014.

*Journal of Public Health Dentistry, 2014: <http://bit.ly/2cZXOYh>

Sealant prevalence increased by 35% among children

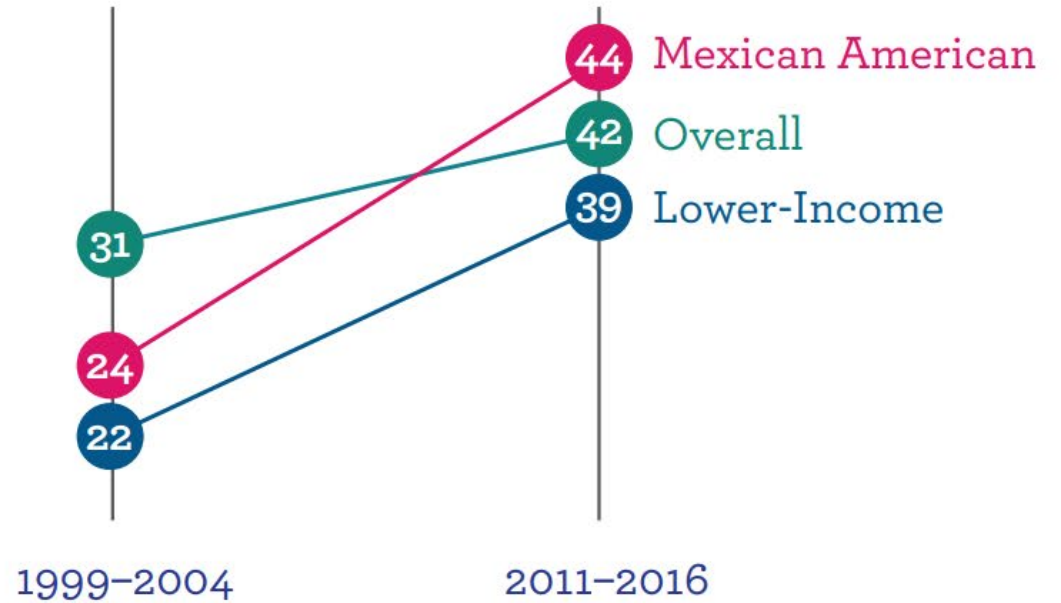


4 in 10 children aged 6–11 years **had dental sealants** on permanent teeth.

Sealant prevalence among **Mexican American** and **lower-income** children **nearly doubled**.

<http://bit.ly/OralHealthReport>

Percentage of children aged 6–11 with sealants

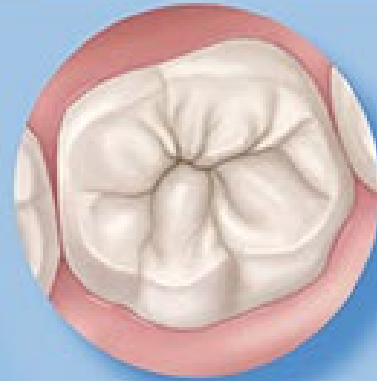


CS306238

Dental sealants can prevent cavities when applied to molar teeth.



Tooth without sealant



Sealant is applied



Tooth with final sealant



Prevention

Communities Benefit from Water Fluoridation

Water fluoridation is safe, effective, and saves communities money.

On average, communities with water fluoridation experience:

25% fewer cavities than communities without water fluoridation leading to:

- Less pain
- Less fillings and teeth pulled
- Less missed days of school and work



A return of **\$20** for every \$1 invested

- Less expensive dental treatments needed
- Saves communities and families money



Water fluoridation improves oral health and reaches everyone in the community.

Visit www.cdc.gov/fluoridation for information about community water fluoridation.

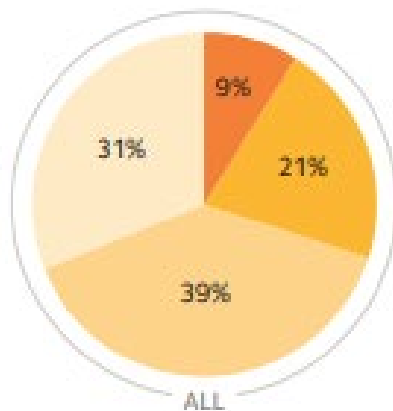


U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

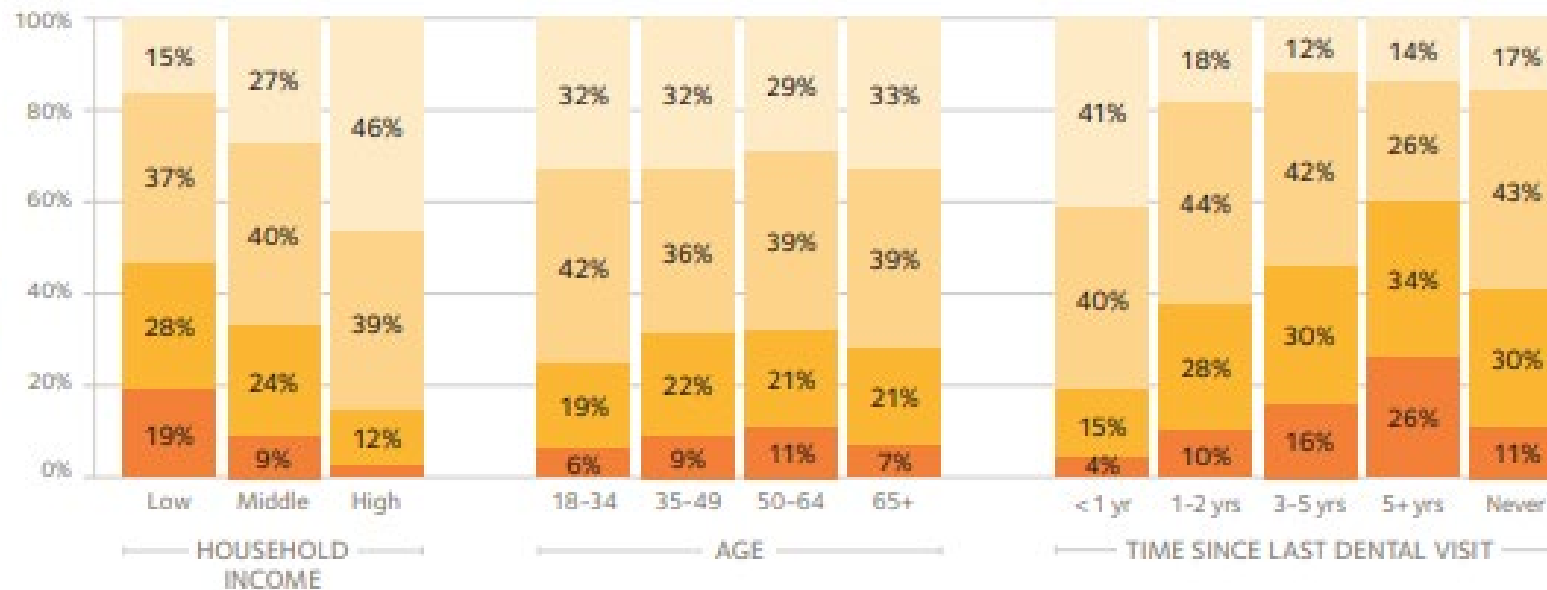
How do Adults in the U.S. view their Oral Health?

Oral Health and Well-Being in the United States

VERY GOOD
GOOD
FAIR
POOR



Overall Condition of Mouth and Teeth



Self-reported oral health status, attitudes and dental care utilization among New York adults as of 2015, by income level, based on an innovative household survey. For methods and sources, visit ADA.org/statefacts. For more information on the ADA Health Policy Institute, visit ADA.org/HPI.us-oral-health-well-being.pdf (ada.org).

Problems Due to Condition of Mouth by Household Income

Oral Health and Well-Being in the United States



1 in 5 low income adults say their mouth and teeth are in poor condition.



Life in general is less satisfying due to the condition of mouth and teeth.



39%
low income adults



38%
young adults

Low income adults are most likely to report having problems due to the condition of their mouth and teeth.



Pain is the top oral health problem for low income adults.



42% of low income adults have difficulty biting and chewing.



23% of low income adults reduce participation in social activities due to the condition of their mouth and teeth.



35% of low income adults feel embarrassment due to the condition of their mouth and teeth.



37% of low income adults avoid smiling due to the condition of their mouth and teeth.

Attitudes Across all Income Levels and Age Groups

Oral Health and Well-Being in the United States



97%
value oral health.



85%
feel they need to visit the dentist twice per year.



95%
agree regular dental visits keep them healthy.



82%
believe straight, bright teeth help you get ahead in life.

“I accept I will lose some teeth with age.”



74%
low income adults



48%
high income adults

What about New York?

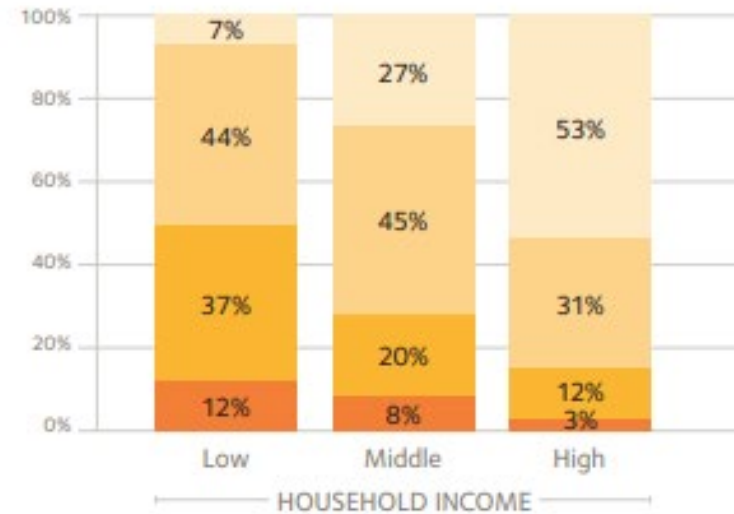
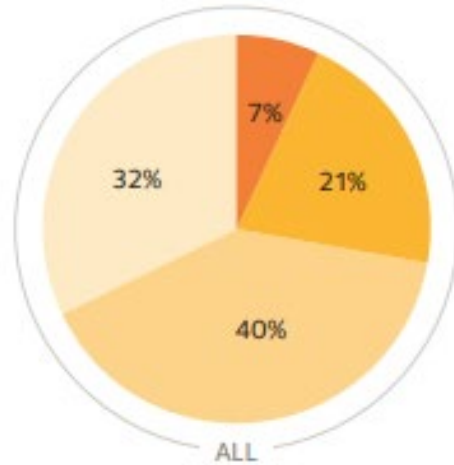
A faint, light-colored map of New York State is centered in the background of the slide.

Oral Health and Well-Being in New York

How do adults in New York view their oral health?

Oral Health and Well-Being in New York

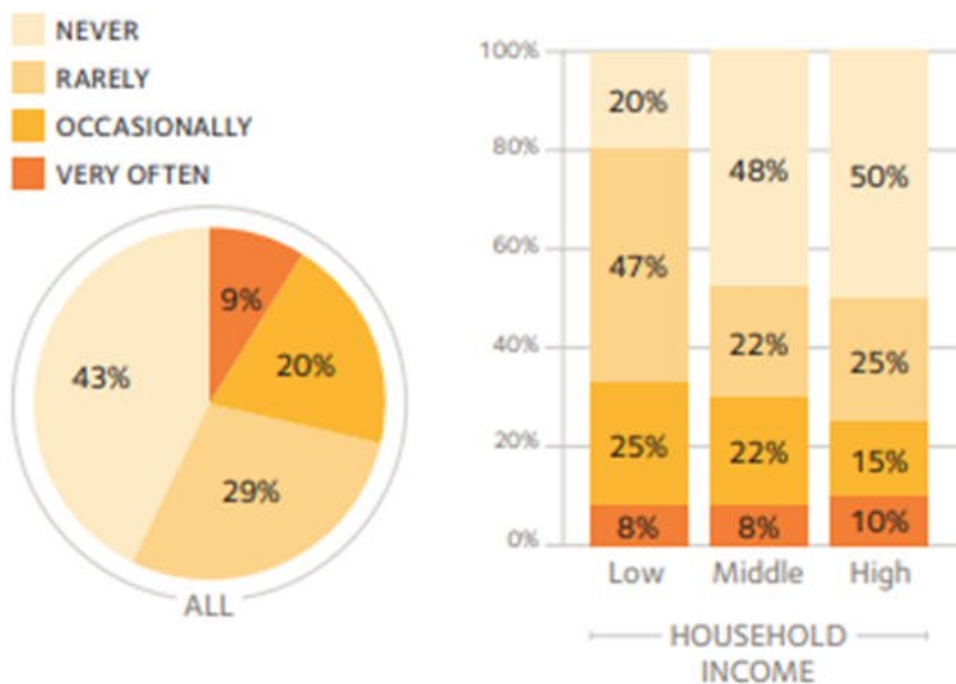
VERY GOOD
GOOD
FAIR
POOR



  **12% of low income adults say their mouth and teeth are in poor condition.**

Self-reported oral health status, attitudes and dental care utilization among New York adults as of 2015, by income level, based on an innovative household survey. For methods and sources, visit ADA.org/statefacts. For more information on the ADA Health Policy Institute, visit ADA.org/HPI.

Life in General is Less Satisfying Due to Condition of Mouth and Teeth



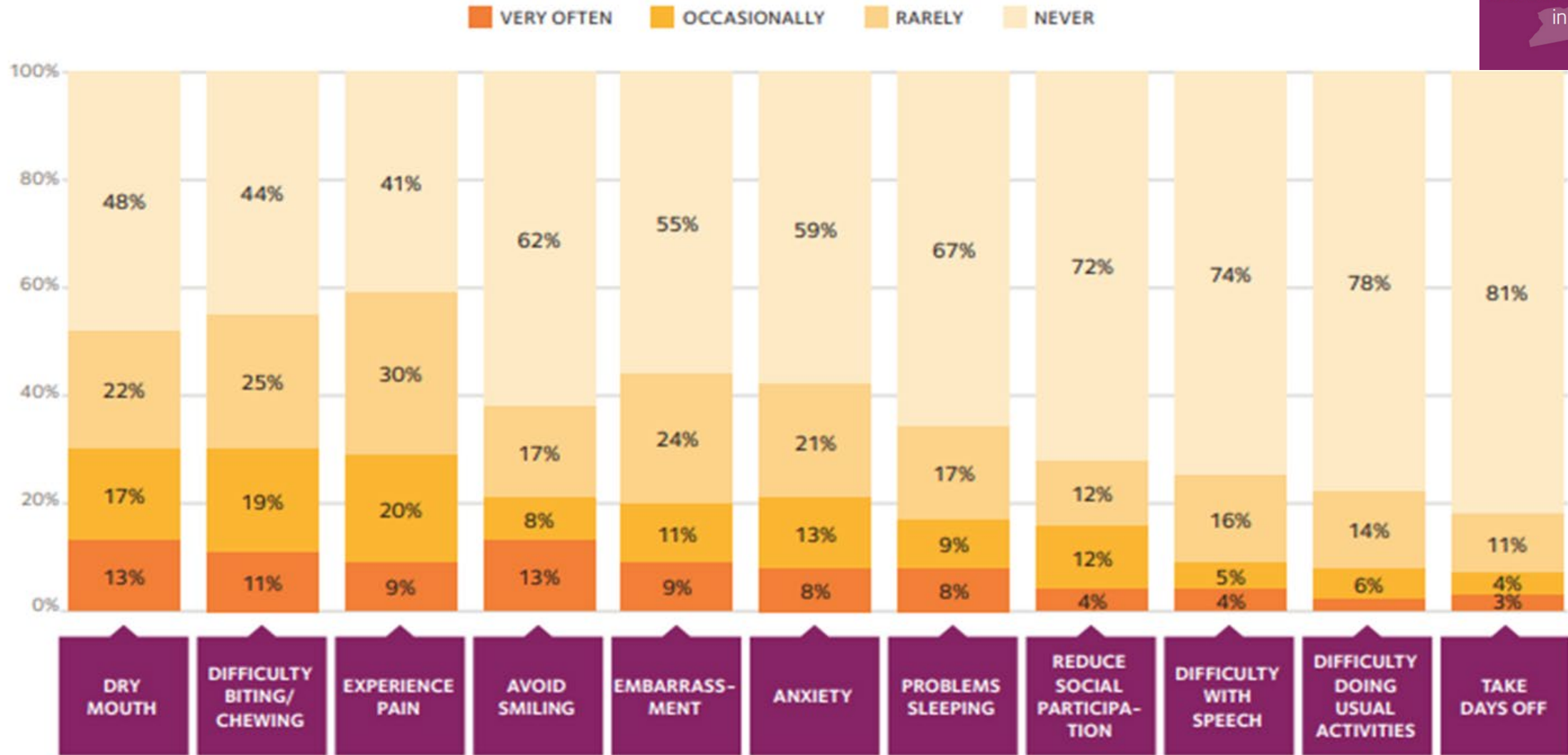
Appearance of Mouth and Teeth Affects Ability to Interview for a Job



Self-reported oral health status, attitudes and dental care utilization among New York adults as of 2015, by income level, based on an innovative household survey. For methods and sources, visit ADA.org/statefacts. For more information on the ADA Health Policy Institute, visit ADA.org/HPI.

How Often Have You Experienced the Following in the Last 12 Months Due to the Condition of Your Mouth and Teeth?

Oral Health and Well-Being
in New York



Self-reported oral health status, attitudes and dental care utilization among New York adults as of 2015, by income level, based on an innovative household survey. For methods and sources, visit ADA.org/statefacts. For more information on the ADA Health Policy Institute, visit ADA.org/HPI.

New Yorkers

Oral Health and Well-Being
in New York



1 in 5

adults **avoid smiling** due to the condition of their mouth and teeth.



1 in 5

adults **feel embarrassment** due to the condition of their mouth and teeth.



1 in 5

adults **experience anxiety** due to the condition of their mouth and teeth.

Problems Due to Condition of Mouth and Teeth, by Household Income

Oral Health and Well-Being
in New York

Low income adults are most likely to report having problems due to the condition of their mouth and teeth.



The top oral health problem for low income adults is **dry mouth**.



28% of low income adults avoid smiling due to the condition of their mouth and teeth.



25% of high income adults experience pain due to the condition of their mouth and teeth.



21% of middle income adults feel embarrassment due to the condition of their mouth and teeth.



14% of low income adults reduce participation in social activities due to the condition of their mouth and teeth.

Attitudes Across all Income Levels and Age Groups

Oral Health and Well-Being
in New York



98%
value oral
health.



84%
feel they need
to visit the
dentist twice
per year.



96%
agree regular
dental visits
keep them
healthy.



79%
believe straight,
bright teeth
help you get
ahead in life.

“I accept I will
lose some teeth
with age.”



74%
low income
adults



54%
high income
adults

97% OF PUBLICLY INSURED CHILDREN LIVE WITHIN 15 MINUTES of a Medicaid dentist.



96% of publicly insured children live in areas where there is at least one Medicaid dentist per 2,000 publicly insured children within a 15-minute travel time.

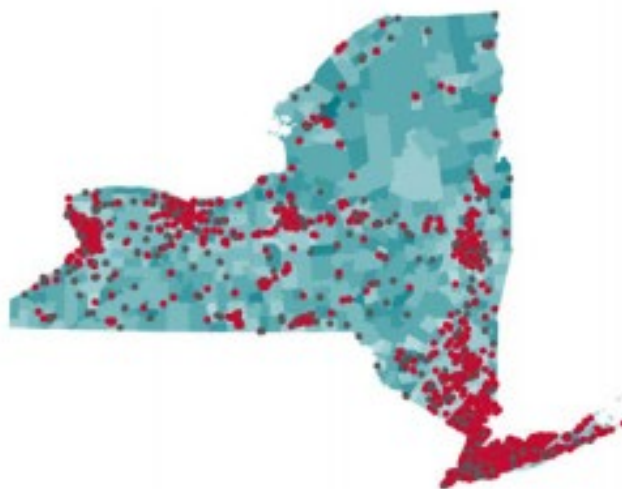


93% of the population live in areas where there is at least one dentist per 5,000 population within a 15-minute travel time.

DISTRIBUTION OF POPULATION ACCORDING TO POPULATION PER DENTIST WITHIN A 15-MINUTE TRAVEL TIME

Publicly Insured Children per Medicaid Dentist		Population per Dentist	
<500	70%	<2,500	70%
500-2,000	26%	2,500-5,000	23%
>2,000	1%	>5,000	5%
No Medicaid dentist within 15-minute travel time	3%	No dentist within 15-minute travel time	2%

DENTAL OFFICE LOCATIONS AND PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE



- OFFICE DOES NOT PARTICIPATE IN MEDICAID
- OFFICE PARTICIPATES IN MEDICAID

PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE

- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

GEOGRAPHIC COVERAGE OF MEDICAID DENTISTS



- 15-MINUTE TRAVEL TIME TO MEDICAID OFFICE

PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE

- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

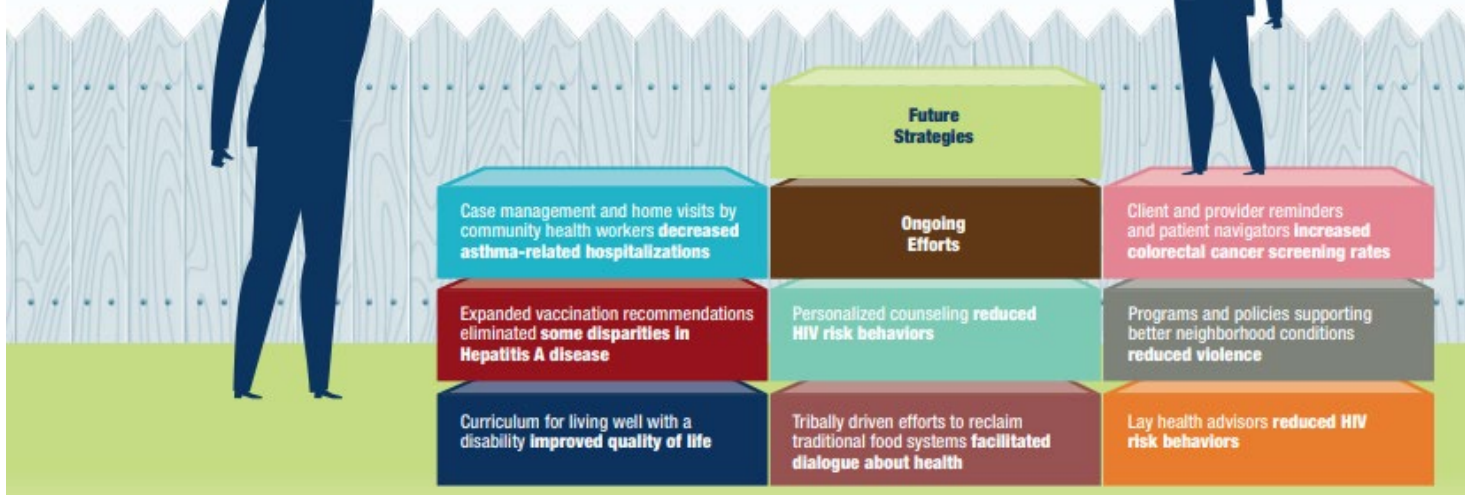
Oral Health and Well-Being in New York

Access to Care

Ongoing Efforts

— REACHING FOR — *Health Equity*

Reducing health disparities brings us closer to reaching health equity. The programs below are examples of how addressing disparities can advance health equity.



Ongoing Efforts



PROGRAMS

POPULATIONS

Black and Hispanic children

Racial/ethnic minority groups

People living with disabilities

Men who have sex with men

American Indian and Alaska Native populations

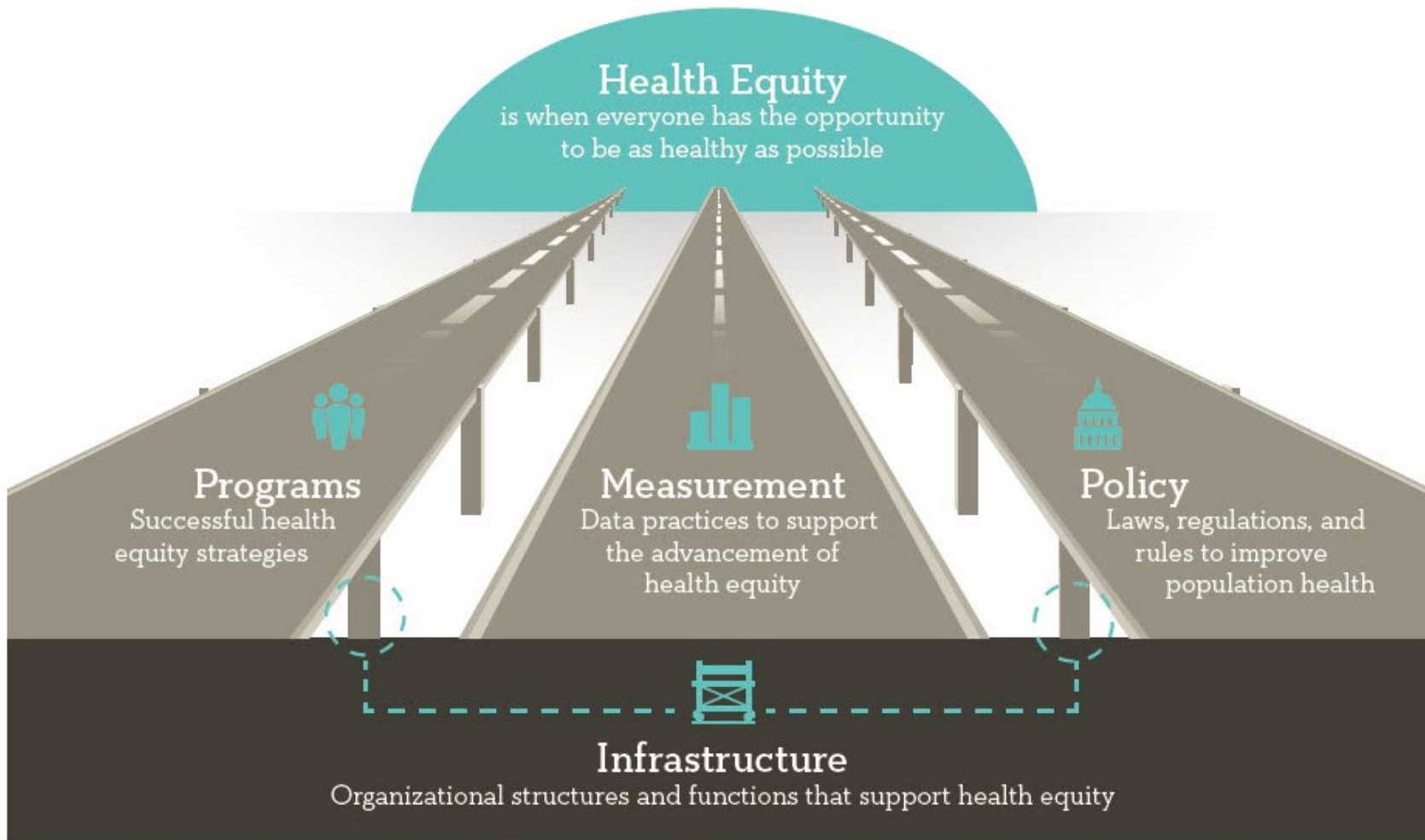
Low income populations and Alaska Natives

High risk communities

Hispanic and Latino immigrant men

PAVING THE ROAD TO HEALTH EQUITY

Health Equity
is when everyone has the opportunity
to be as healthy as possible



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Dental Clinics

- ▶ **Columbia University - Dental School**
- ▶ **NYU - Dental School**
- ▶ **Hostos Community College - Dental Hygiene**
- ▶ **Plaza College - Dental Hygiene**
- ▶ **Touro College – Dental School – Westchester County**
- ▶ **City Tech Dental Hygiene Clinic:**

