



Westerville Public Library

# Westerville, Ohio

Westerville History Museum  
at the Westerville Public Library



# Contact Me



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Westerville Public Library

# Ancient & Not-so Ancient History

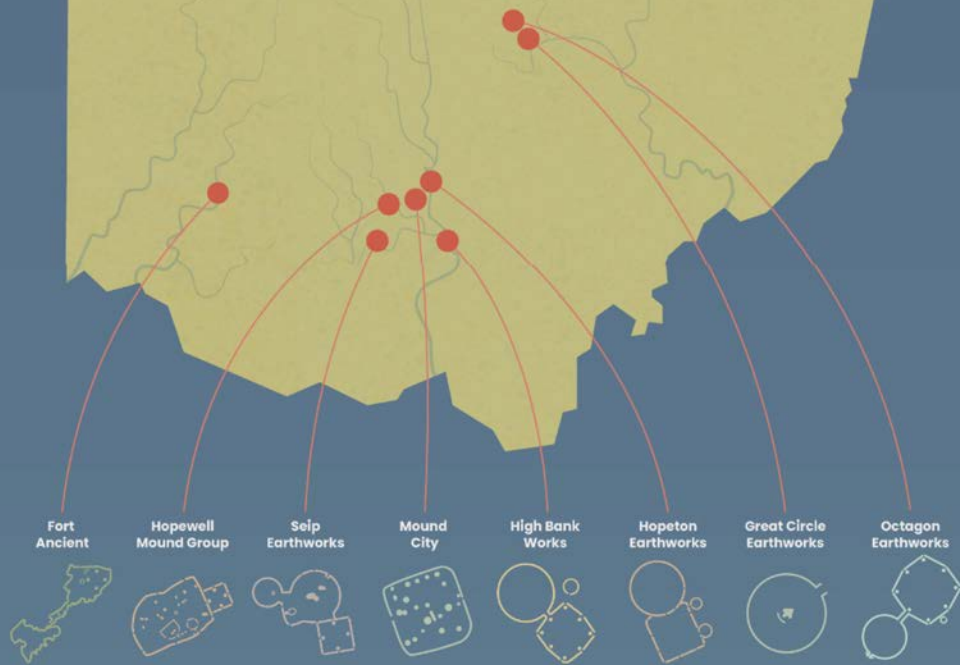


# Mound Builders

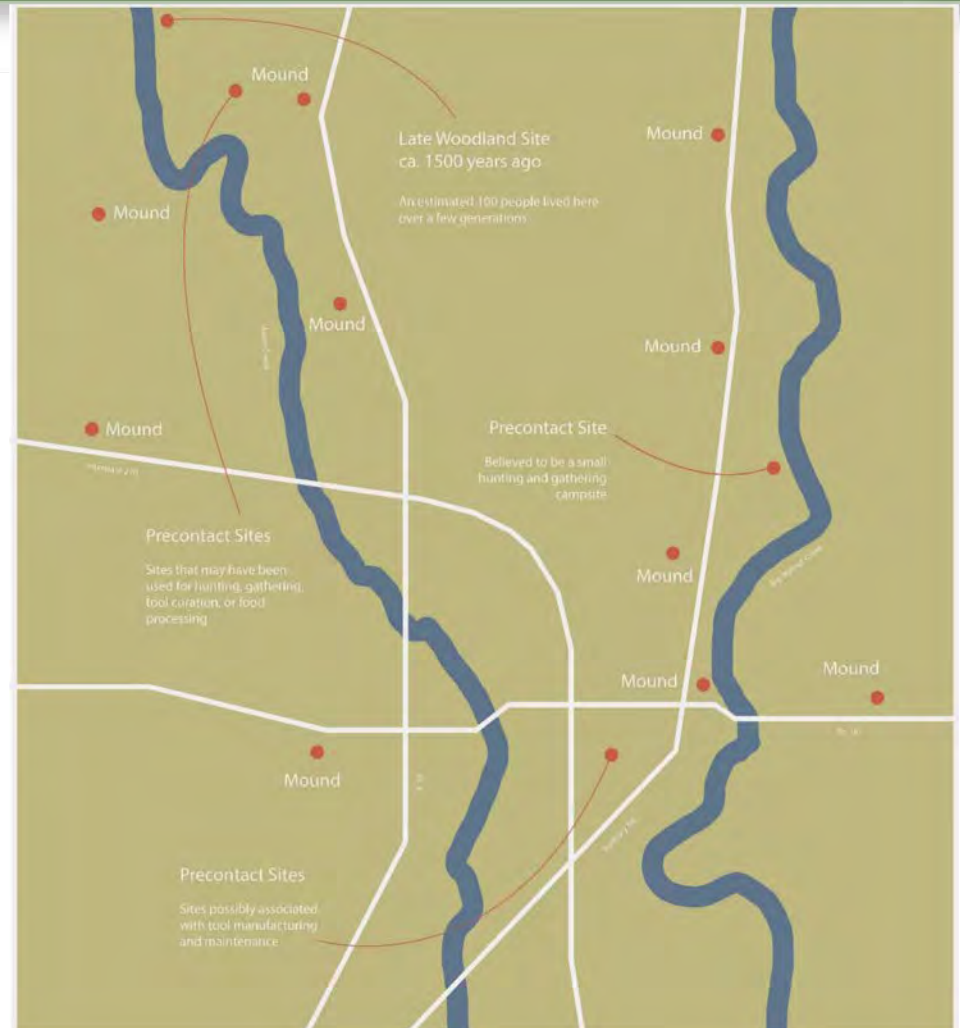
1000 B.C. – 1000 C.E.



HOPEWELL  
CEREMONIAL  
EARTHWORKS



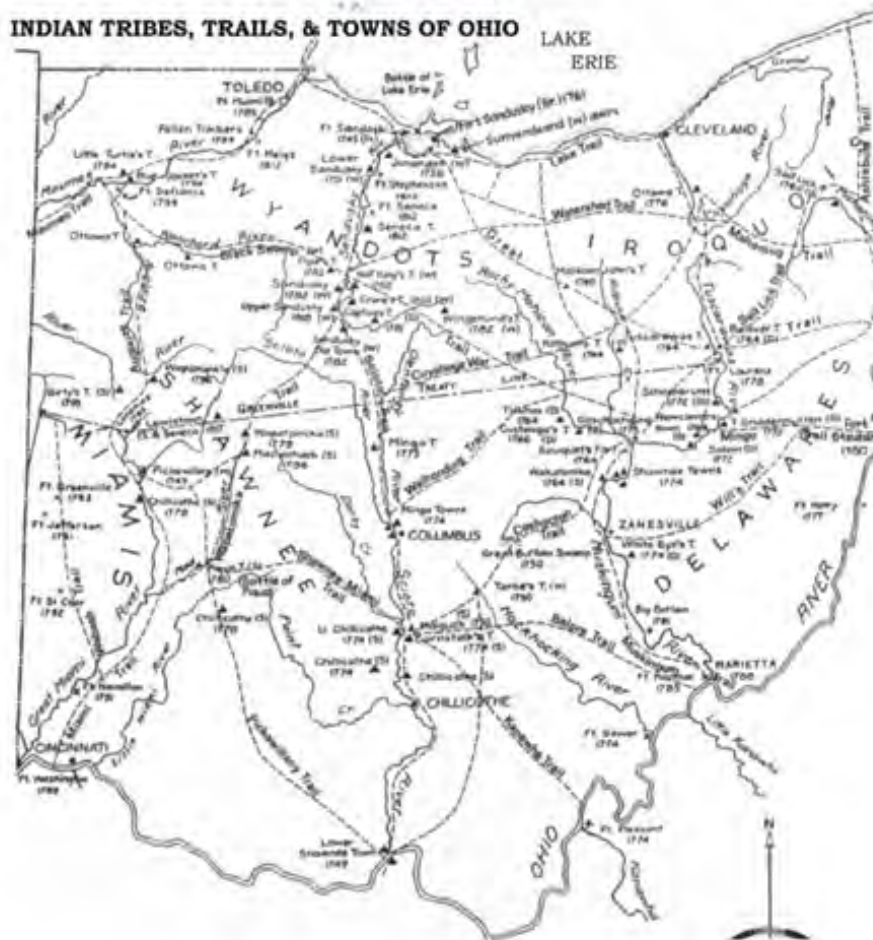
Map by Ohio History Connection





# Contemporary Tribes

1654-1843



- Delaware, Miami, Seneca, Shawnee, and Wyandot/te people had claim to this region
- Forced Removal impacted all tribes in Ohio, including here
- Westerville has little remaining evidence above ground of their time here

Map by Ohio History Connection



# Contemporary Tribes



- Those tribes that were forcibly removed from what became Ohio are mostly in Kansas and Oklahoma.
- They return to Ohio to work on cultural projects like World Heritage.

Shawnee Tribe Flag; Chief Images by Eastern Shawnee Tribe of Oklahoma





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# Town & Gown

Otterbein University



# Otterbein University

- Founded 1847
- Always allowed women faculty and students; 1<sup>st</sup> in U.S.
- Officially allowed Black students from inception; first Black graduate = 1893

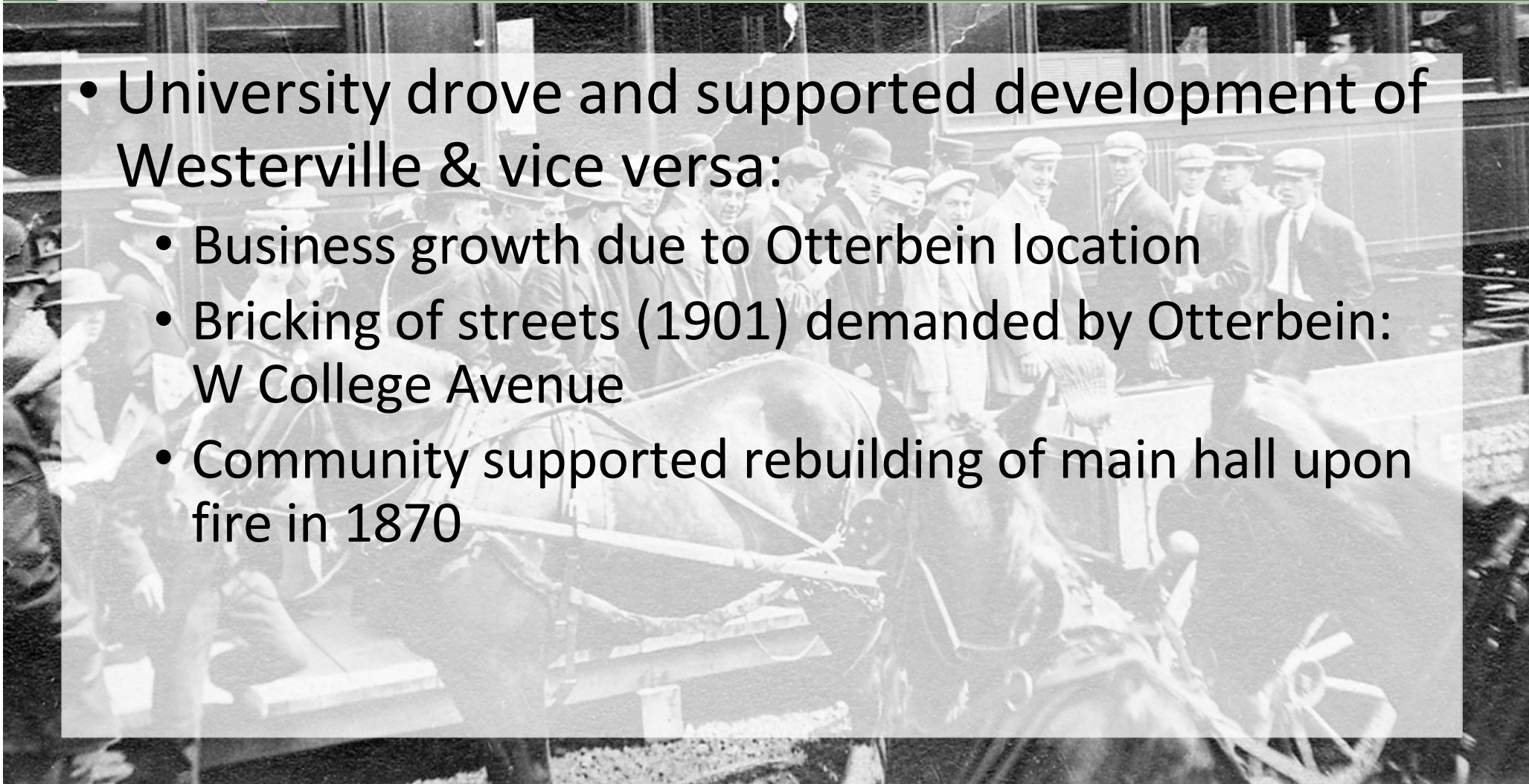
Photo by Otterbein University





# Otterbein University

- University drove and supported development of Westerville & vice versa:
  - Business growth due to Otterbein location
  - Bricking of streets (1901) demanded by Otterbein: W College Avenue
  - Community supported rebuilding of main hall upon fire in 1870





1858





Westerville Public Library

# Westerville People & Events

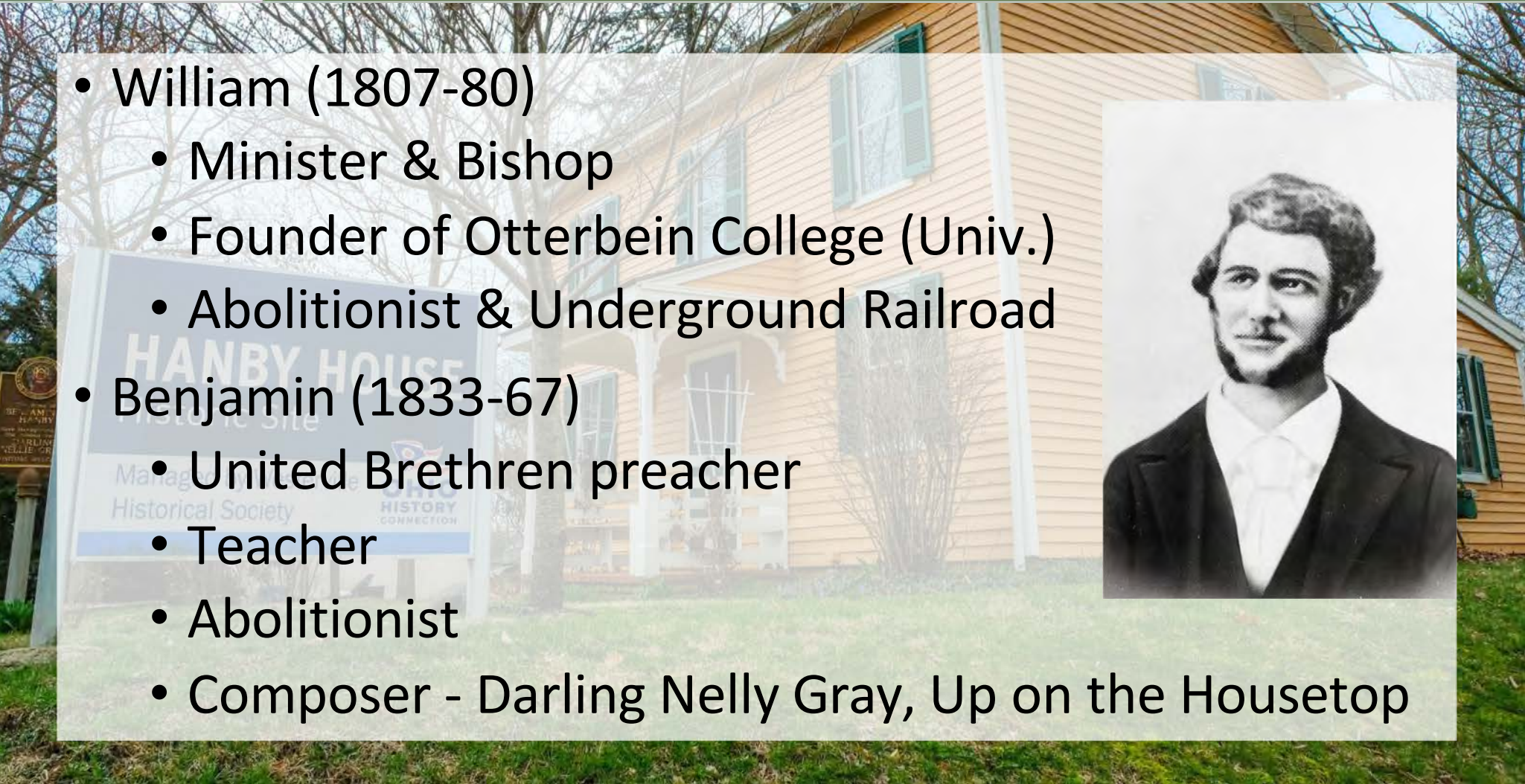
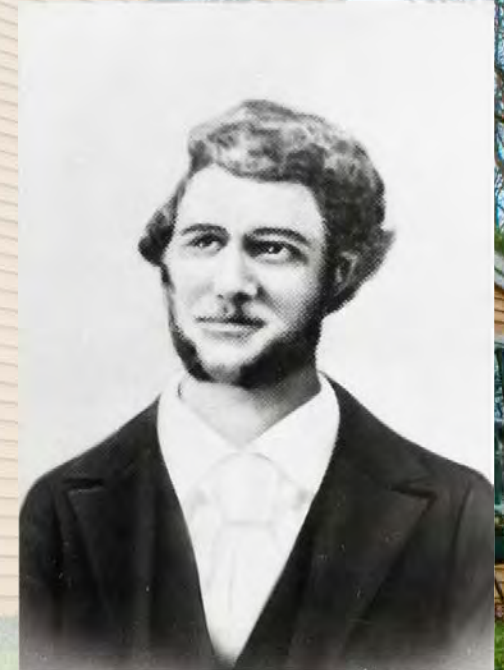
Prominent Westerville People & Moments





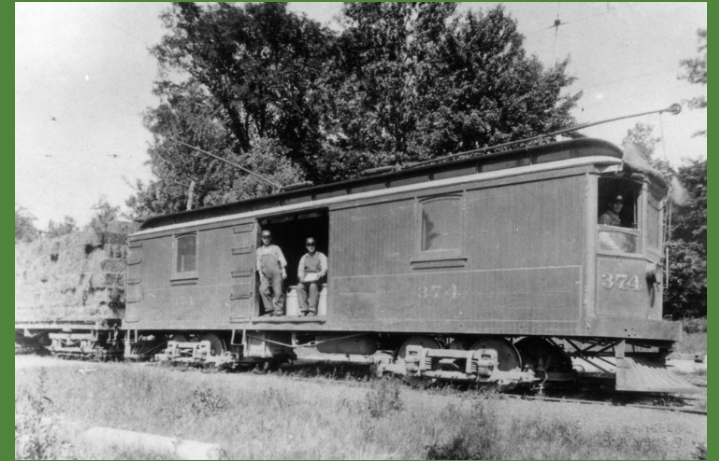
# William & Benjamin Hanby

- William (1807-80)
  - Minister & Bishop
  - Founder of Otterbein College (Univ.)
  - Abolitionist & Underground Railroad
- Benjamin (1833-67)
  - United Brethren preacher
  - Teacher
  - Abolitionist
  - Composer - Darling Nelly Gray, Up on the Housetop





# Streetcars: 1895-1929





# Minerva France (1906-35)



Miss Minerva France  
Salutatorian  
West Virginia



- Graduated West Virginia State College- Salutatorian
- Writer of prose & poetry
- Asst. Librarian at Wilberforce University; built collection including Black authors
- Namesake of Minerva Park- amusement park, neighborhood, school



# The Fouse Family



1868 - 1944

- Squire & Sallie Fouse were enslaved in North Carolina until 1865. Though illiterate, they emphasized education.
- William Fouse was the first Black graduate of Westerville Public Schools AND of Otterbein University (1893).
- He was an educator, principal, activist and school namesake.





# Isaac Newton Custer

- Civil War Veteran
- Deeply Patriotic
- WFH Dentist
- Daughter Dacia Shoemaker led effort to save Hanby House



**VETERAN DENTIST  
AT DEATH'S DOOR**

Captain Isaac N. Custer Putting  
Up Brave, But Unequal  
Fight.

**FOUGHT IN THE CIVIL WAR**

His Last Request Is That He  
Be Buried in Uniform Wrapped  
in the Flag.

Captain Isaac N. Custer of Westerville, for many years a dentist of that city, lies seriously ill at his home there, suffering from a complication of troubles, caused in part by his age, which is 76 years. He has been engaged in the practice of dentistry since soon after the Civil war, in which he served.

Captain Custer is a member of the G. A. R. and has always been an enthusiastic worker for that organization. He is as great a lover of the flag today as he was during the days of '61 to '63, when he fought for it, and it is now prominently displayed in his room, where he lies ill, so that it is the last thing he sees at night and the first in the morning.

**HIS DYING REQUEST.**

He has requested that when death comes, he be strapped in the colors of his country, and that a small piece of his old army uniform, which he still keeps, be placed on his breast, and his relatives have assured him that his wishes will be respected.

Captain Custer is a member of the United Brethren church, and has been an active supporter of Otterbein university. He also served five years as captain of Company C, Fourteenth Infantry, U. S. A., since the close of the Civil war.

Photo from Zillow



# Trains: 1873-1950





# City Manager form of Government, 1916







# The Alexander Family



- Family owned foundry
- Active Underground Railroad supporters
- Owned a false-bottom wagon
- Daughter Inez was oldest county resident in 1955 (102)



# Agnes Meyer Driscoll

"THIS BOOK IS A WINNER." —*KIRKUS* (starred review)

## CODE GIRLS

*The UNTOLD STORY of the*  
AMERICAN WOMEN CODE BREAKERS  
*of WORLD WAR II*





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# Temperance & Prohibition

The Anti-Saloon League

# PROHIBITION

A FILM BY KEN BURNS & LYNN NOVICK





# The Anti-Saloon League





# 18<sup>th</sup> Amendment

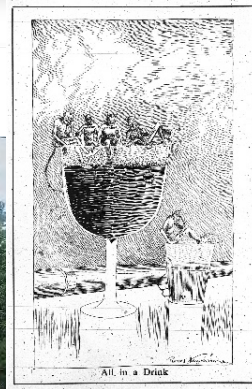
- Ratified January 16, 1919
- Banned production, transport, and sale of intoxicating liquors
- Repealed via the 21<sup>st</sup> Amendment, December 5, 1933



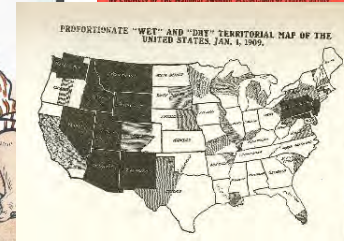
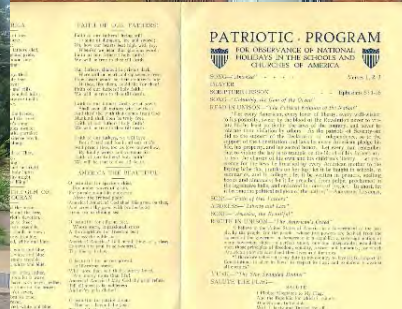
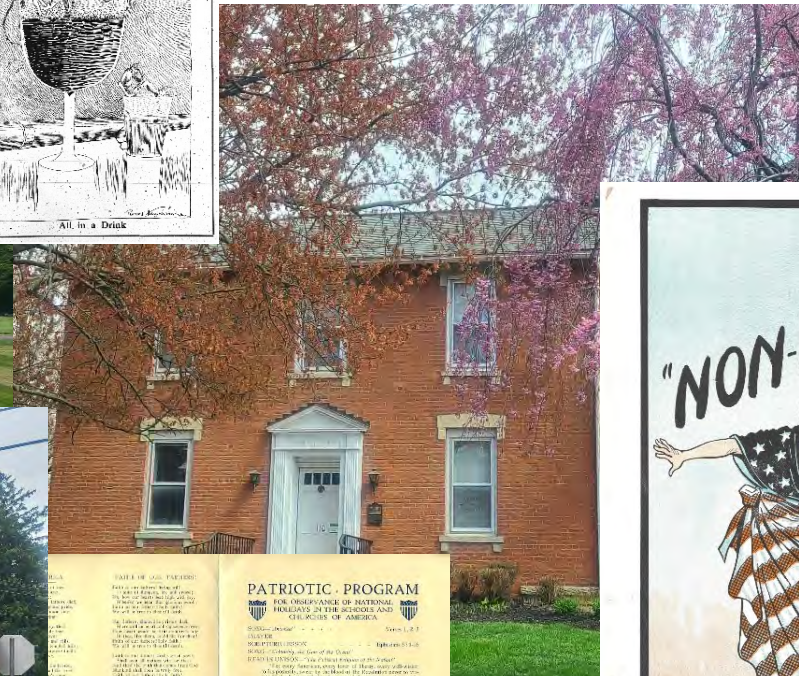


# Historical Legacy

## Historic Sites



## Archives & Materials





Westerville Public Library

# Westerville Today



# Citizen Profile

- 38,911 people
- 40.8 m. age
- 57.9% college degree
- \$103,617 m. income
- 78% housing = SF units
- 6.5% foreign-born
- 83.8% white only
- 7% Black only
- 5.7% two or more races
- 2.9% Asian American only



# What You See



- Busy residential suburb northeast of state capital city, Columbus (OH)
- Alum Creek (Alum Creek Lake)
- Big Walnut Creek (Hoover Reservoir)
- Historic Uptown
- Historic Sites

Photos by Army Corps of Engineers, Wander\_Girl (Trip.com), Aloha Photography



# City Within a Park

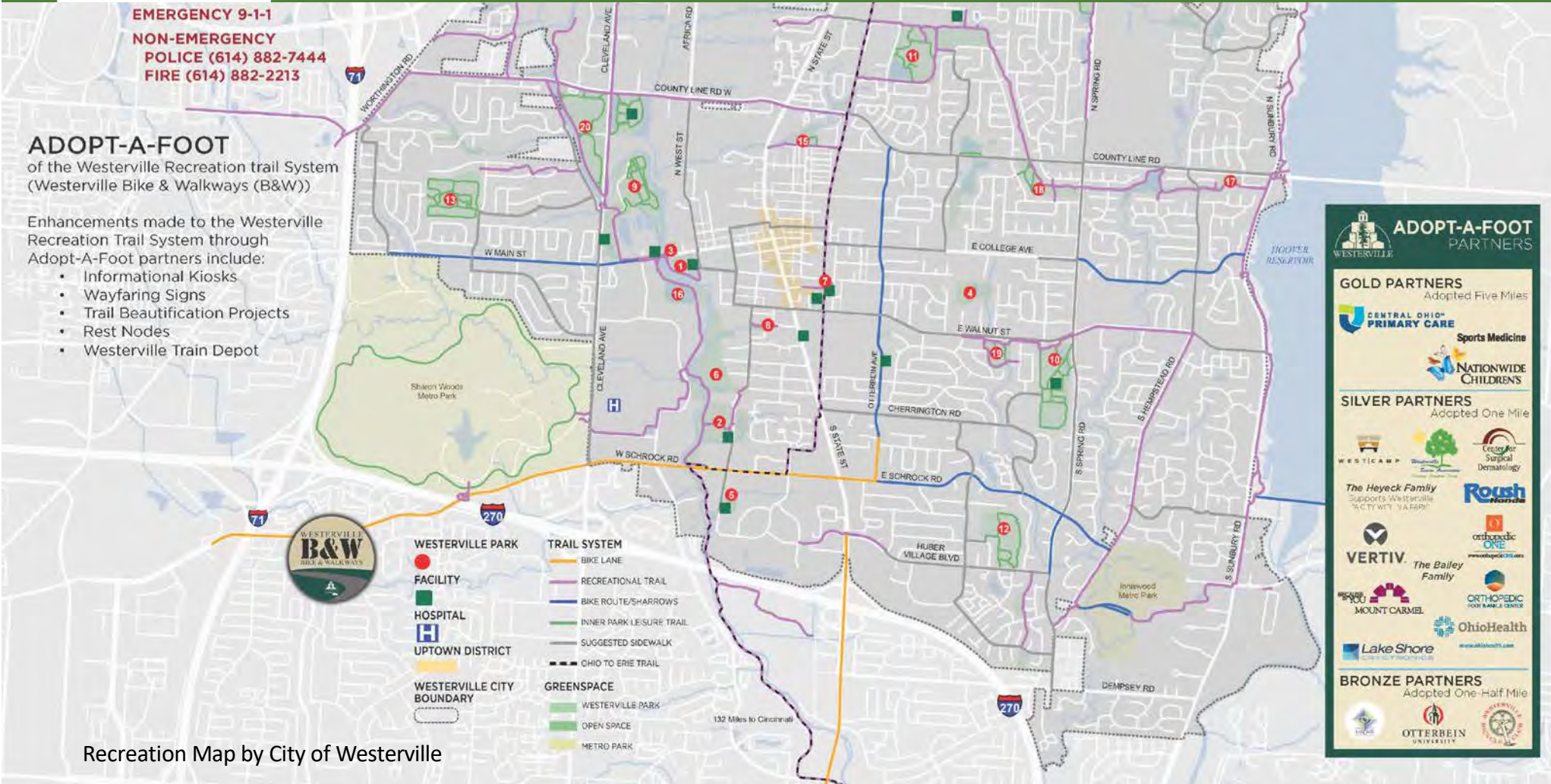
**EMERGENCY 9-1-1**  
**NON-EMERGENCY**  
**POLICE (614) 882-7444**  
**FIRE (614) 882-2213**

## ADOPT-A-FOOT

of the Westerville Recreation trail System  
 (Westerville Bike & Walkways (B&W))

Enhancements made to the Westerville  
 Recreation Trail System through  
 Adopt-A-Foot partners include:

- Informational Kiosks
- Wayfinding Signs
- Trail Beautification Projects
- Rest Nodes
- Westerville Train Depot



**ADOPT-A-FOOT PARTNERS**

**GOLD PARTNERS**  
 Adopted Five Miles

CENTRAL OHIO PRIMARY CARE  
 Sports Medicine  
 NATIONWIDE CHILDREN'S

**SILVER PARTNERS**  
 Adopted One Mile

WESTICAMP  
 Greater Surgical Dermatology  
 The Heyeck Family Supports Westerville ACTIVITY YARD  
 Roush Honda  
 orthopedic ONE  
 VERTIV  
 The Bailey Family  
 MOUNT CARMEL  
 ORTHOPEDIC FOOT & ANKLE CENTER  
 OhioHealth

**BRONZE PARTNERS**  
 Adopted One-Half Mile

Lake Shore CITY CYCLES  
 OTTERBEIN UNIVERSITY

Recreation Map by City of Westerville

# Sonja Lauren

CAPTIVATING SPEAKER  
Motivational ★ Educational ★ Unforgettable

## *The Covered Smile*

*Presented by*  
**Sonja Lauren**



[www.thecoveredsmile.com](http://www.thecoveredsmile.com)



***“Situation Hopeless”***



**Sonja**

**at**

**age 11**

**and**

***the beginning of:***

**“The Covered  
Smile”**

11/26/55 - Exam - Panix - BWS -

absolutely the worst dental condition I have  
ev - seen I also seen by Dr

abscess in upper Rt exacerbated by kick in  
jaw - penicillin given to pt. by Dr. - Dr

said that situation hopeless - (agree) - referred  
to Dr. for immediate condition - (ext. of #

2+3, 24, 25, 20) Vx phenoxymethylpenicillin 250

X 08 - 884 -

Consult YES  NO  DEC. 1 1975

CC/ All my teeth are bad.

HPI: No Rx, Tx, High regard diet. Pt. advised by Dentist & Physician to seek Tx earlier.

EXAM/ OH MUCOSA  
 CRIES TONGUE *swollen*  
 MISSING PHARYNX  
 PERIO  
 X-RAY PA  
 OCCL PRE-OP  
 PAN POST-OP

ANESTHESIA WGT  
 BP / /  
 P / /  
 CC BREV. IN MIN.

N<sub>2</sub>O O<sub>2</sub> %  
 INHALATION  
 ATROPINE CC  
 VALIUM CC

LOCAL AMP. OF

COMPLICATIONS: YES  NO

Pt. advised that 3<sup>rd</sup> molar would most likely have to be removed at later date.

Extractions

R 8 7 6 5 4 3 2 1 8  
 8 7 6 5 4 3 2 1 8 L

Procedures

SUTURES *uv* | *uv*  
 I C *uv* | *uv*  
 SR 1/16/75  
 POT  
 POE 4/19/75  
 HEALING *Satisf*

APICO/RC  
 FREN  
 CYST  
 ISD/CULT  
 BIOPSY  
 IM-DENT  
 AVULSION  
 FRACTURE  
 OTHERS

REMARKS

*Pts parents both advised alternative Tx pl  
 & warned of sequella of early loss of all teeth  
 They have elected to go ahead w/ extractions  
 Case discussed - D.*  
 RXT PEN 250/500/susp # 28 QID AC&HS

EMP. COMP/TYLENOL 2 3 4 # Q4H PRN PAIN  
 SYNALGOS-9C # Q4H PRN PAIN

POST-OP INSTS YES  NO

DATE	TOOTH	SERVICE RENDERED	TIME	CHARGE	PAID	BALANCE
2/1/75		Consult -		0-	0-	0-
2/13/75		LA + N <sub>2</sub> O, O <sub>2</sub> , SEXT(12) ALVIO(4)		200 00	100 00	100 00
2/16/75		rx, sk - pt to appt & did the same get immediate dentures		0-	0-	100 00
1/12/76		payment		0	20 00	80 00
2/10/76		payment		0	20 00	60 00
3/11/76		payment		0	20 00	40 00
4/15/76		payment		0	20 00	20 00
4/15/76		LA + N <sub>2</sub> O, MEXI (16) placement of immed dentures		250 00	100 00	170 00
4/15/76		POE <i>Healing Saff</i>		0	0	170 00
		Pt advised to have dentures relined 2-3 mo.				
5/10/76		Payment		0	20 00	150 00
6/10/76		Payment		0	20 00	130 00
7/10/76		payment		0	20 00	110 00
8/10/76		payment		0	20 00	90 00
9/9/76		payment		0	20 00	70 00
10/9/76		payment		0	20 00	50 00
11/11/76		Payment		0	20 00	30 00
12/9/76		Payment		0	20 00	10 00
1/1/77		Payment		0	10 00	0

869

27 7



***Sonja***

***at***

***age***

***13 years,  
3 months***

# *Seventh grader becomes edentulous*



PERMANENT RECORDS—Berkeley County Schools ELEMENTARY SCHOOLS SECTION

FATHER'S NAME SHERMAN	MOTHER'S NAME SHERMAN	FIRST NAME Clyde	LAST NAME GOSNELL	SEX	COSES														
GUARDIAN'S NAME				TELEPHONE				YEAR		GRADE LEVEL		READING							
RESIDENCE (I) St. No. City				TELEPHONE				YEAR		GRADE LEVEL		READING							
RESIDENCE (II) St. No. City				TELEPHONE				YEAR		GRADE LEVEL		READING							
SCHOOL ENTERED				GRADUATED				WITHDREW				SCIENCE							
CLASS				MIDDLE/JR				HIGH				SOC. ST.							
TRANSFERS, MANUSCRIPTS AND WITHDRAWALS				DATE				HEALTH				PHY. ED.							
Personal				2-18-69				Present				Absent							

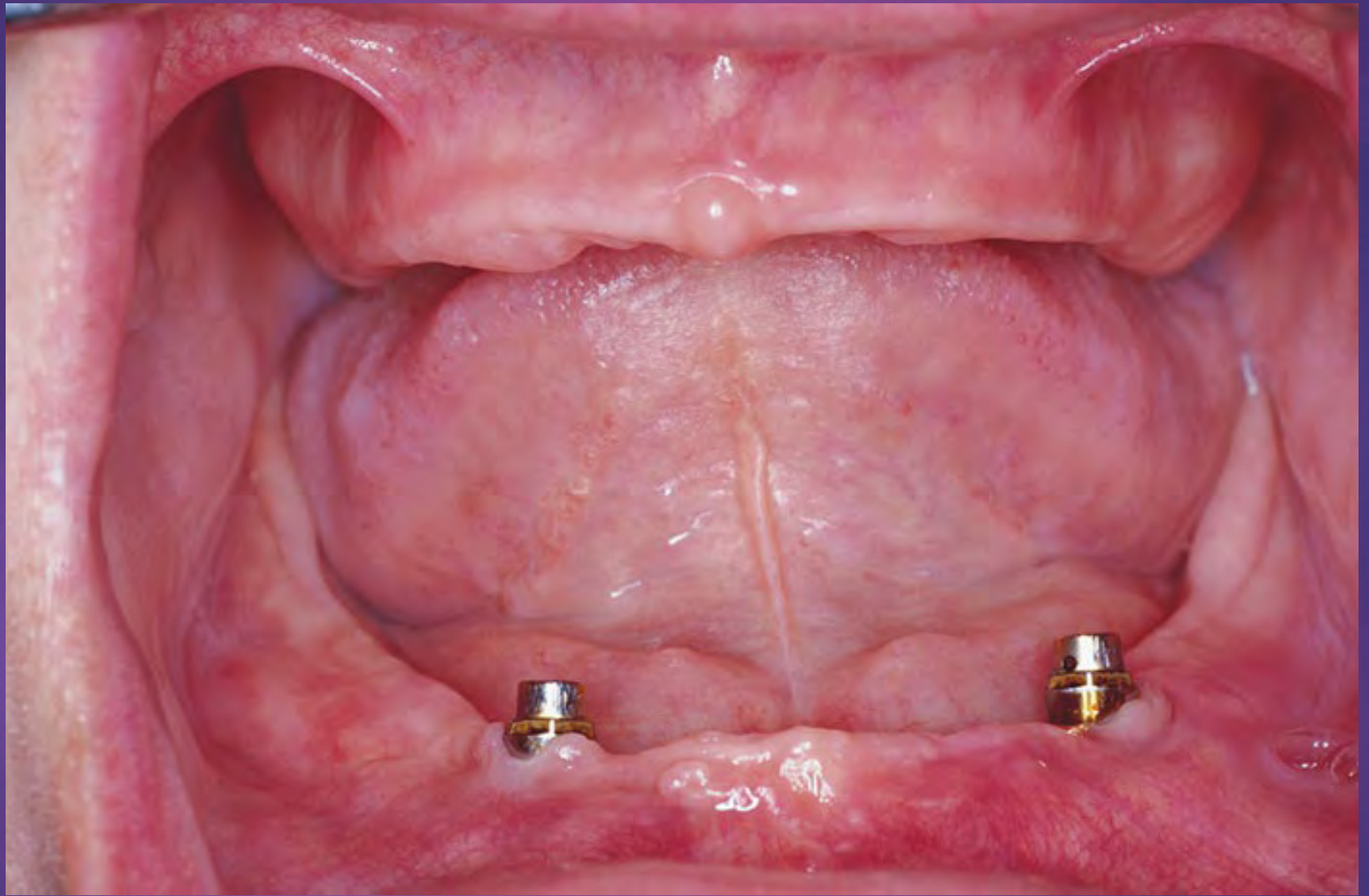
NAME: SHERMAN			SONJA			FAYE			BERKELEY COUNTY SCHOOLS STATE OF WEST VIRGINIA					
SIXTH			SEVENTH			EIGHTH			NINTH					
SCHOOL			SCHOOL			SCHOOL			SCHOOL			HEDGESVILLE		
1975	1976	1977	1976	1977	1978	1975	1976	1977	1975	1976	1977	1	2	3
READING			READING			READING			READING			D-	C	D
ENGLISH			ENGLISH			ENGLISH			ENGLISH			D	D	D
MATH			MATH			MATH			MATH			F	D	D-
SOCIAL ST.			WORLD REG.			W.V. STUDIES			W.V. STUDIES			D	C-	C-
SCIENCE			SCIENCE			SCIENCE			SCIENCE			D	D	D
HOME EC.			HOME EC.			HOME EC.			HOME EC.				C	C
INDUST. ARTS			INDUST. ARTS			INDUST. ARTS			INDUST. ARTS			C-		C-
MUSIC			MUSIC			MUSIC			MUSIC					
ART			ART			ART			ART					
HEALTH			HEALTH			HEALTH			HEALTH					
PHY. EDUC.			PHY. EDUC.			PHY. EDUC.			PHY. EDUC.			D	C	C
			Band						Band			A	A	A
Read Level			Read Level			Read Level			Read Level					
Present			Present			Present			Present					150
Absent			Absent			Absent			Absent					21
Not Scored			Not Scored			Not Scored			Not Scored					

RETTAINED BY 8-1-69





***Sonja***  
***at***  
***age 9***  
***“with original***  
***teeth”***





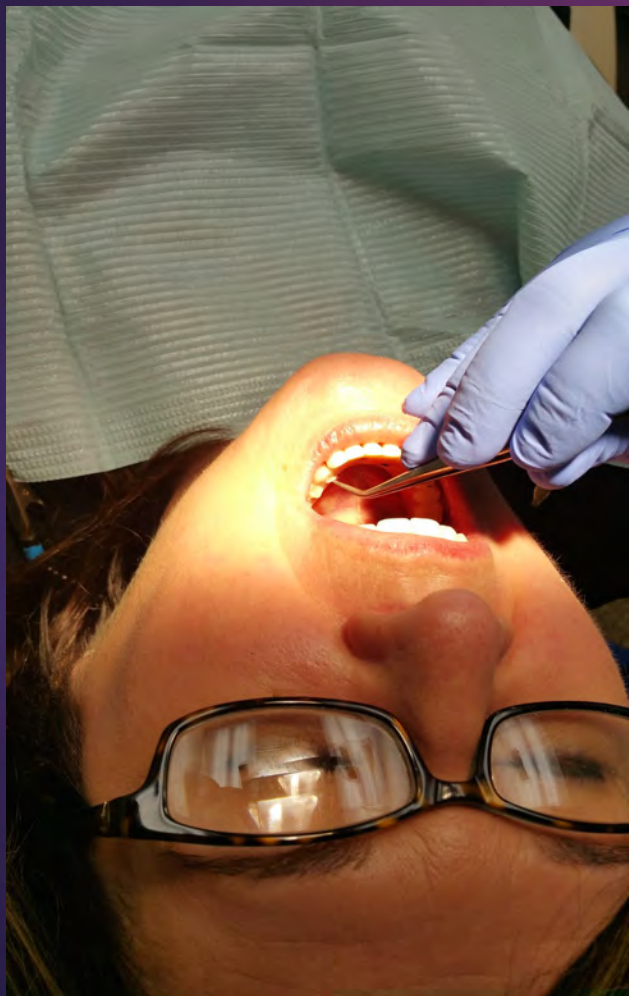
# Before Book Contract



# After Book Contract



# Dental Neglect Has Kept Me Upside Down and Afraid For Most Of My Life!



Dental Care - Not Expensive

Dental Education - Is Not Expensive

Dental Treatment – EXPENSIVE!

\$90,000.00 Out Of Pocket

\$250.000.00 Smile

**True Cost** Taste of Blood, Sweat, Tears  
Job Loss, Unable to Get a Job  
Treatment Expense – Financial Hardship  
Lack of Self-Esteem – Relationships  
Health Issues: Heart, BP, DM, Depression



# In Loving Memory of Dr. John Ward



Dr. Ward took my hands and gave me dignity back









**Waiting For New Technology Was Painful!**

**No one was willing to touch my case!**

# ***EARTH ANGELS:***

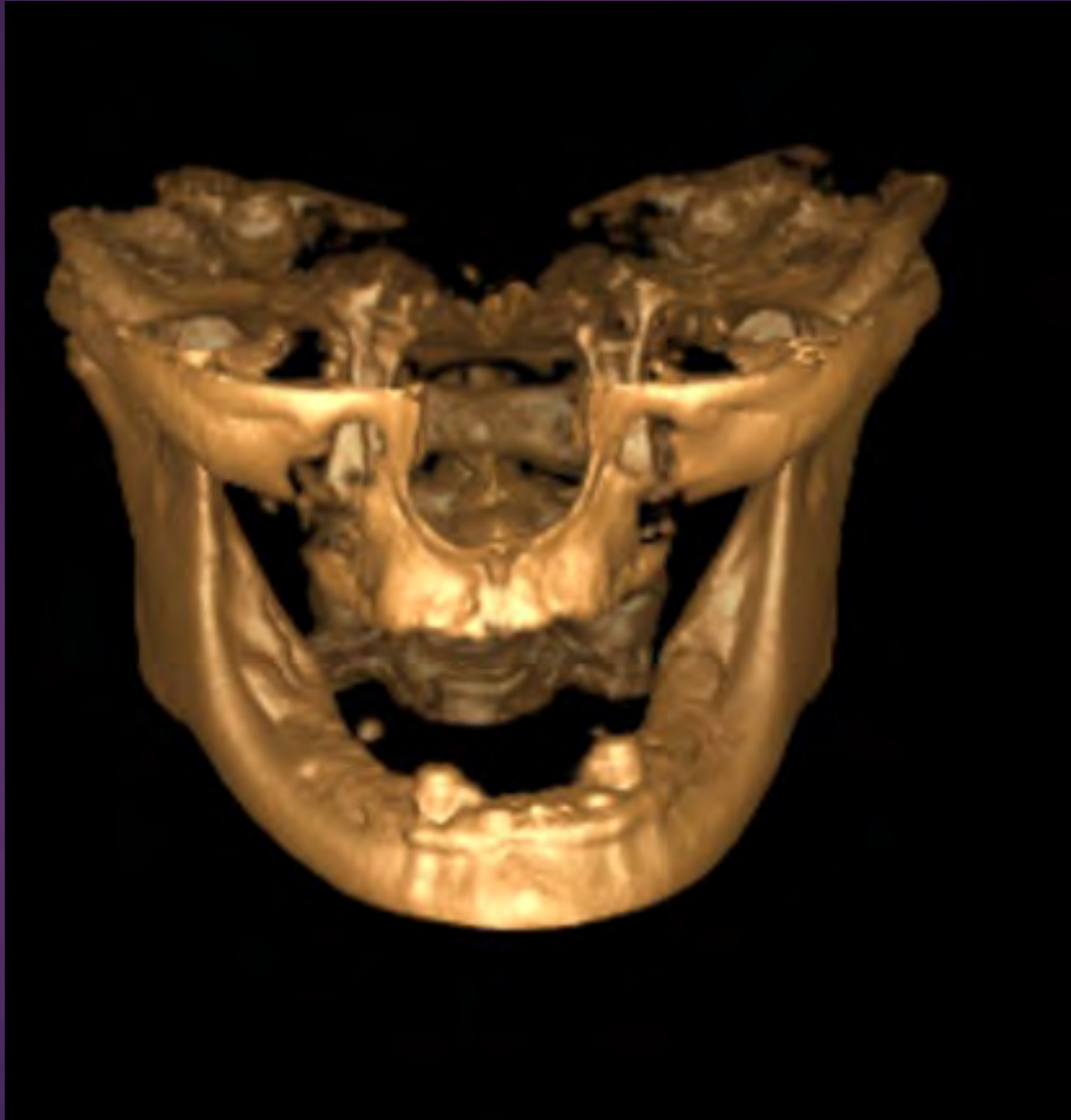
***Dr. Richardson***



***Dr. McAndrew***



# Sonja's CBCT Image

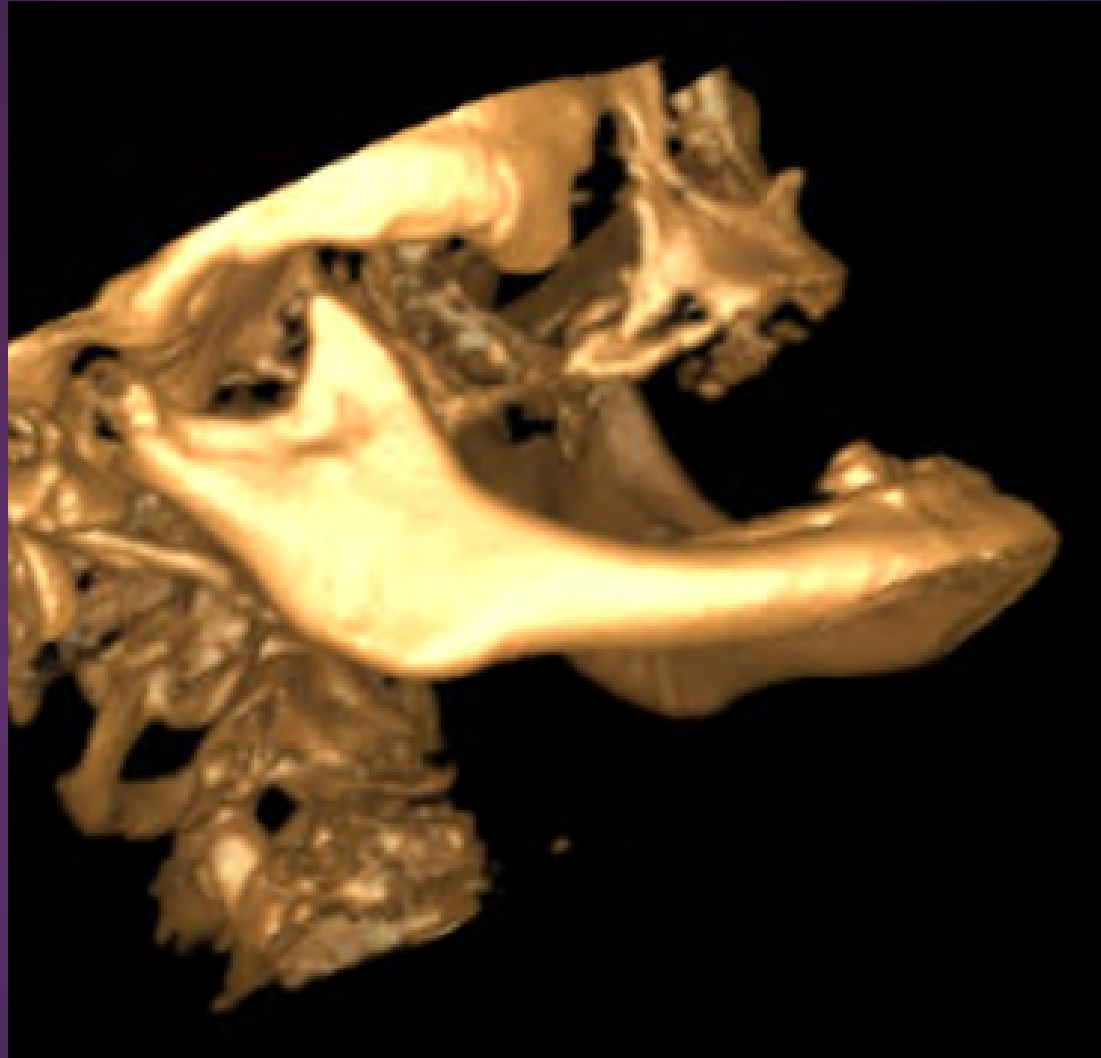


Snap2: Skeletal View

Interpretation by Dr. Richardson



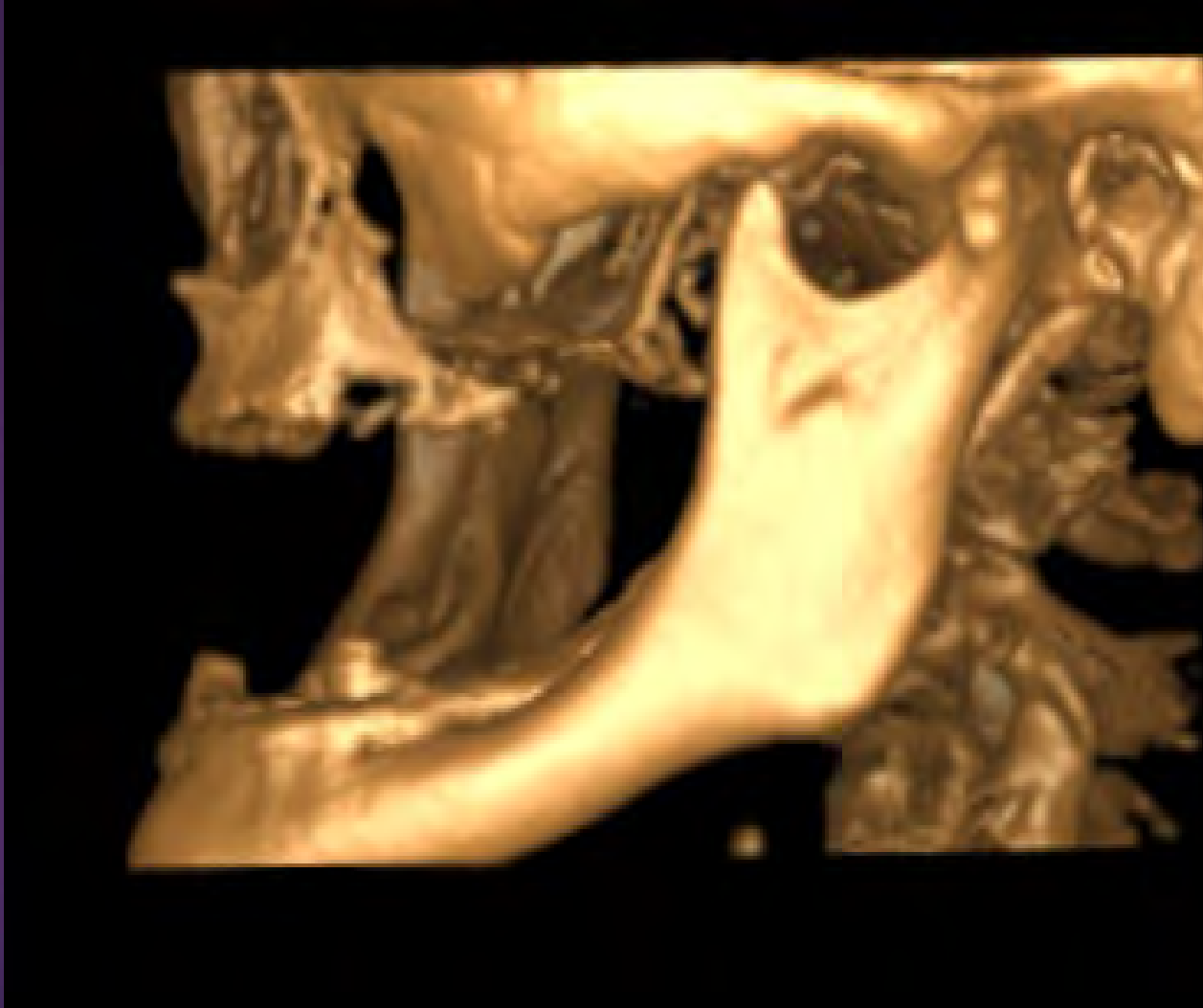
# ***Sonja's CBCT Image***



**Snap2: Skeletal View**

**Interpretation by Dr. Richardson**

# ***Sonja's CBCT Image***

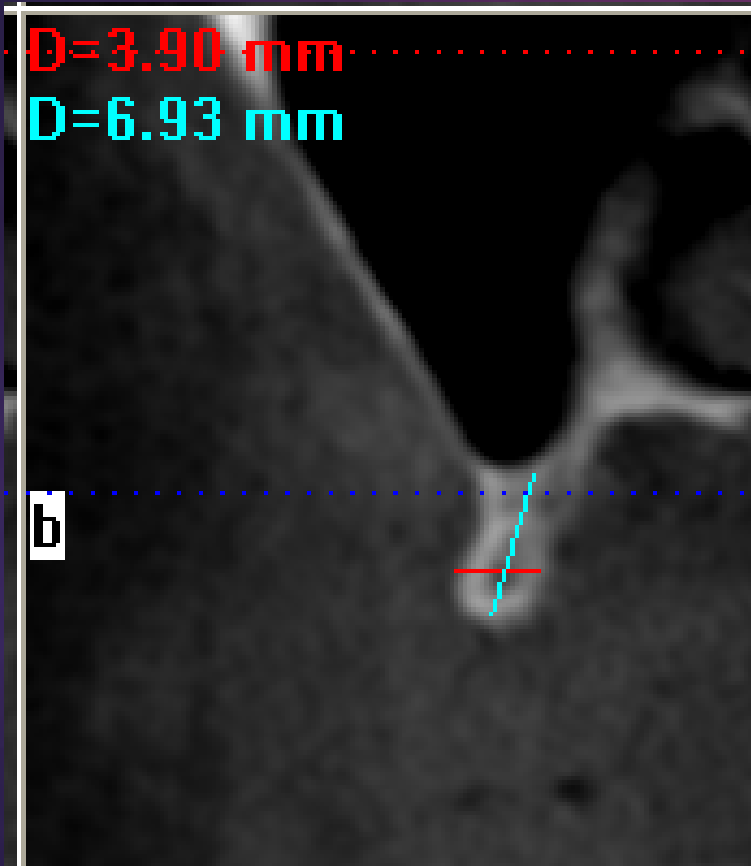


**Snap2: Skeletal View**

**Interpretation by Dr. Richardson**

# CBCT - Snap6: Millimeter

## Measurements Right Maxillary Posterior

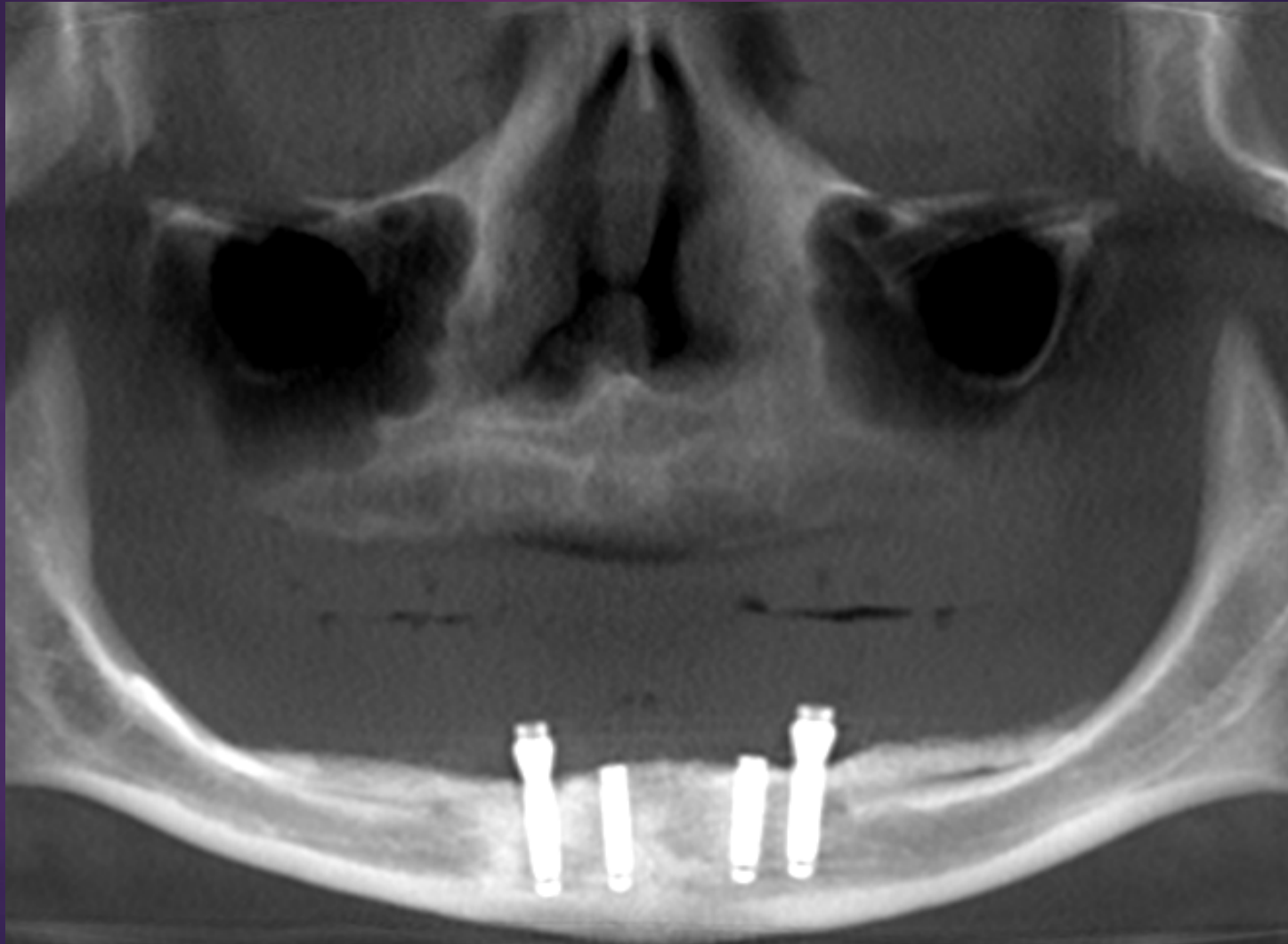


## CBCT - Snap7: Mandibular Posterior Measurements

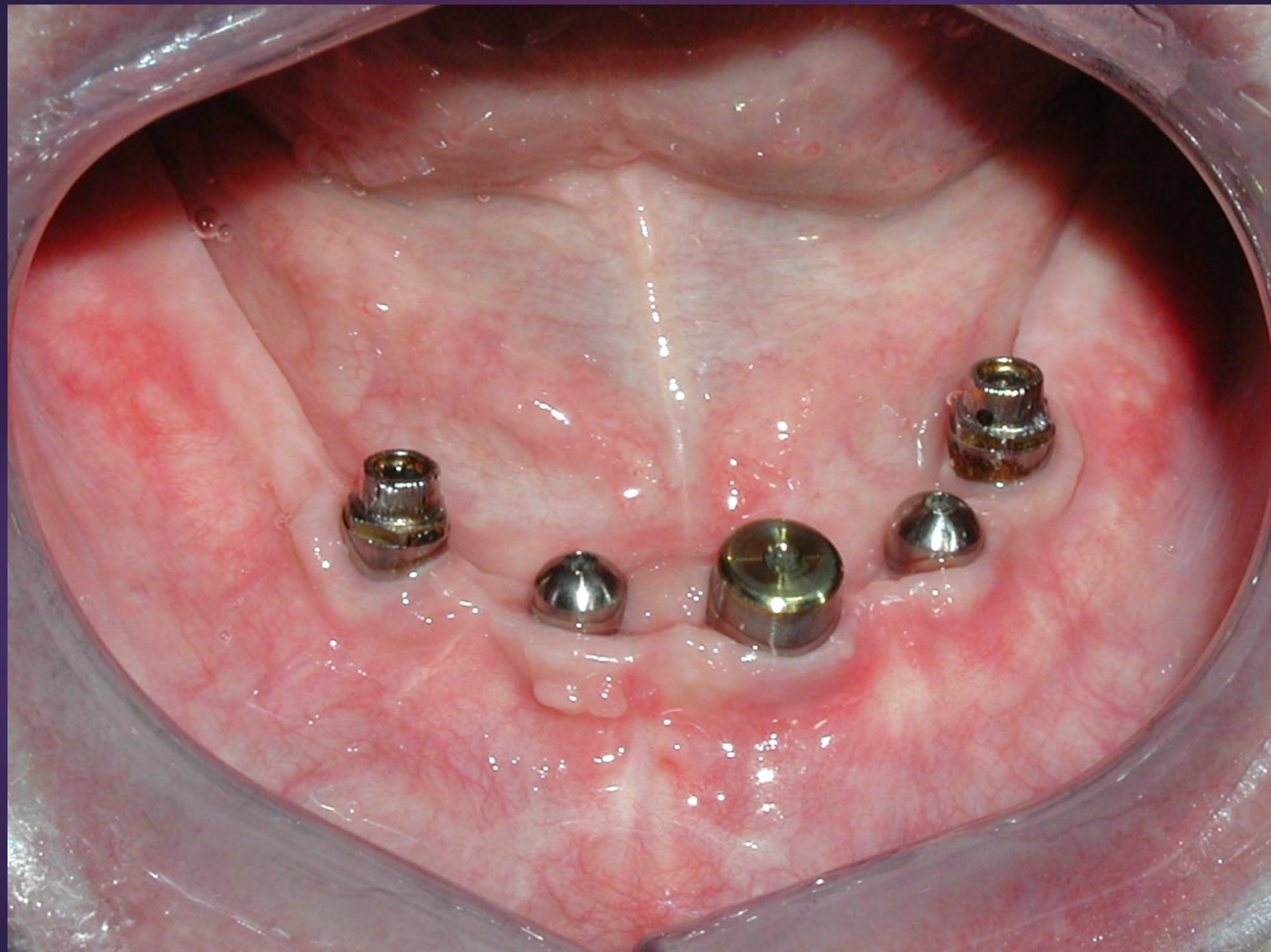


Interpretation by Dr. Richardson

## Panoramic View 40 Years Of Age



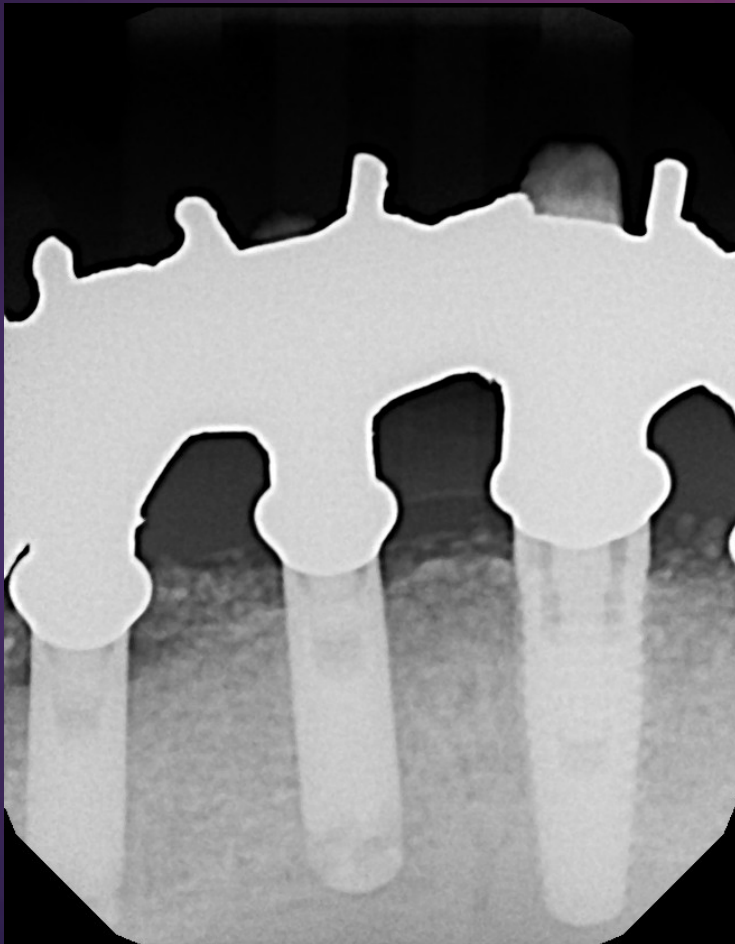
*Interpretation by Dr. Richardson*



# ***Current X-Rays***

***Fixed hybrid lower***

***“Not enough bone” for fixed upper***





***Hope***





# Bringing **Hope** to Others



# ***“Teaching”** Children*



# Breaking a *“Family Tradition”*”



# *Helping Others Break “Family Traditions”!*



***Angel and Chris were  
married in 2015!***



# A Mothers Dream Team!



# Helping Generations To Come!





# When Momma Told Her To Eat Her Vegetables



**SMILES ARE MORE PRECIOUS THAN GOLD**



# Even Our Puppy Brushes Her Teeth!



***Questions?***

***Comments?***

***Thoughts?***



In office presentations that promote productivity and production which creates better patient care.

Cell 804-519-6544  
Sonjl36@msn.com

# *Thank You!*



Cell 804-519-6544

Email [sonjl36@msn.com](mailto:sonjl36@msn.com)



# The Oral Health of Ohioans— Are We Getting the Job Done?

Oral Health 2024 Symposium

**Nov. 8, 2024**

**Barbara Carnahan, RDH, BS, MS**

**Junhui Qian, BA, MS**

# Objectives

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- Describe the current oral health status of Ohio's schoolchildren and adults.
- Compare the current oral health of Ohioans to five years ago.
- Describe factors that impact the oral health status of Ohioans and their access to dental care.



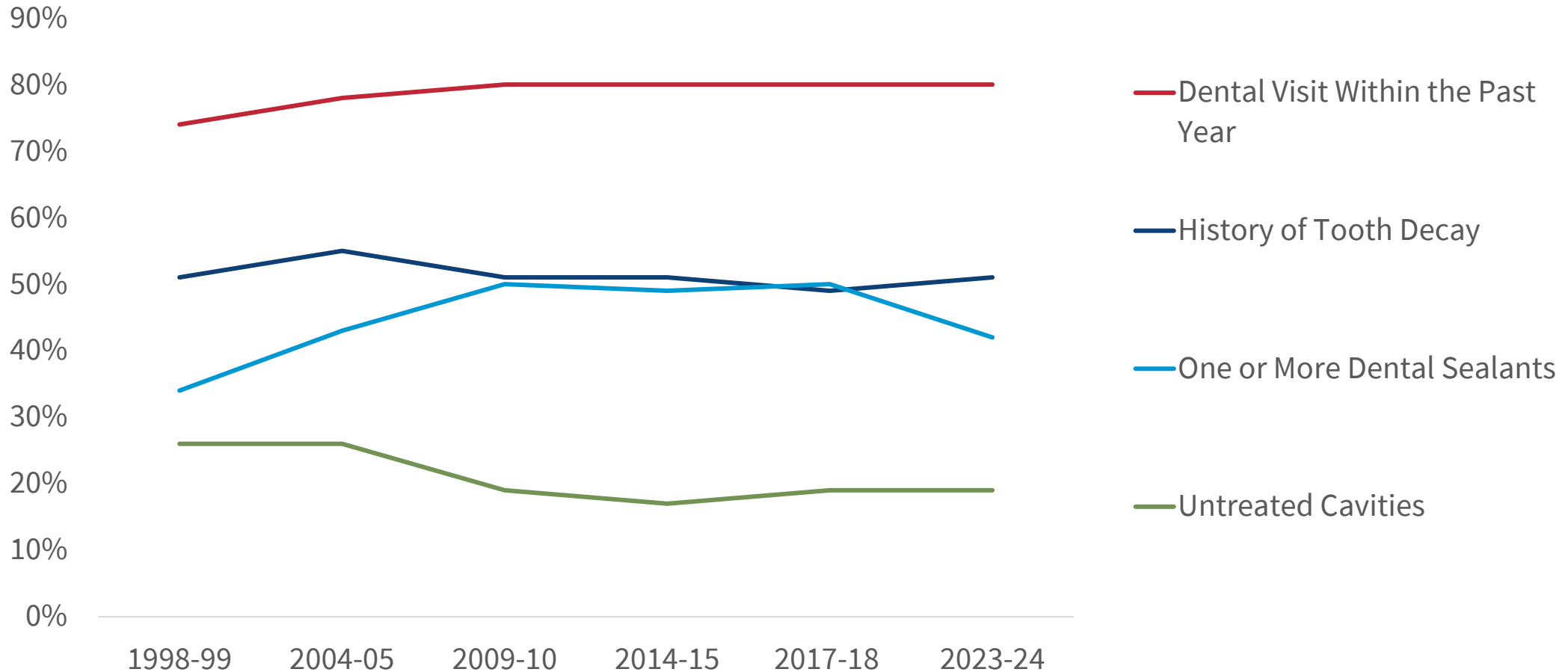
# Oral Health Status of Children

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- History of tooth decay.
- Untreated cavities.
- Dental sealants.
- Dental visit within the past year.

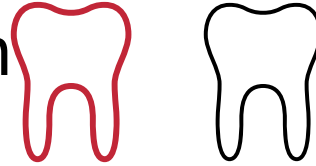
# Trends in Oral Health Status Among Ohio 3rd Grade Schoolchildren, 1998-2024



Data Sources: [Oral Health Basic Screening Survey of Third Grade Schoolchildren in Ohio \(BSS\)](#)  
2023-2024 **Make Your Smile Count!** Statewide Oral Health Screening Survey of Third Grade Schoolchildren

# History of Tooth Decay, 2023-2024

**One in two** third-grade schoolchildren had a history of tooth decay.

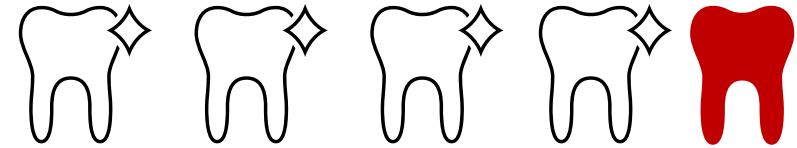


Schoolchildren who are significantly more likely to have a history of tooth decay compared to their counterparts are:

- Enrolled in **Medicaid**.
- **Come from lower-income families**.
- Consume **more servings of sugar-sweetened beverages** per day.
- **Hispanic**.

# Untreated Tooth Decay, 2023-2024

**One in five** third-grade schoolchildren had untreated tooth decay.



Schoolchildren who

- **Did not have a dental visit within the last year.**
- **Lack dental sealants.**
- Are enrolled in **Medicaid** or **self-pay** for dental bills.
- Come from **lower-income families.**
- Are **Hispanic.**

are about **twice** as likely to have untreated tooth decay compared to their counterparts.

# Prevalence of Dental Sealants, 2023-2024

Overall, **42%** of third-grade children had dental sealants on one or more permanent molars.



Schoolchildren who

- **Didn't have a dental visit within the last year.**
- **Face challenges in accessing** needed dental care.
- **Are uninsured.**

were significantly less likely to receive dental sealants compared to their counterparts.

# Dental Visit Within the Last Year, 2023-2024

**One in five** third-grade schoolchildren didn't have a dental visit within the last year.

Children without a dental visit within the last year were more likely to be:

- **Black or African American, or of another race, or Hispanic of any race.**
- Those with reportedly **fair/poor oral health.**
- Those who reportedly **had trouble accessing necessary dental care.**
- Those who **self-pay** for dental bills or are on **Medicaid.**

The most common reasons for not visiting the dentist were: **Cost, dental office not open at convenient times, insurance did not cover procedures, could not take time off work, and dental office was too far away.**

# Parent/Guardian Rating of Child's Oral Health, 2023-2024

**One in four** third-grade schoolchildren were rated by their parent/guardian as having fair/poor oral health rather than very good/good oral health.

Schoolchildren who

- **Didn't have a dental visit within the last year.**
- **Had trouble accessing necessary dental care.**

were **three times** as likely to be rated as having fair/poor oral health compared to their counterparts.

# Oral Health Status of Adults

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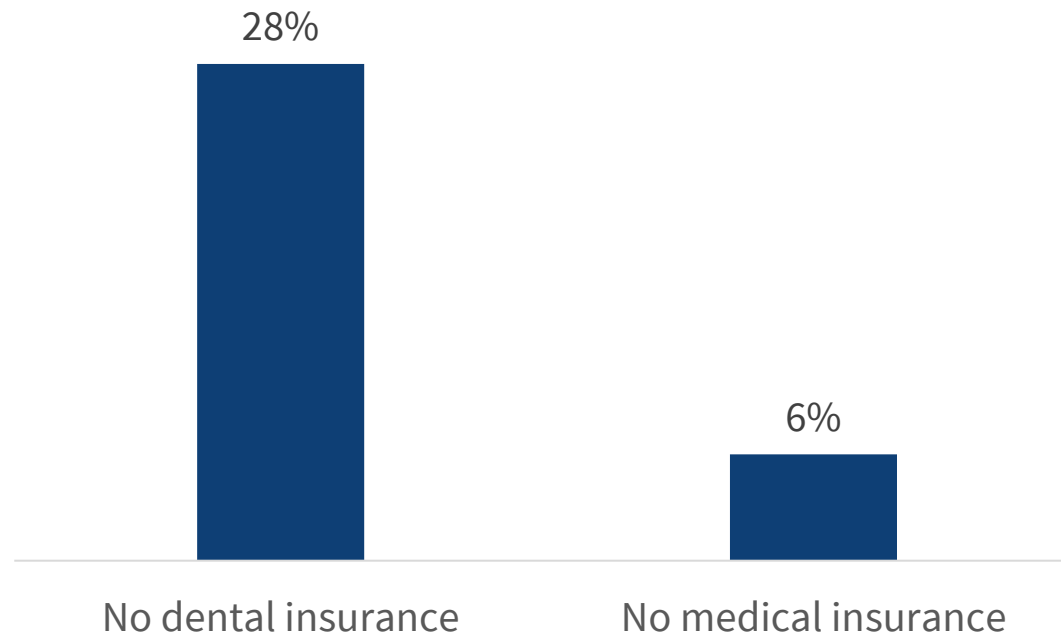
- Dental insurance coverage.
- Self-reported rating of oral health.
- Complete tooth loss.
- Unmet dental needs.
- Dental visit within the past year.
- Oral health of pregnant women.



# Dental Insurance Coverage, 2021

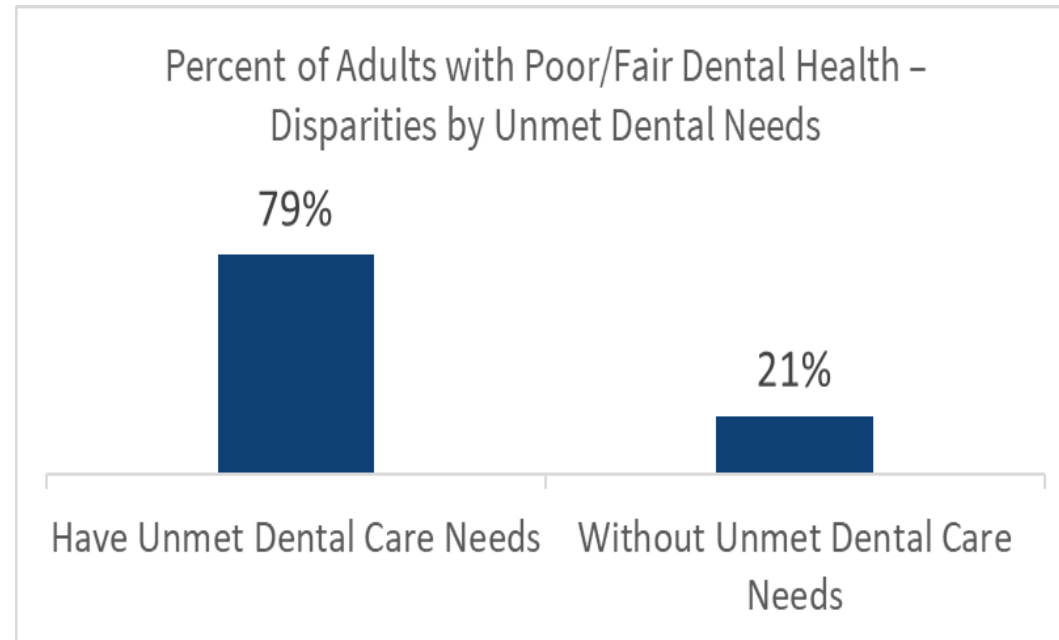
The percentage of adults reportedly **without dental insurance** was **4.6x** higher than the percentage without medical insurance.

Percent of Respondents Who Reported Not Having Dental insurance vs. Medical insurance



# Self-Reported Rating of Oral Health, 2021

**One in three** adults rated their dental health as poor/fair rather than excellent/very good/good. Those who needed dental care were far more likely to rate their dental health as poor/fair.



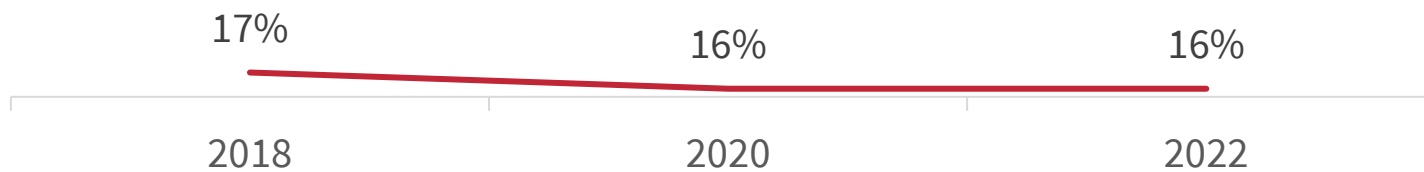
Data Source: [Ohio Medicaid Assessment Survey \(OMAS\)](#)

# Complete Tooth Loss in Older Adults, 2018-2022

## — Overall Findings

**One in seven** adults aged 65 years or older had all their teeth extracted due to tooth decay or gum disease.

Percent of Adults Aged 65+ Who Had All Their Natural Teeth Extracted



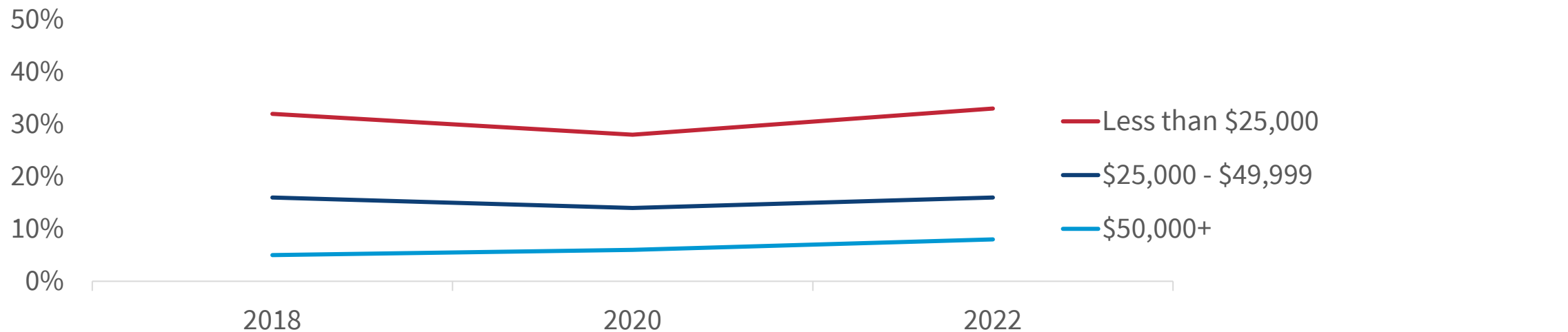
Source: Adobe Stock Images.

# Complete Tooth Loss in Older Adults, 2018-2022

## — Disparities by Income

Adults aged 65+ with a household income **less than \$25,000** were:

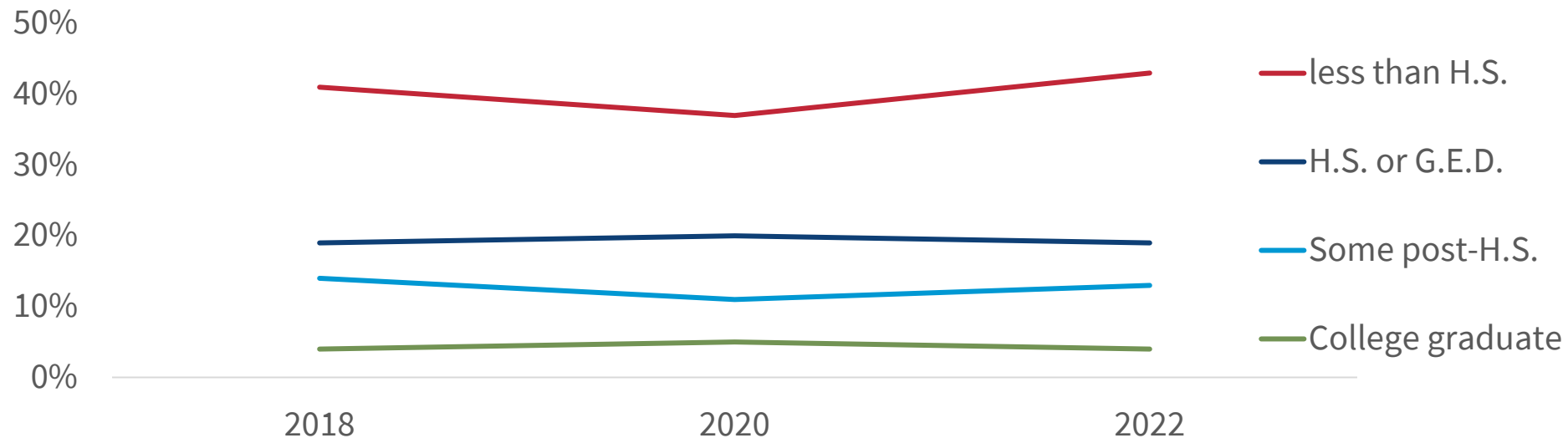
- **2x** as likely to lose all their teeth compared to those with an income of \$25,000 to \$49,999.
- **4x** as likely to lose all their teeth compared to those with an income of \$50,000 or more.



# Complete Tooth Loss in Older Adults, 2018-2022 — Disparities by Education

Adults aged 65+ with **less than High School degree** were:

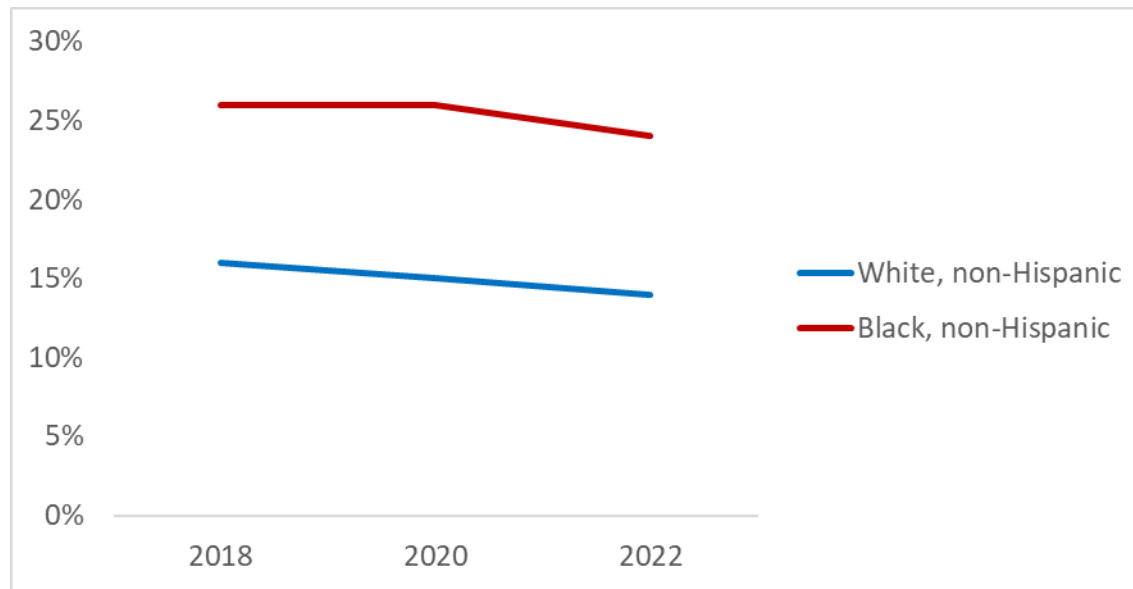
- **2x** as likely to lose all their teeth compared to those with a High School (H.S.) or General Educational Development (G.E.D.) degree.
- **12x** as likely to lose all their teeth compared to those with a college degree.



# Complete Tooth Loss in Older Adults, 2018-2022

## — Disparities by Race/Ethnicity

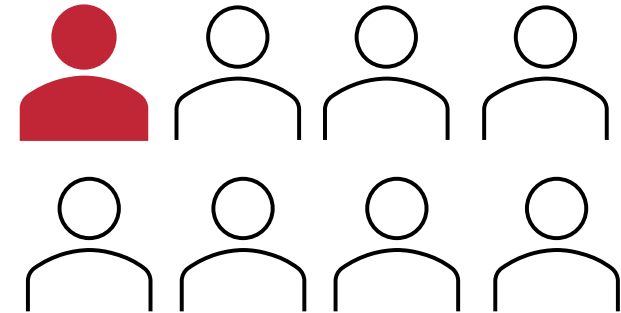
People who self-identified as Black/Non-Hispanic aged 65+ were **1.7x** as likely to lose all their teeth compared to Non-Hispanic White individuals.



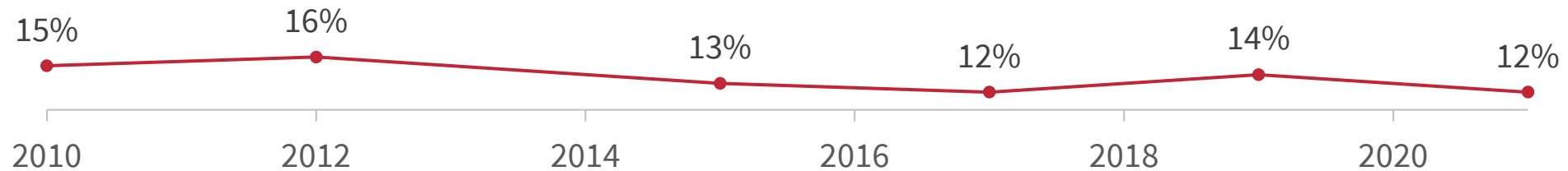
Data Source: [Behavioral Risk Factor Surveillance System \(BRFSS\)](#)

# Unmet Dental Needs, 2010-2021 —Overall Findings

**One in eight** adults aged 18+ reported they had unmet dental health care needs in 2021.



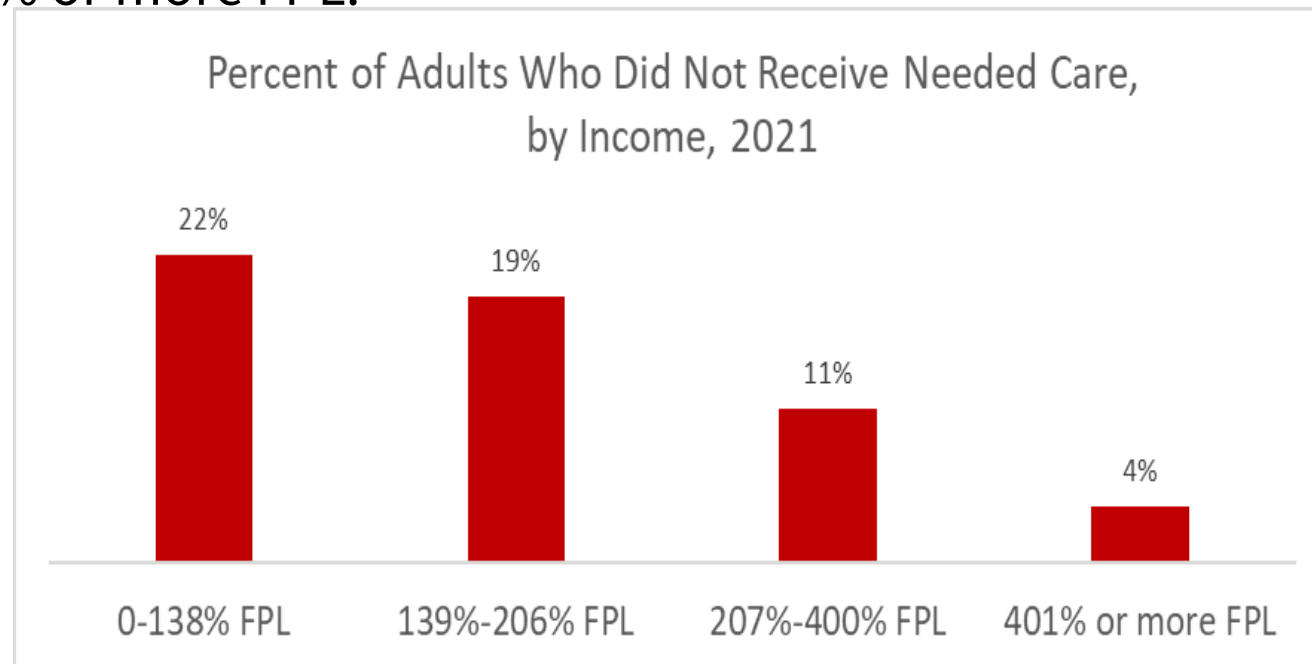
Percent of Adults with Unmet Dental Health Care Needs



# Unmet Dental Needs , 2021 — Disparities by Income

Adults with an income between **0% and 138% of the Federal Poverty Level (FPL)** are

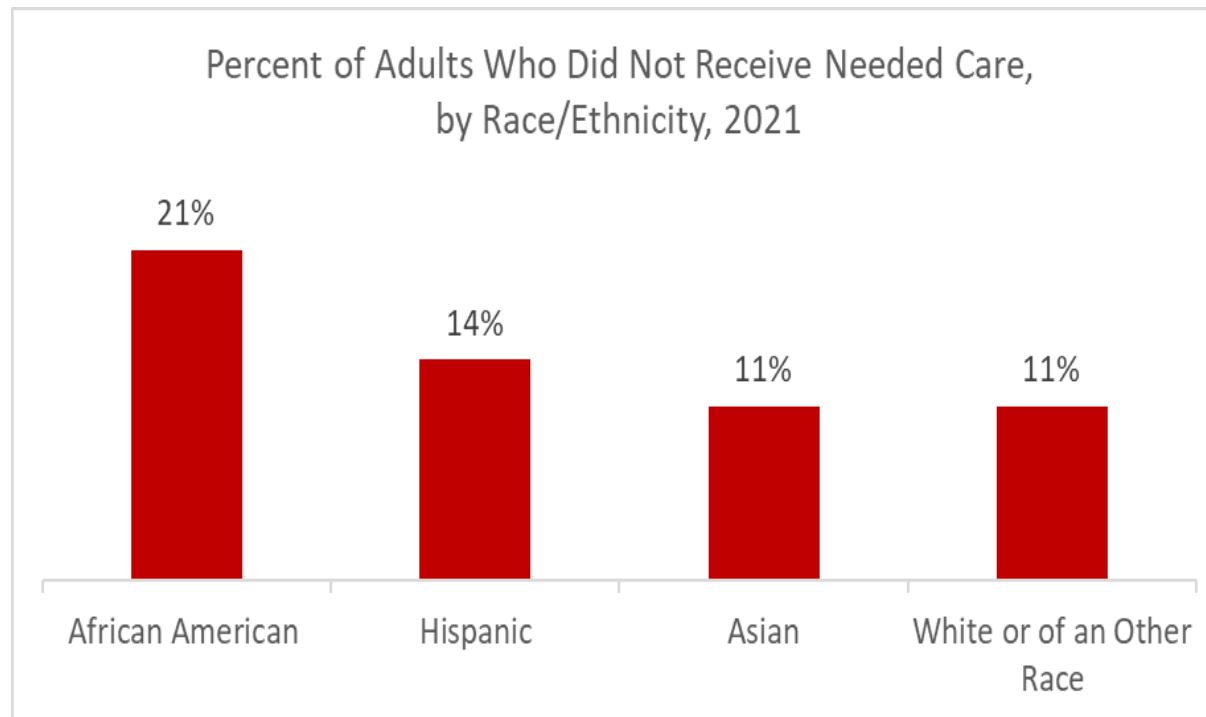
- **2x** as likely to have unmet dental care needs compared to those with a household income of 207%-400% FPL.
- **5.5x** as likely to have unmet dental care needs compared to those with a household income of 401% or more FPL.





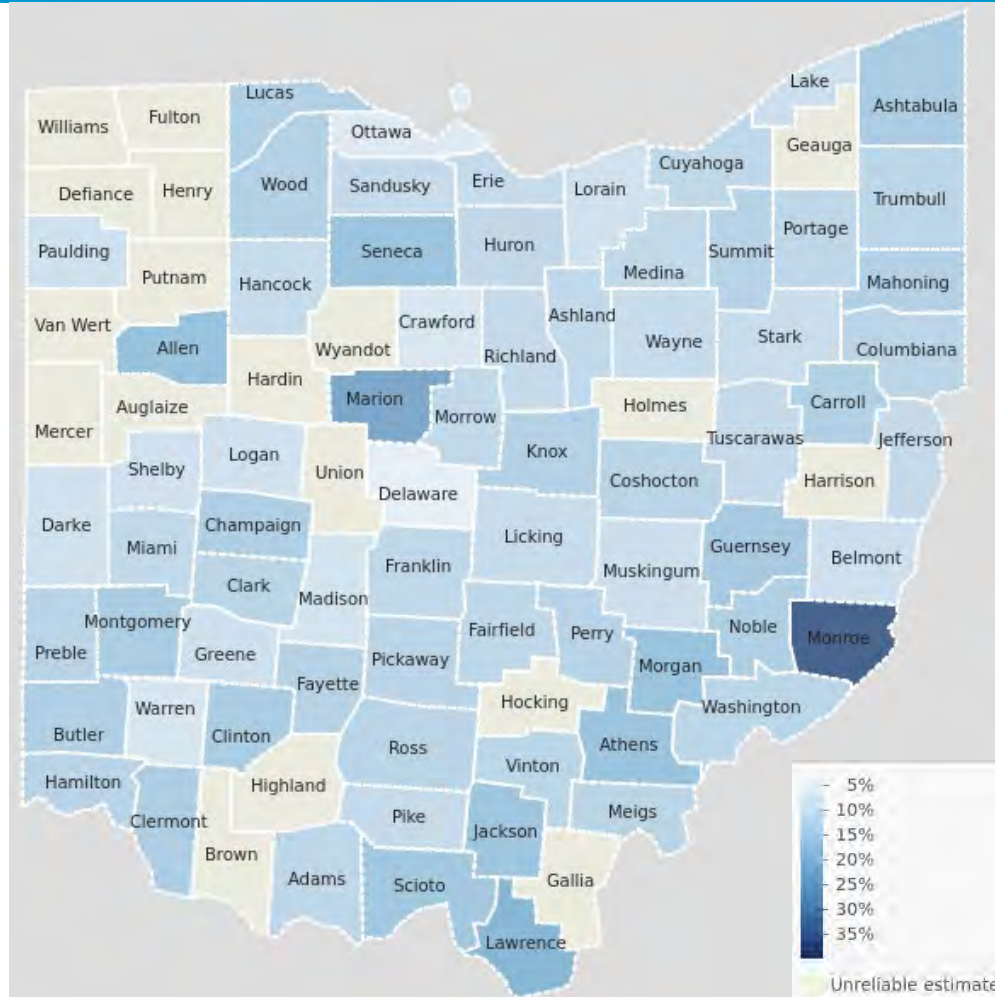
# Unmet Dental Needs, 2021 — Disparities by Race/Ethnicity

**African American** adults are **2x** as likely to have unmet dental care needs compared to Asians, Whites, and persons of other races.



Data Source: [Ohio Medicaid Assessment Survey \(OMAS\)](#)

# Unmet Dental Needs, 2021 – Geographic Disparities



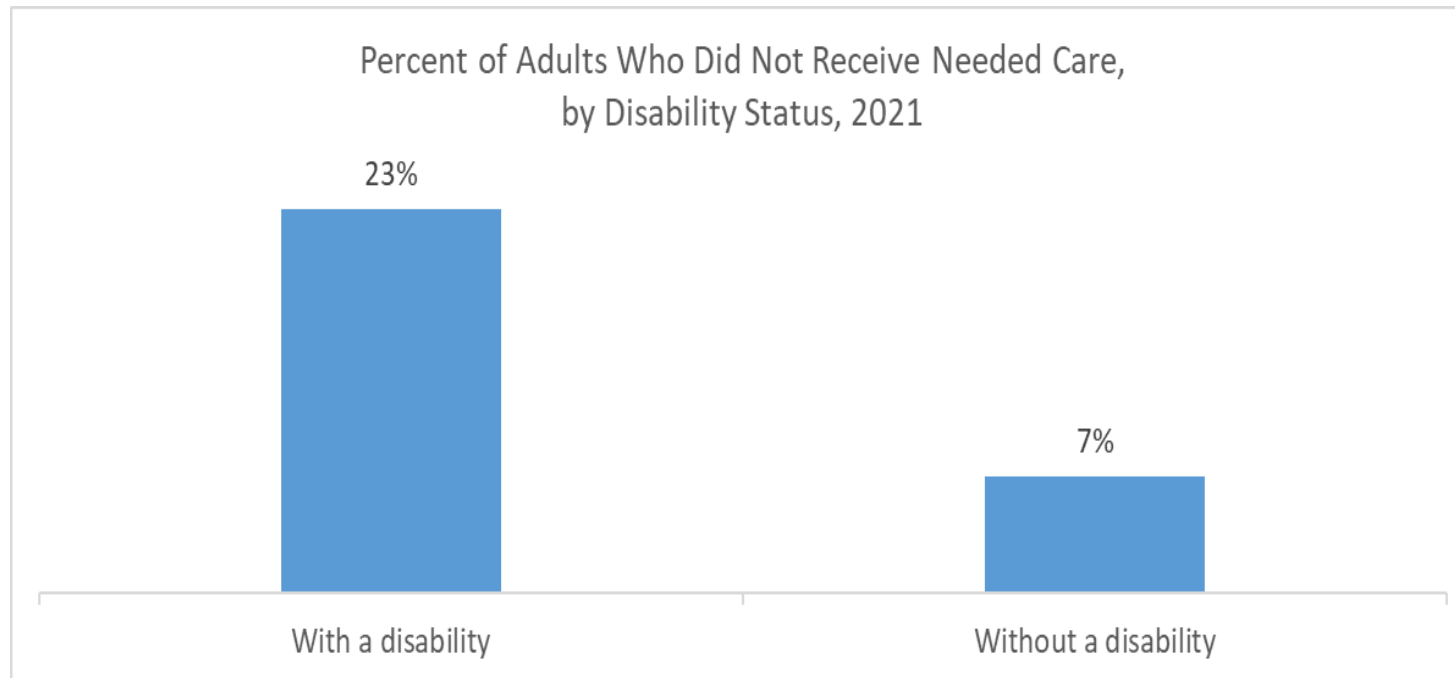
## Counties with the Highest Percentage of Persons Reporting Unmet Dental Needs:

1. Monroe (55%)
2. Marion (36%)
3. Lawrence (31%)

In Ohio, 12% of adults aged 18+ reported they had unmet dental needs.

# Unmet Dental Needs, 2021 — Disparities by Disabilities Status

Adults with a disability are **3x** as likely to have unmet dental care needs compared to those without a disability.



Data Source: [2021 Ohio Medicaid Assessment Survey \(OMAS\)](#)

# Dental Visit Within the Past Year, 2022

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In 2022, **65%** of adults reported visiting a dentist or dental clinic within the past year. This proportion has remained stable since 2018.

Adults without a dental visit within the last year are more likely to be:

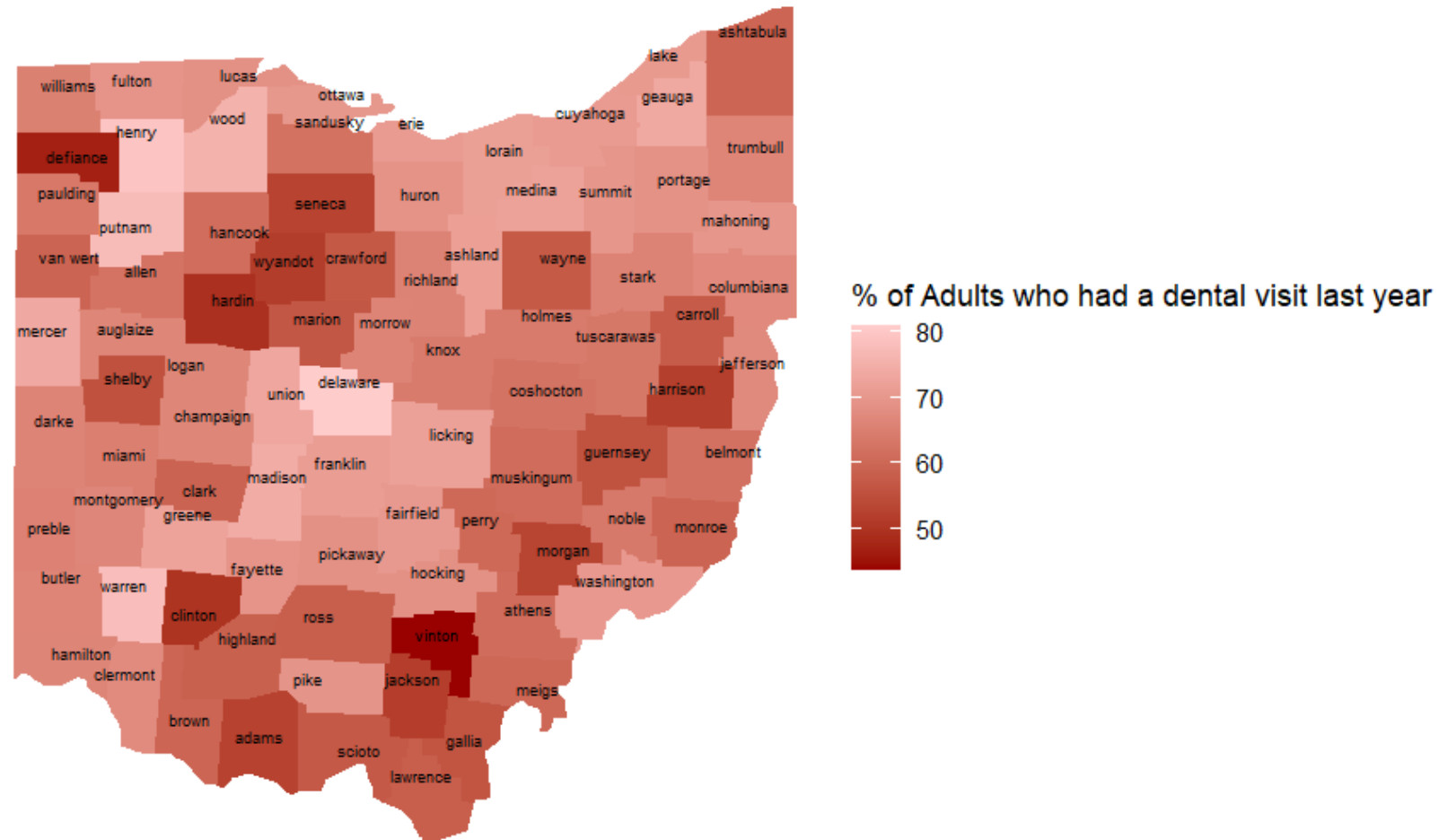
- Those with an annual **income of less than \$15,000**.
- Those with **less than a High School degree**.
- **Black** or **multiracial**.

(Note: The prevalence of dental visits among **American Indian or Alaskan Native** populations has significantly declined over the last six years, dropping from 76% in 2018 to 45% in 2022.)

# Dental Visit Within the Past Year, 2021 –Geographic Disparities

## Counties with the lowest percentage of adults reporting a dental visit in the past year:

1. Adams (53%)
  2. Morgan (53%)
  3. Seneca (53%)
  4. Harrison (52%)
  5. Jackson (52%)
  6. Wyandot (52%)
  7. Clinton (50%)
  8. Hardin (49%)
  9. Defiance (47%)
  10. Vinton (44%)
- All Ohio (65%)**



# Oral Health of Pregnant Women, 2021

**17%** of pregnant women reported unmet dental needs within the past year.<sup>1</sup>

**30%** of pregnant women rated their oral health as fair/poor, rather than excellent/very good/good.<sup>1</sup>

**42%** of pregnant women did not have a visit for teeth cleaning.<sup>2</sup>





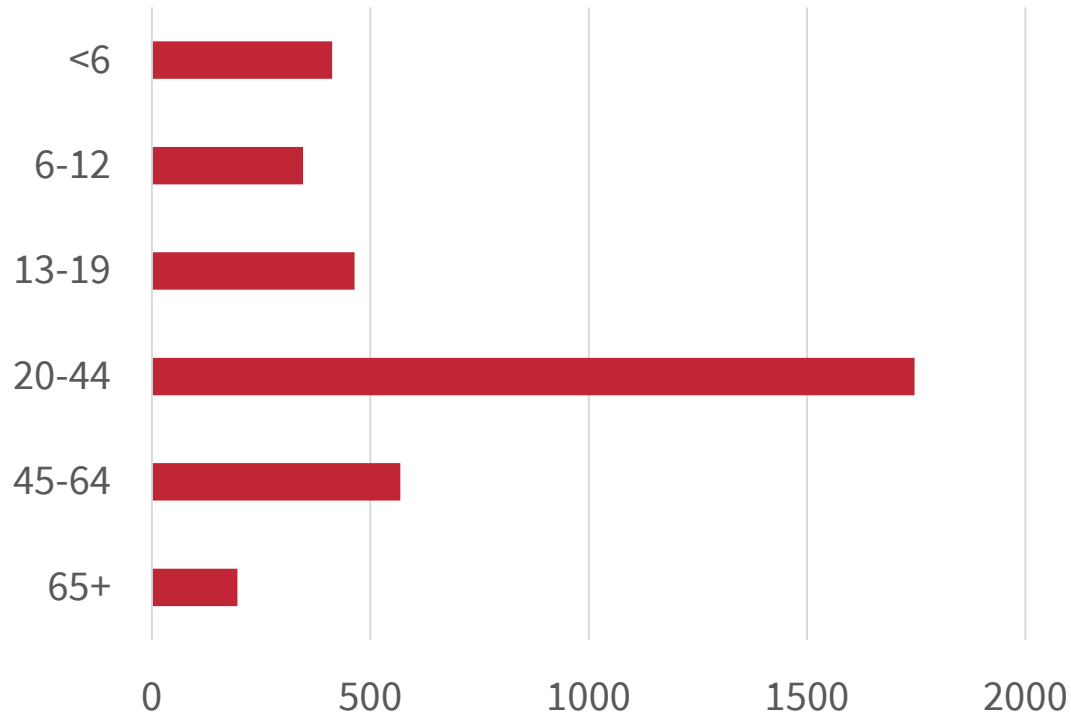
# Emergency Department Visits for Non-Traumatic Dental Conditions (NTDCs), 2016-2019

- **391,223 hospital visits** with a primary diagnosis of a NTDC, for an overall rate of 838 hospital visits per 100,000 Ohio residents.
- **85%** of these visits were for oral health problems that can typically be addressed in a dental office/clinic.
- **54%** of all NTDC-related hospital visits were by **Medicaid-insured** patients; followed by persons who were uninsured (18%).
- Estimated costs of these visits is **\$738 million**.

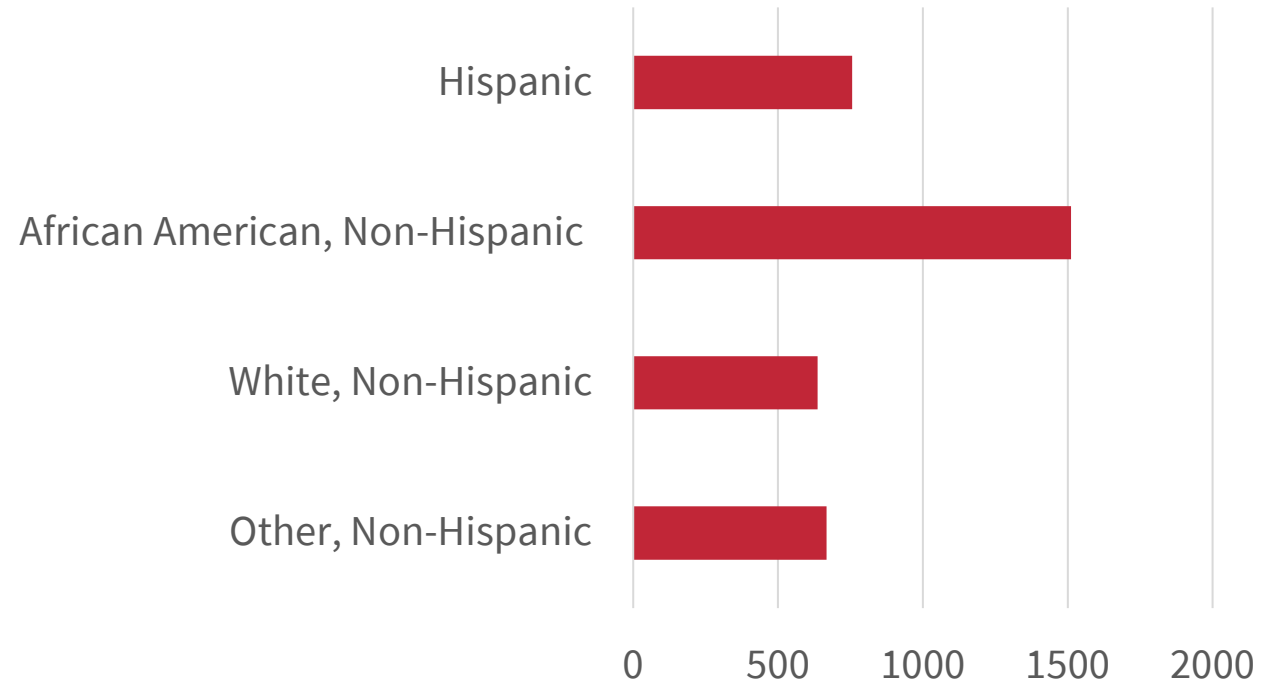


# Emergency Department Visits for NTDCs, 2016-2019 (continued)

Rate of Hospital Visits for NTDCs (per 100,000 residents), Disparities by Age

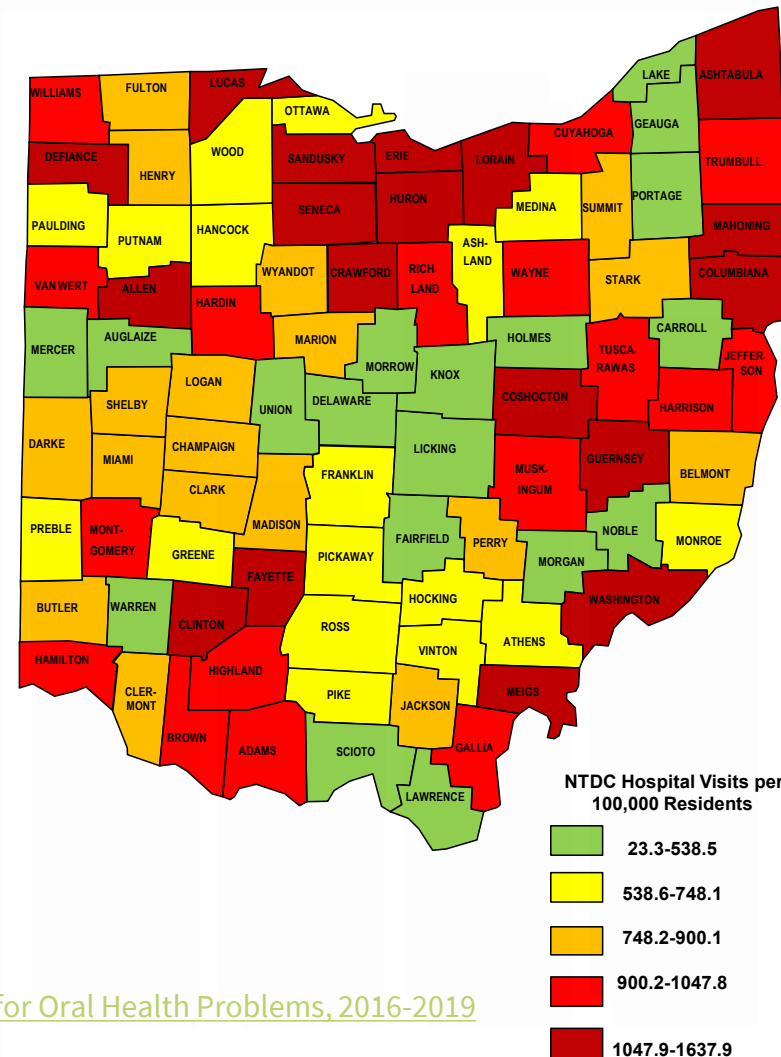


Rate of Hospital Visits for NTDCs (per 100,000 residents), Disparities by Race/Ethnicity



Data Source: [Use of Hospital Emergency Departments for Oral Health Problems, 2016-2019](#)

# Rates of Emergency Department Visits by County, 2016-19



Data Source: [Use of Hospital Emergency Departments for Oral Health Problems, 2016-2019](#)

# Are We Getting the Job Done?

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- Disparities continue to exist.
- What's behind the observational data?
- Access to care remains limited.
- Strategies that show promise:
  - Integration of oral health into primary care/chronic disease management.
  - Expansion of school-based/linked oral health services.
  - Changes in Medicaid.

# QUESTIONS?

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[Barbara.Carnahan@odh.ohio.gov](mailto:Barbara.Carnahan@odh.ohio.gov)

<https://odh.ohio.gov/know-our-programs/oral-health-program/welcome>





**Department of  
Health**

# Building Blocks of Organizational Health Literacy: Strategies and Frameworks



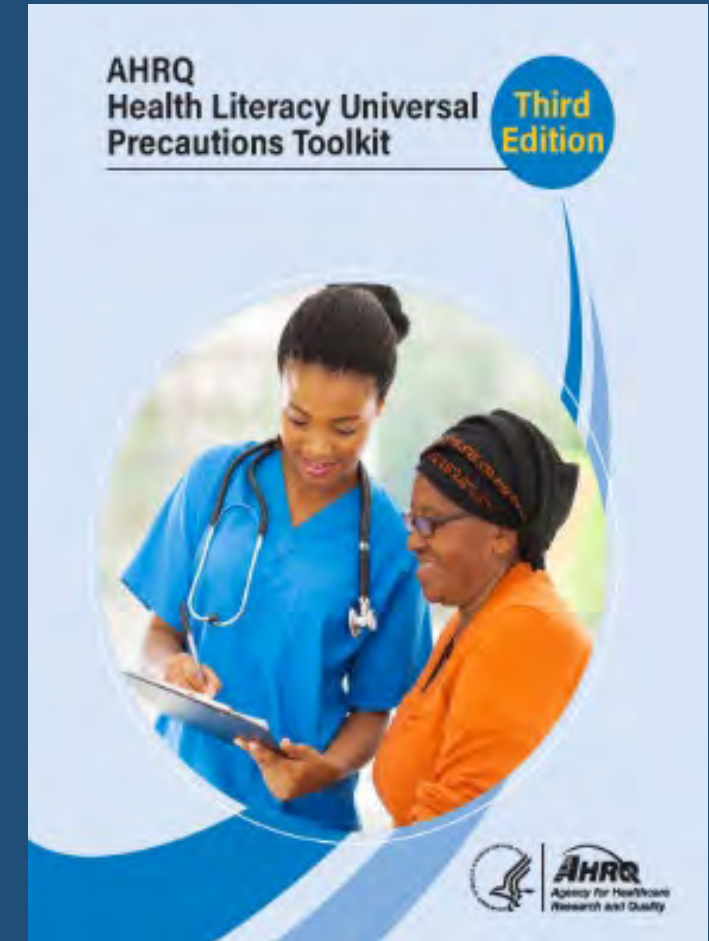
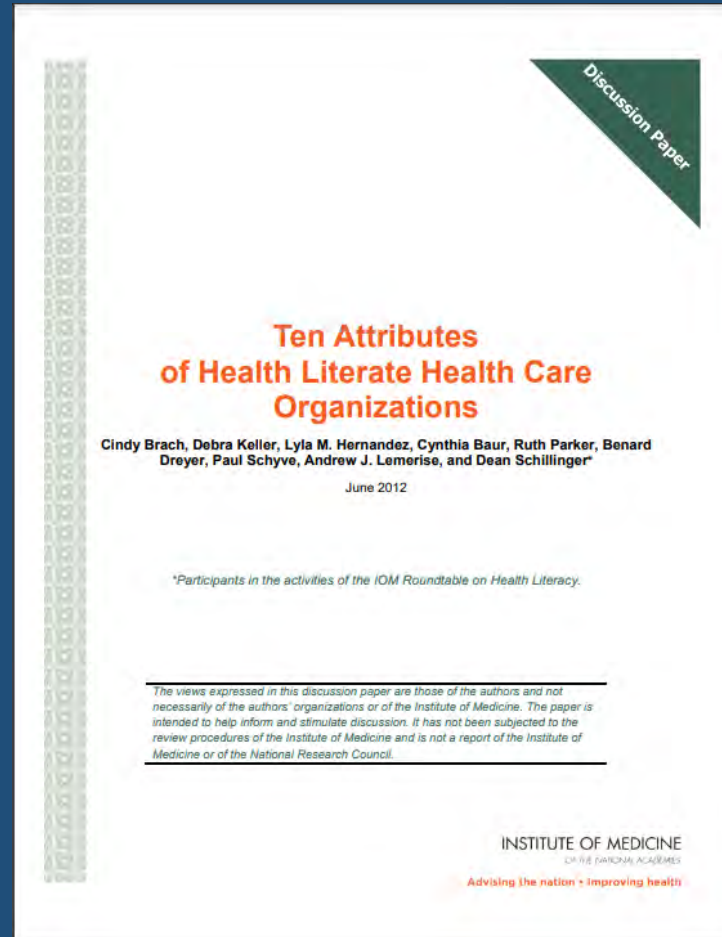
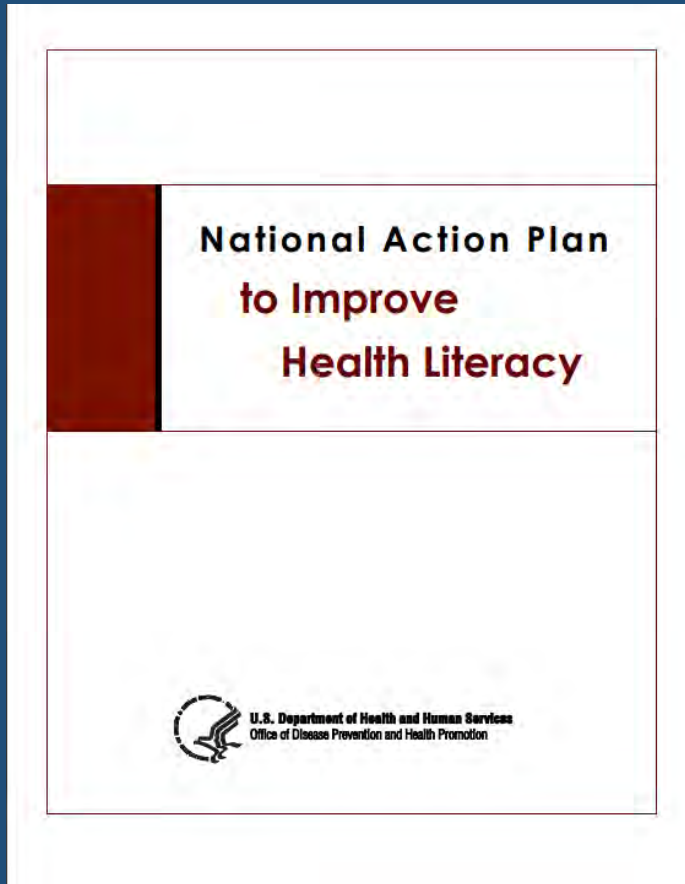
Jessica Y. Lee DDS, MPH, PhD,  
Demeritt Distinguished Professor of Pediatric Dentistry  
Chair, Department of Pediatric Dentistry and Dental Public Health  
University of North Carolina at Chapel Hill, USA

*Oral Health  
2024 Symposium*

# Objectives

1. Recognize the significance of organizational health literacy and how it contributes to employee well-being, productivity, and organizational success.
2. Explored the key elements and dimensions of organizational health literacy.
3. Understand the interplay between communication, culture, and health literacy.
4. Discuss the positive impacts of organizational health literacy on employees, clients, and the organization including improved health outcomes, enhanced decision-making, and increased trust and satisfaction.

# Resources





**Which of the following is the strongest predictor of a person's health status?**

- a. Age
- b. Income
- c. Literacy skills
- d. Employment status
- e. Education level
- f. Racial or ethnic group

# Which of the following is the strongest predictor of a person's health status?

The correct answer is “c.” Although low health literacy can affect everyone regardless of background or educational level, studies on the issue show that **limited literacy skills** are a stronger predictor of an individual's health status than age, income, employment status, education level, and racial or ethnic group.

*“Health Literacy: Report of the Council on Scientific Affairs.” JAMA 1999;281:552-557.*

**What percentage of patients forgets what the doctor told them as soon as they leave the office?**

- a. 80 percent
- b. 50 percent
- c. 10 percent
- d. Less than 10 percent

# What percentage of patients forgets what the doctor told them as soon as they leave the office?

The correct answer is “a.” **Up to 80% of patients forget** what their doctor tells them as soon as they leave the office. And nearly 50% of what they do remember is recalled incorrectly.

*“Patients’ memory for medical information.” Journal of the Royal Society of Medicine 2003:96:219-222.*

## Which of the following are coping mechanisms used by patients with low health literacy?

- a. Say they forgot their eyeglasses to avoid filling out forms or questionnaires.
- b. Laugh about being forgetful when asked about their medical condition or treatments.
- c. Nod politely when the doctor speaks and don't ask any questions.
- d. All of the above.

# Which of the following are coping mechanisms used by patients with low health literacy?

The correct answer is “d.” People with low health literacy are often embarrassed or ashamed to admit they have difficulty understanding health information and instructions. **They use well-practiced coping mechanisms that effectively mask their problem.**

*“20 Common Problems in Primary Care,” Barry D. Weiss, MD, editor. McGraw-Hill, 1999.*

**Health literacy refers only to the ability to read and understand written information.**

a. True

b. False

**Health literacy refers only to the ability to read and understand written information.**

The correct answer is “b.” Health literacy is broader than general literacy; it includes the ability to process numbers (numeracy) and navigate the health care system.

*“Health Literacy: A Prescription to End Confusion.”  
Institute of Medicine of the National Academies,  
April 2004.*



# Definition

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Definition of Health Literacy  
(Healthy People 2010)

“The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.”

# Literacy is multidimensional

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Beyond education level and knowledge

Ability to process information

Cognitive skills: reading, writing, numeracy

Computer literacy, financial literacy, etc..

# Epidemiology

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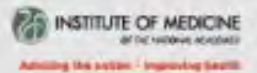
Nearly a quarter to a half of Americans are functionally illiterate (NLS, 2000)

90 million Americans struggle to understand basic health information

This includes consents, verbal instructions and drug labels



This graphic reflects the views of the authors of the Discussion Paper "Ten Attributes of Health Literate Health Care Organizations" and not necessarily of the authors' organizations or of the IOM. The paper has not been subjected to the review procedures of the IOM and is not a report of the IOM or of the National Research Council.



**FIGURE 1A** Foundations of a Health Literate Organization

# Communication

# Communication

- the act or process of using words, sounds, signs, or behaviors to express or exchange information or to express your ideas, thoughts, feelings, etc., to another person
- is verbal speech or other methods of relaying information that get a point across.

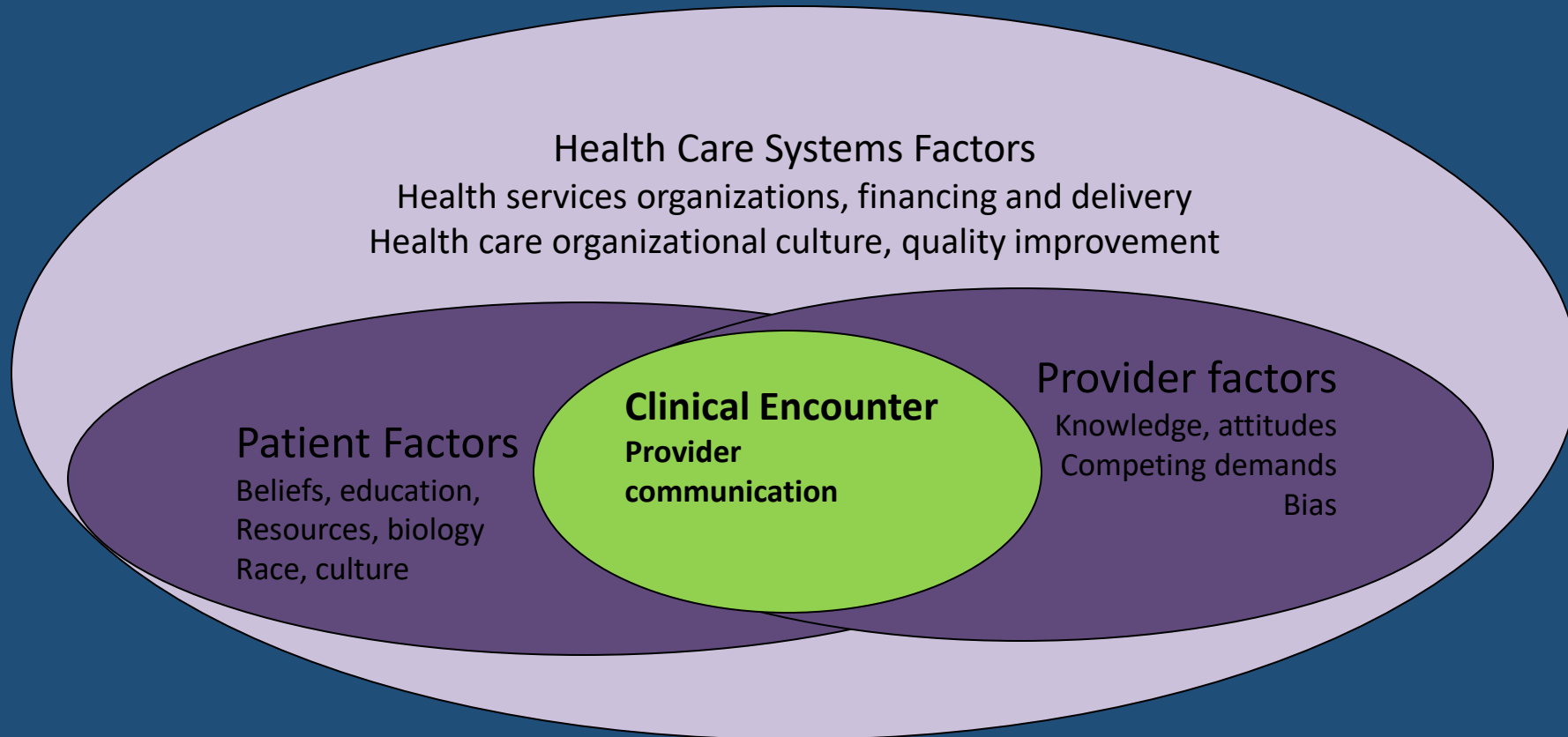
“It takes two to speak the truth - one to speak and another to hear.”

Henry David Thoreau



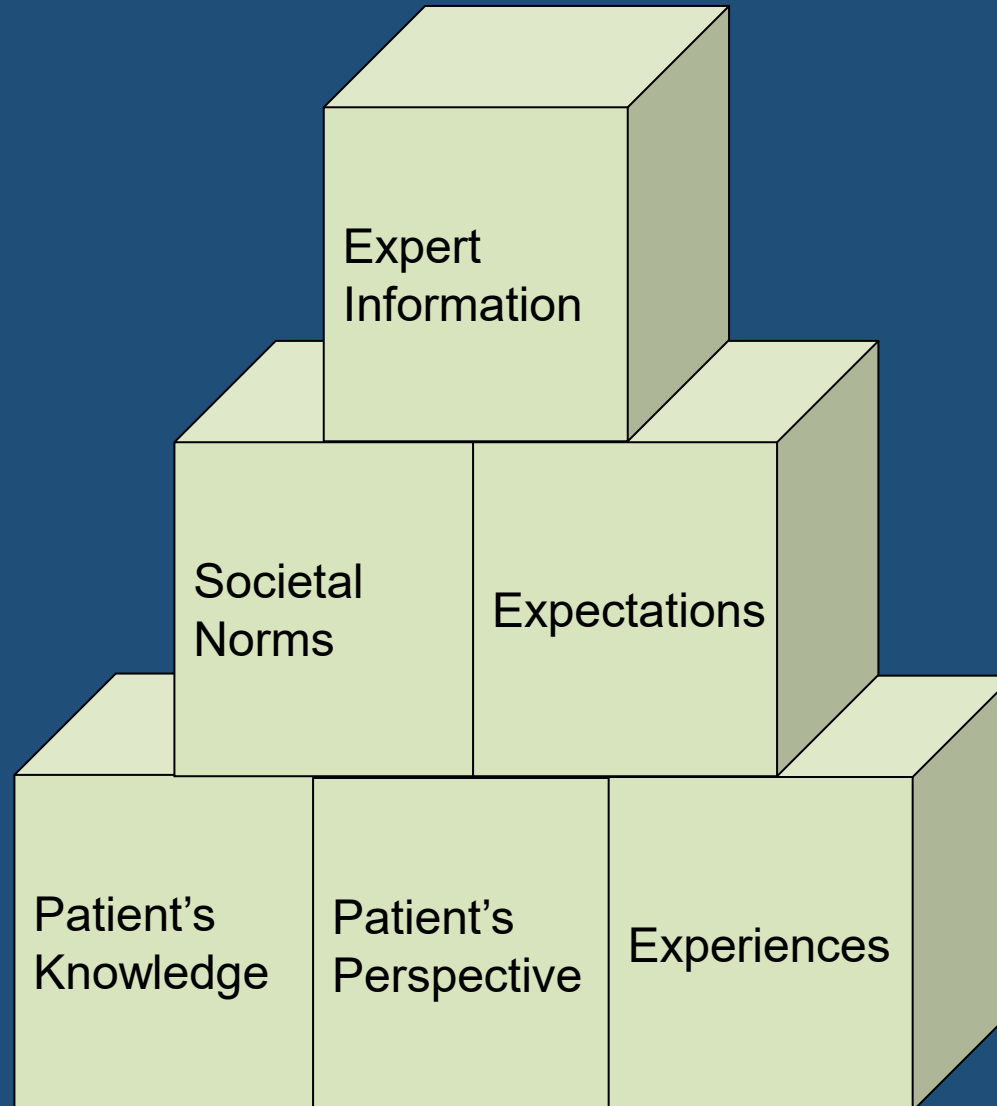
# Understanding the Origins of Health Care Disparities: Key Potential Determinants

Kilbourne et al., AJPB 2006





# Components of Health Literacy



# Assessment of Caregivers/Patients

## Readiness to Change

Pre-contemplation	28%
Contemplation	10%
Action	31%
Maintenance	31%

## Confidence/Self efficacy

**WHY effective  
communication is critical in  
the delivery of optimal oral  
health care?**

# Fluoride Knowledge


Parents should brush their child's teeth twice a day until the child can handle the toothbrush alone	88%
All children older than 6 months should receive a fluoride supplement every day	20%
Parents should start brushing their child's teeth with toothpaste that contains fluoride at age 3	6%
Children younger than 6 years should use enough toothpaste with fluoride to cover the brush	32%



	Dental patients N=102	Medical Patients N=202	WIC N=221
Floss	100%	100%	100%
Brush	100%	100%	100%
Pulp	97%	87%	83%
Fluoride	98%	95%	95%
Abscess	86%	82%	74%
Extraction	97%	91%	71%
<b>Dentition</b>	<b>44%</b>	<b>37%</b>	<b>20%</b>
Plaque	94%	87%	92%
<b>Incipient</b>	<b>61%</b>	<b>48%</b>	<b>25%</b>
Caries	93%	87%	75%

# Comprehension Increased with Patient Literacy Level

\* p<.0001, † p<.05

	<u>&lt;6</u>	<u>7-8</u>	<u>&gt;9</u>
	79%	86%	88% †
	35%	66%	78% *
	8%	64%	82% *
	8%	18%	23% *
	0%	6%	15% *

**In multivariate analysis only literacy and age predicted comprehension.**

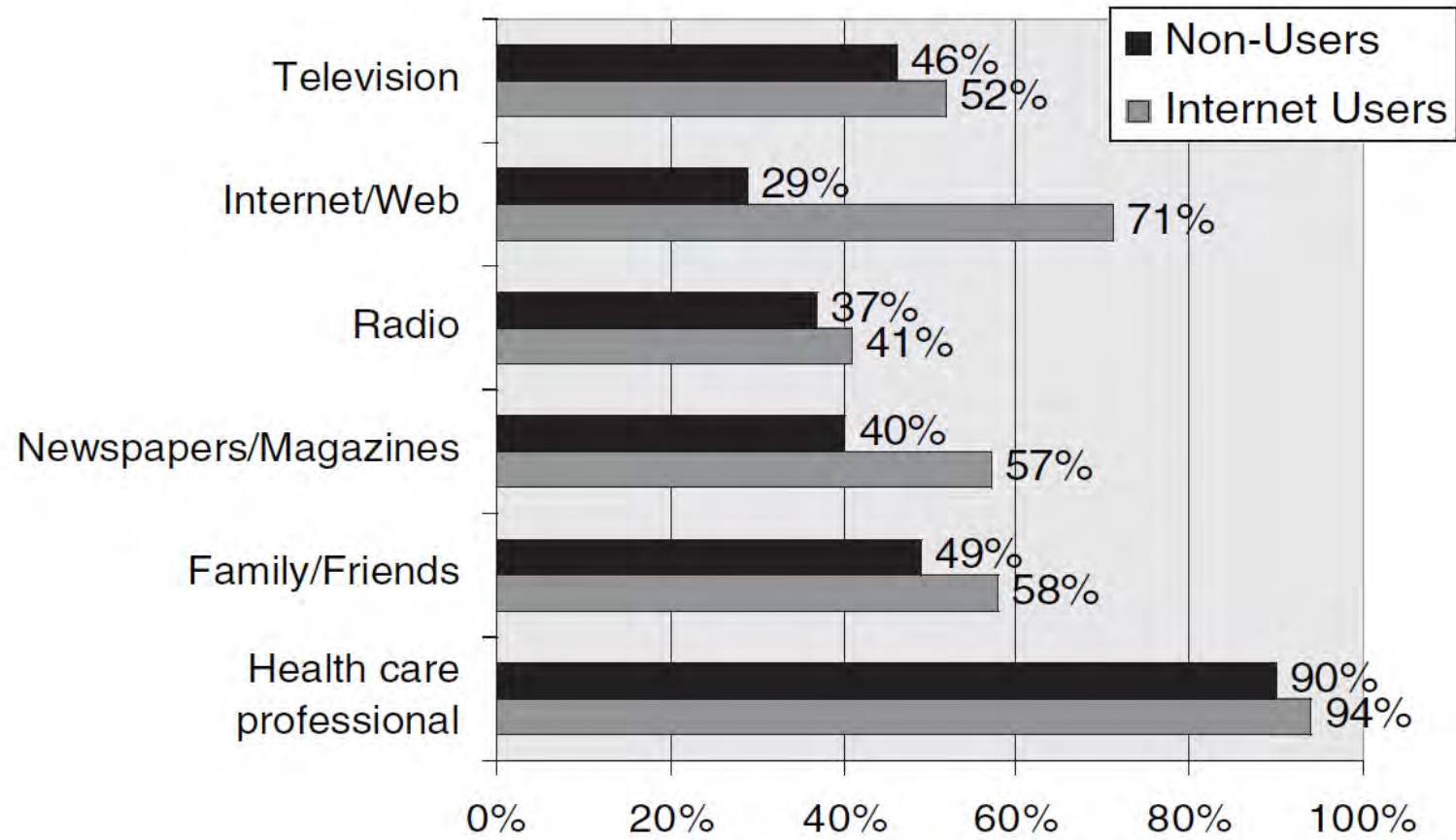
Patients with low literacy (< 6th gd.) 3x more likely to incorrectly interpret warning labels.

**TABLE 3-1** Health Information Seeking by Current Internet Use

	Internet Users	Non-Users	P Value
"I have difficulty understanding a lot of the health information I read."	70 (21.2)	128 (42.0)	<0.0001
"When I read or hear something concerning my health care, I bring it up with my doctor."	274 (83.3)	272 (87.7)	0.1101
"It is hard to find good answers to my health questions and concerns."	90 (27.5)	142 (47.3)	<0.0001
"Very" or "Somewhat" confident in ability to get health advice OR confidence in ability to get health advice or information if needed	290 (88.2)	247 (80.7)	0.0096
Scale: (1) Very confident, (2) Somewhat confident, (3) Slightly confident, (4) Not confident at all.	Mean (SD) 1.53 (0.77)	Mean (SD) 1.75 (0.92)	0.0014

SOURCE: Kukafka, 2008.





**FIGURE 3-1** Trust in sources of health information.  
 SOURCE: Kukafka, 2008.

# Implications of good communication

- Tolerate pain (Roder et al, 1996)
- Adhere to treatment (Greenfield et al., 1994)
- Recover from illness (Roder et al, 2002)
- Increased daily function (Smith et al., 2004)

# Implications of good communication

- Patients judge good communication skills as a major indicator of their doctor's competence

Henrdon et al., 2002

# Implications of good communication

- Increased patient satisfaction (Roter et al, 2002)
- Fewer complaints (Maguire et al., 2002)
- Fewer malpractice suits (Little et al, 2001)
- Greater job satisfaction (Brown et al., 2001)
- Less work related stress (Brown et al., 2001)
- Decreased burn out (Hall et al., 1998)

# Best Practices



"The doctor will see you now —  
I can't promise that he'll talk  
to you, but he'll see you."

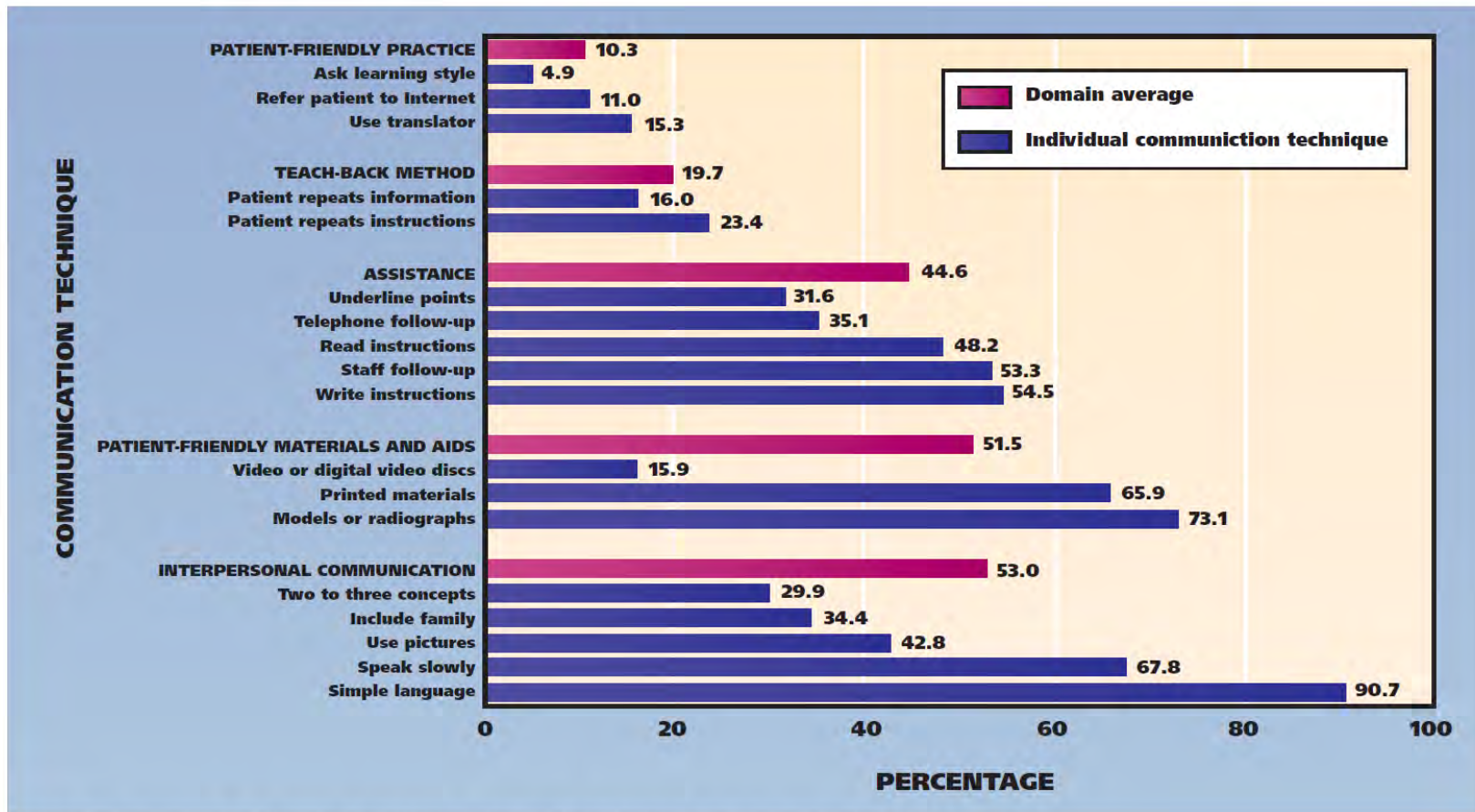
# Treatment of Dental Caries

The management protocol (tx plan) should be based on:  
1) Detailed history information 2) Clinical findings & diagnoses

A typical treatment plan should consider the following (in this order):  
1) Preventive 2) Behavioral 3) Growth & Development 4) Restorative

More than 1 alternative treatment plans/strategies are usually available/possible

Provider and parent preferences come into the decision-making, while operating within the “**standard of care**”



**Figure.** Percentage of dentists routinely using each technique, according to domain.



**TABLE 4**

## Mean number of communication techniques used routinely, according to area of dentistry.

AREA OF DENTISTRY*†	18 COMMUNICATION TECHNIQUES‡ (n = 1,730)		SEVEN BASIC COMMUNICATION TECHNIQUES§ (n = 1,825)	
	Sample Size (No. [%])	Mean No. of Techniques Used	Sample Size (No. [%])	Mean No. of Techniques Used¶
<b>Oral and Maxillofacial Surgery</b>	40 (2.3)	9.68	44 (2.4)	3.50 (3)
<b>Periodontics</b>	56 (3.2)	9.16	59 (3.2)	3.59 (2)
<b>Dental Public Health</b>	4 (0.2)	8.75	4 (0.2)	3.25 (5#)
<b>Endodontics</b>	34 (2.0)	8.06	35 (1.9)	3.29 (4)
<b>Prosthodontics</b>	19 (1.1)	7.47	22 (1.2)	3.91 (1)
<b>Orthodontics and Dentofacial Orthopedics</b>	79 (4.6)	7.35	84 (4.6)	3.25 (5#)
<b>Oral and Maxillofacial Pathology</b>	3 (0.2)	7.00	3 (0.2)	3.00 (8)
<b>General Practice</b>	1,454 (84.0)	6.94	1,530 (83.8)	2.99 (9)
<b>Pediatric Dentistry</b>	41 (2.4)	6.49	44 (2.4)	3.09 (7)

\* Listed according to descending frequency for 18 communication techniques.

† Oral and maxillofacial radiology is not included in this table because none of the participants practiced in this area of dentistry.

‡ Analysis of variance  $P \leq .001$ .

§ Analysis of variance  $P = .005$ .

¶ The descending rank order for the seven basic communication techniques is shown in parentheses.

# This communication technique tied for fifth place; therefore, there is no sixth place ranking.

TABLE 5

### Percentage distribution of participants, according to beliefs about effectiveness of communication techniques.

DOMAIN AND ITEM	SAMPLE SIZE (NO.)*	RESPONSE (%)		
		Yes	No	Don't Know
<b>Interpersonal Communication</b>				
Present two to three concepts at a time	1,613	49.0	10.2	40.7
Ask patients whether they would like a family member or friend involved in the discussion	1,700	77.8	1.4	20.7
Draw pictures or use printed illustrations	1,672	84.2	0.7	15.0
Speak slowly	1,735	83.2	0.9	15.7
Use simple language	1,725	87.8	0.5	11.5
<b>Teach-Back Method</b>				
Ask patients to repeat information or instructions back to you	1,452	62.5	2.8	34.6
Ask patients to tell you what they will do at home to follow instructions	1,442	55.1	5.1	39.7
<b>Patient-Friendly Materials and Aids</b>				
Use a video or digital video disc	875	64.5	2.4	33.0
Hand out printed materials	1,718	75.9	1.5	22.4
Use models or radiographs to explain	1,745	89.3	0.8	9.8
<b>Assistance</b>				
Underline key points on print materials	1,412	59.8	2.9	37.1
Follow up with patients by telephone to check understanding and adherence	1,697	78.6	1.0	20.3
Read instructions out loud	1,545	67.9	3.4	28.6
Ask hygienist, assistant or other office staff to follow up with patients for postcare instructions	1,736	83.2	0.8	15.9
Write or print out instructions	1,660	77.7	1.2	21.0
<b>Patient-Friendly Practice</b>				
Ask patients how they learn best	850	35.5	3.0	61.4
Refer patients to the Internet or other sources of information	1,298	42.0	3.3	54.5
Use a translator or interpreter	1,403	82.1	0.7	17.1

\* Excludes participants who reported "never" using a communication technique.

**Goals for Healthy Teeth (Age 5 and younger)**

Patient Name: \_\_\_\_\_  
Date of Visit: \_\_\_\_\_  
Dentist: \_\_\_\_\_  
Hygienist: \_\_\_\_\_

Your child has been assessed to have the following for caries (cavities):  
 High  Medium  Low

Between today and your next visit, please work on the Goals checked (✓) below:



Next fluoride visit in \_\_\_ months



Healthy snacks such as fruit, carrot sticks, yogurt, low fat cheese, pretzels, whole grain crackers



No soda/energy drinks  
 No juice  
 Juice only with meals



Less or no candy & junk food  
 Chew Sugarfree gum (eg Trident, Extra)



No sippy cup/bottle  
 Only plain milk or water in cup or bottle  
 If bottle to bed, use only water



Drink fluoridated water, tap water



Daily flossing with floss string or pick



Brush morning and before bed with fluoride toothpaste:  
 Thin smear (<2 years old)  
 Pea-size amount (2-5 years old)



Fluoride varnish was applied in clinic today.

\* Wait until tomorrow to brush/floss. Avoid hard, crunchy, and sticky foods.

**IMPORTANT:**  
The last thing that touches your child's teeth before bedtime is the toothbrush with fluoride toothpaste.



Use Gel-kam \_\_\_ a day - Apply thin smear to all teeth

\* Wait 30 minutes before eating, drinking or rinsing after

On a scale of 1-5, how likely do you think you can help your child meet these goals?

1                      2                      3                      4                      5  
Not very                      Not sure                      Very  
likely

Clinician's Comments:

Next visit Date: \_\_\_\_\_

Preventative

1 month follow-up

Restorative

3 month follow-up

6 month checkup

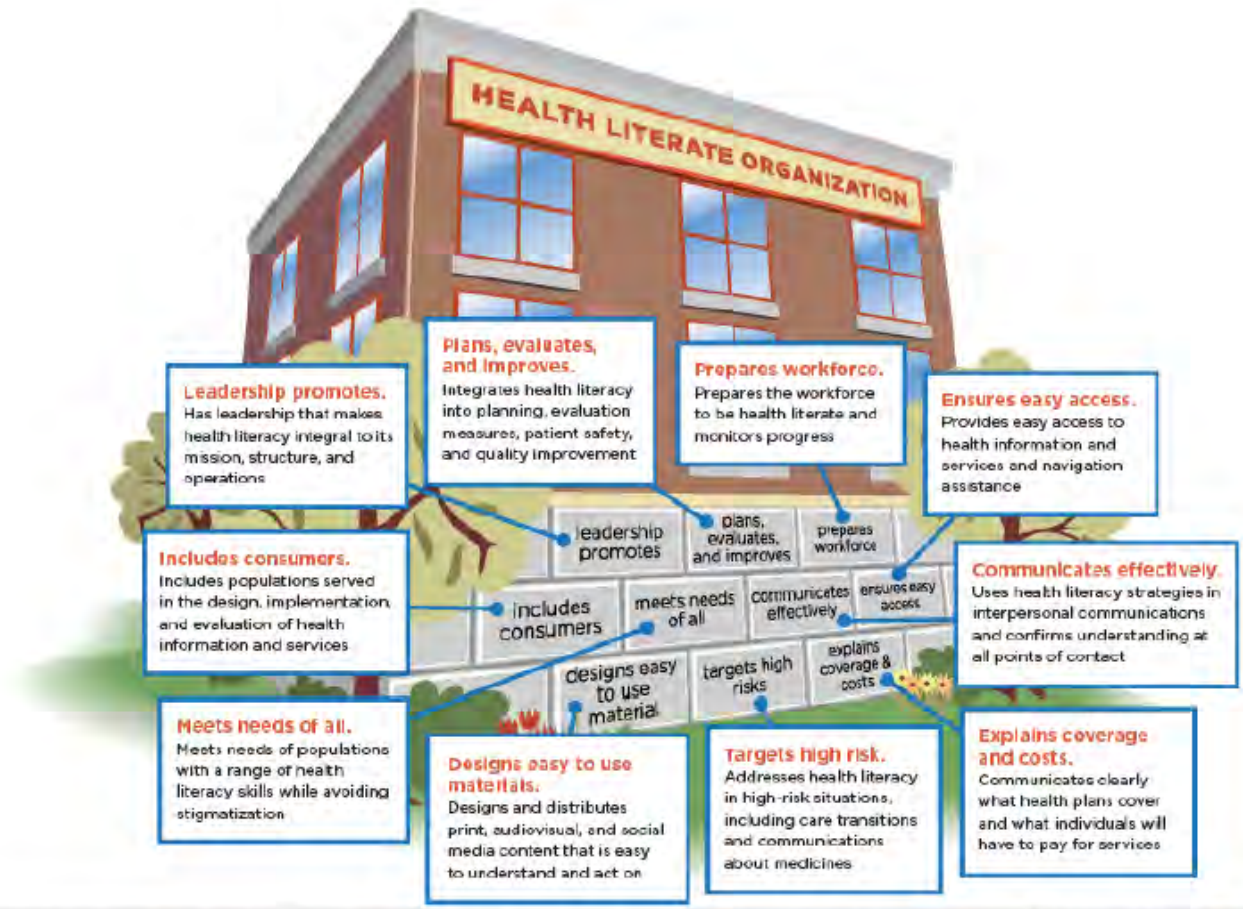
\_\_\_\_\_

# Providers tend to overestimate their communication ability

75% providers believed they communicated satisfactorily

21% patients believed that their provider communicated satisfactorily

Tongue et al., 2002



This graphic reflects the views of the authors of the Discussion Paper "Ten Attributes of Health Literate Health Care Organizations" and not necessarily of the authors' organizations or of the IOM. The paper has not been subjected to the review procedures of the IOM and is not a report of the IOM or of the National Research Council.

**INSTITUTE OF MEDICINE**  
OF THE NATIONAL ACADEMIES  
*Advancing the nation • restoring health*

FIGURE 1B Elaborations on the Foundations of a Health Literate Organization

“Health care professionals do not recognize that patients do not understand the health information we are trying to communicate.

We must close the gap between what health care professionals know and what the rest of America understands.”



**Dr. Richard Carmona,  
U.S. Surgeon General**

**Mentioned health literacy in  
200 of last 260 speeches**

**The patient will never care how  
much you know until they  
know how you care**

**Thank you!**