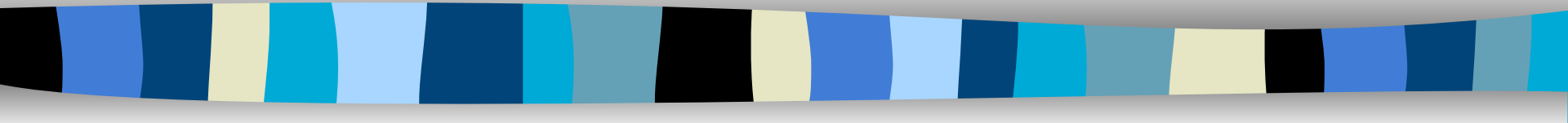


# Smiles Across Miami



Dr. Ana Karina Mascarenhas  
Associate Dean for Research  
College of Dental Medicine



# Why Oral Disease prevention important?

- Oral disease affects general health
  - Cardiovascular, preterm births, diabetes
- Affect economic productivity, affect work
  - 51 million school hours lost
- Oral disease progressive, cumulative, complex over time

# Currently a large majority of the US Population



# Caries Decline: US

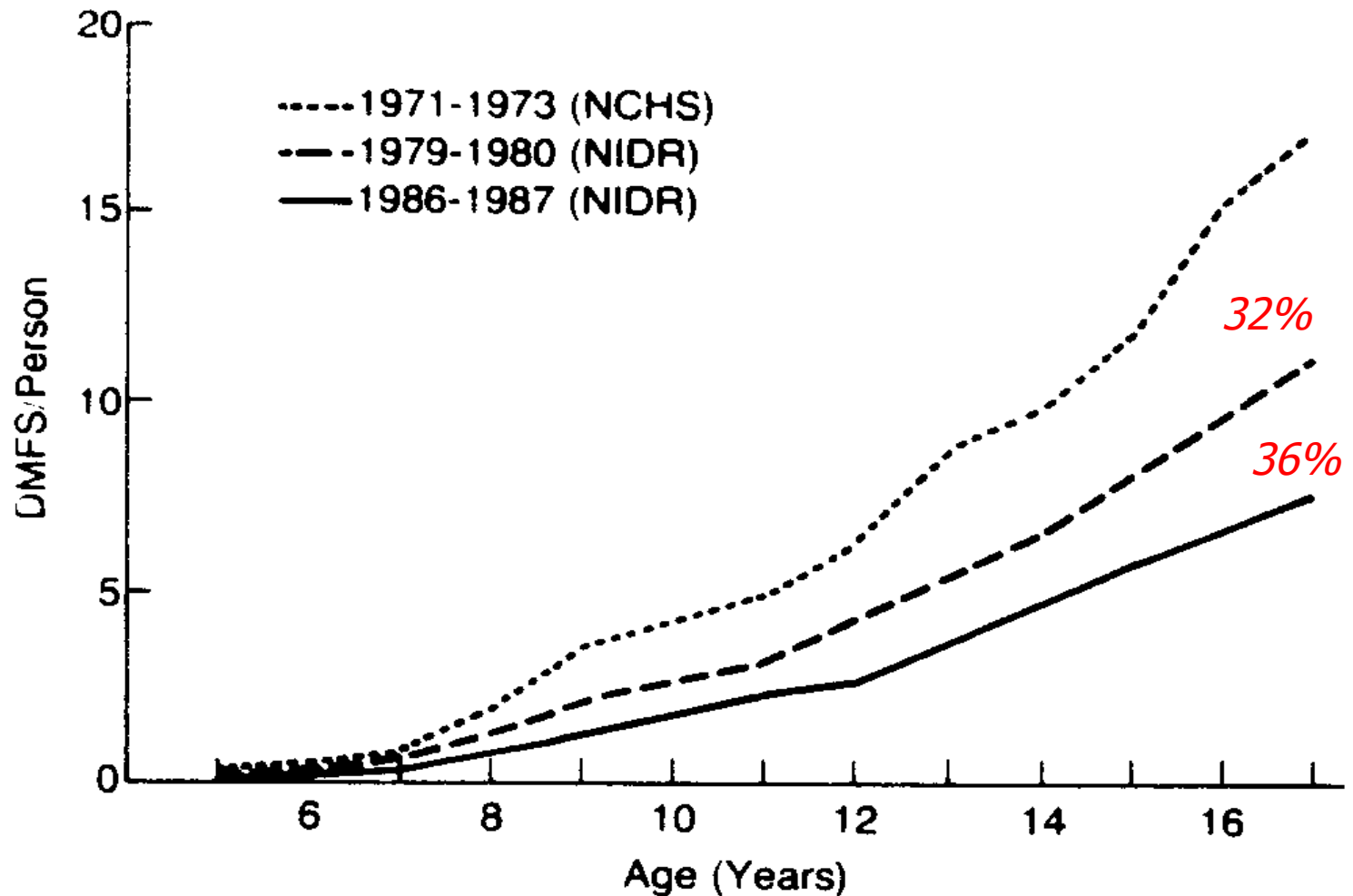
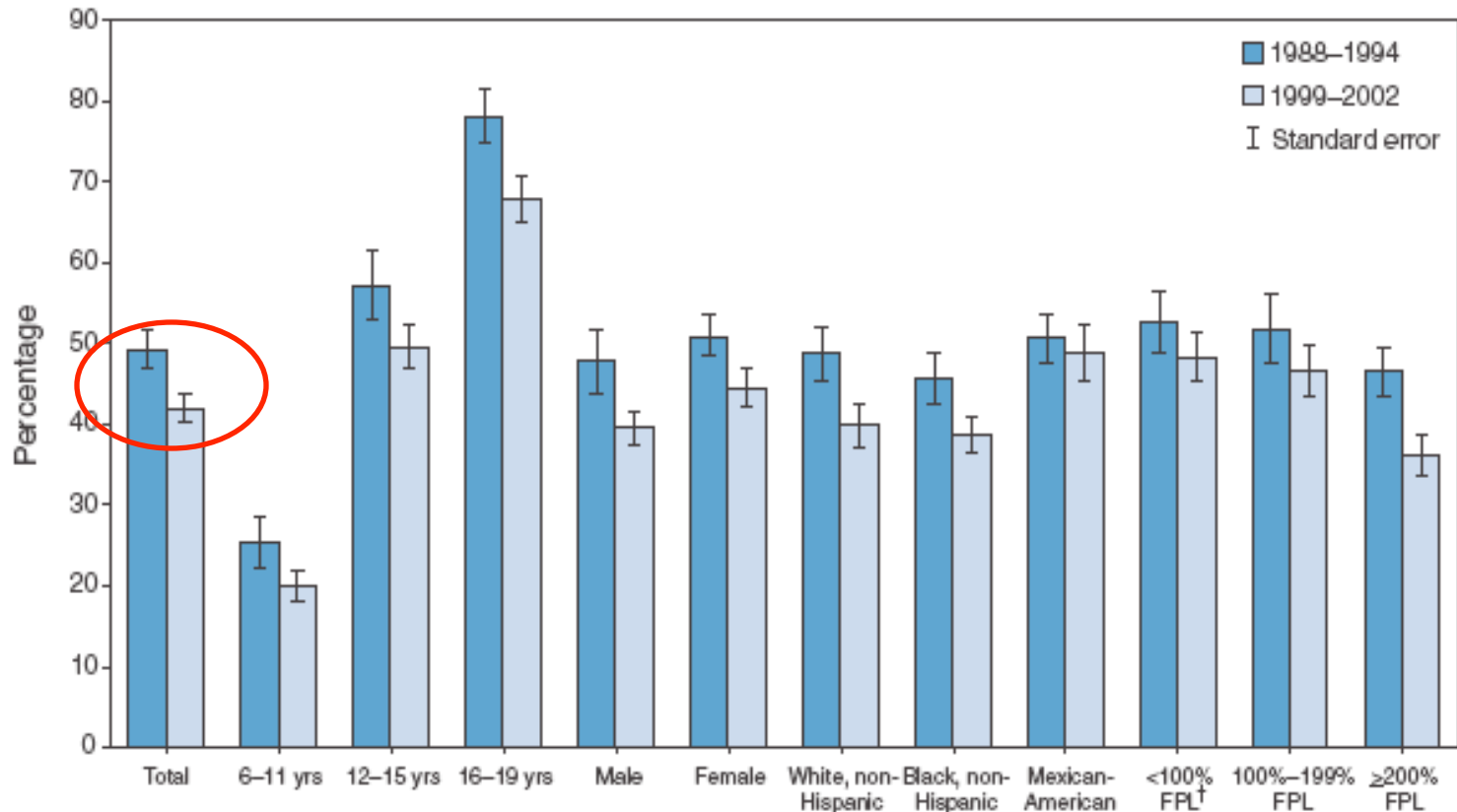


Fig. 7—Age-specific mean DMFS in three national epidemiological surveys, U.S.



# Trend in the US – Caries in Permanent Teeth

Prevalence of dental caries in permanent teeth \* among children and adolescents aged 6 - 19 years, by selected characteristics –United States, National Health and Nutrition Examination Survey, 1988-1994, and 1999-2002

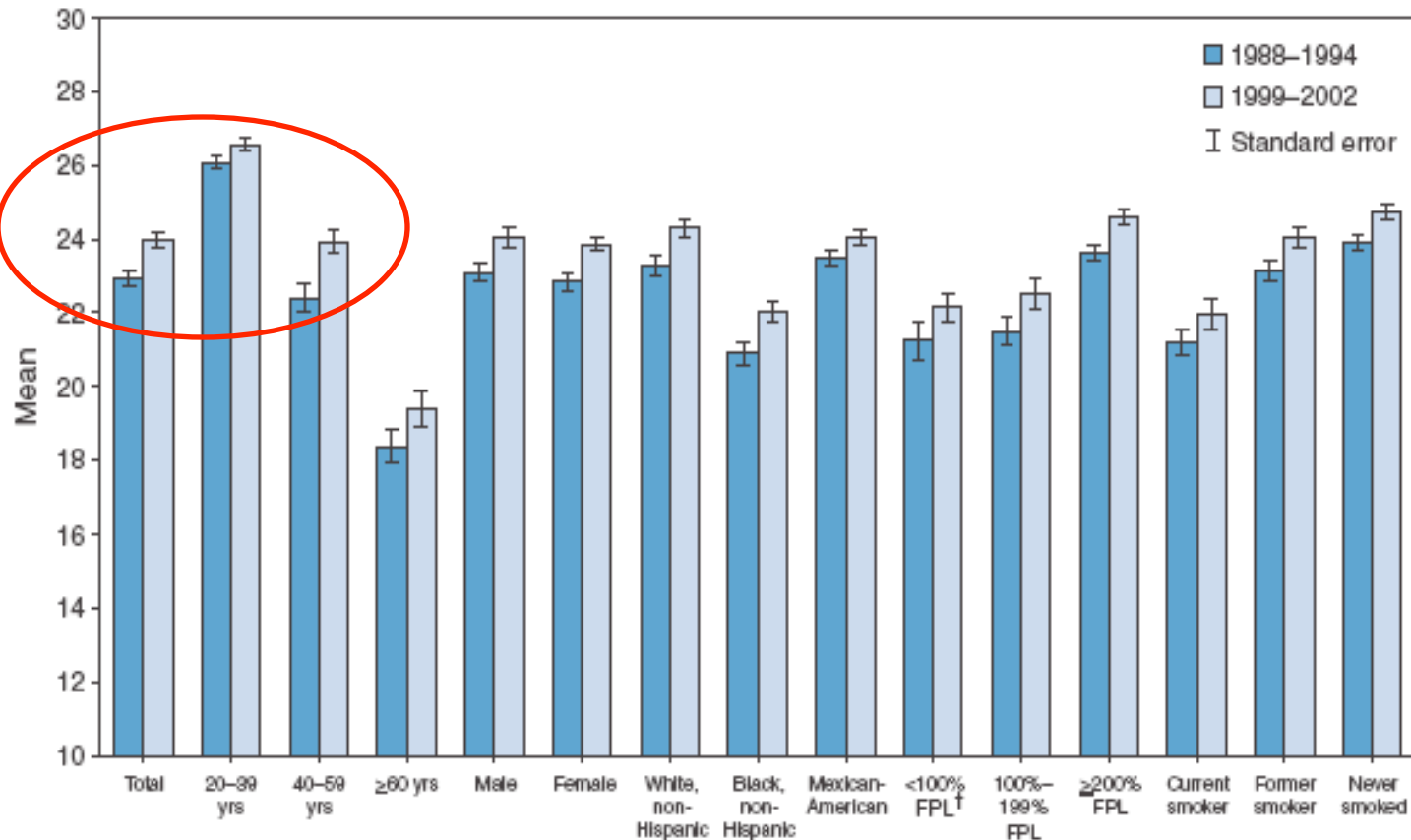


\* Defined as having one or more decayed, missing, or filled surfaces in permanent teeth (DMFS>0) among those with at least one permanent tooth. All estimates are adjusted by age (single years) and sex to the U.S. 2000 standard population, except sex, which is adjusted only by age.

† Percentage of the Federal Poverty Level (FPL), which varies by income and number of persons living in the household.

# Trend in the US – Tooth retention

FIGURE 16. Mean number of permanent teeth\* among dentate adults aged  $\geq 20$  years, by selected characteristics — United States, National Health and Nutrition Examination Survey, 1988–1994 and 1999–2002

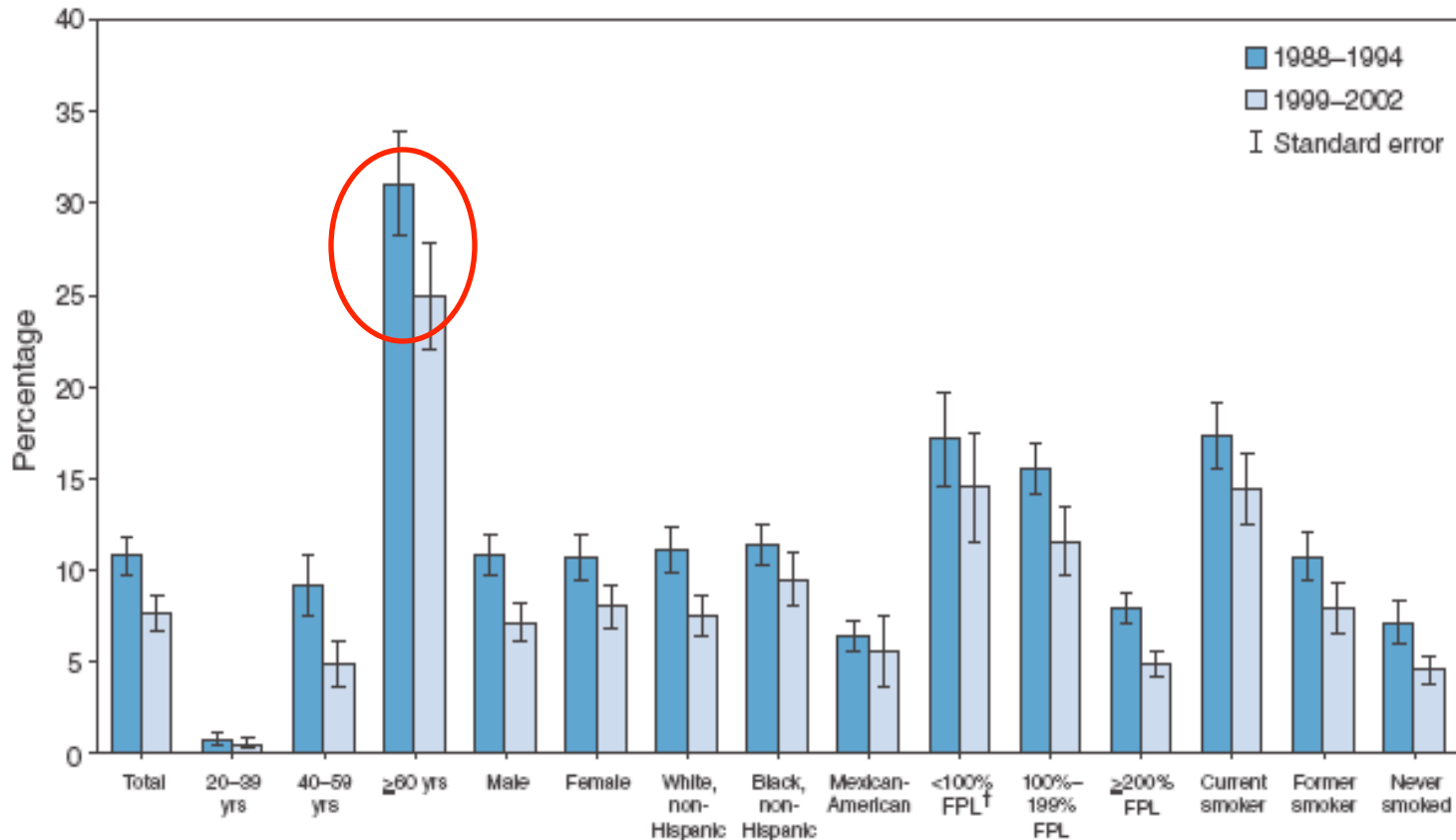


\* All estimates are adjusted by age (10-year groups) and sex to the U.S. 2000 standard population, except sex, which is adjusted only by age.

† Percentage of the Federal Poverty Level (FPL), which varies by income and number of persons living in the household.

# Trend in the US – Edentulism

FIGURE 17. Prevalence of edentulism\* among adults aged  $\geq 20$  years, by selected characteristics — United States, National Health and Nutrition Examination Survey, 1988–1994 and 1999–2002



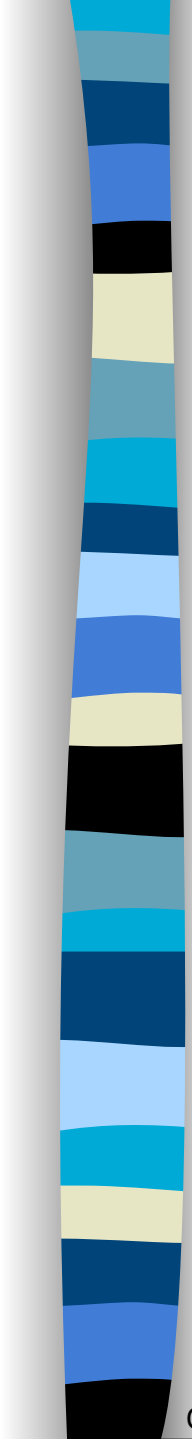
\* Defined as having lost all permanent teeth, excluding third molars. All estimates are adjusted by age (10-year groups) and sex to the U.S. 2000 standard population, except sex, which is adjusted only by age.

† Percentage of the Federal Poverty Level (FPL), which varies by income and number of persons living in the household.



## *Cause of declining trend – tooth loss and edentulism*

- Community water fluoridation
- Fluoride tooth paste and rinse – improving oral hygiene
- Other preventive measures -dental sealants
- **Multiple prevention methods**



# However.....The Problem

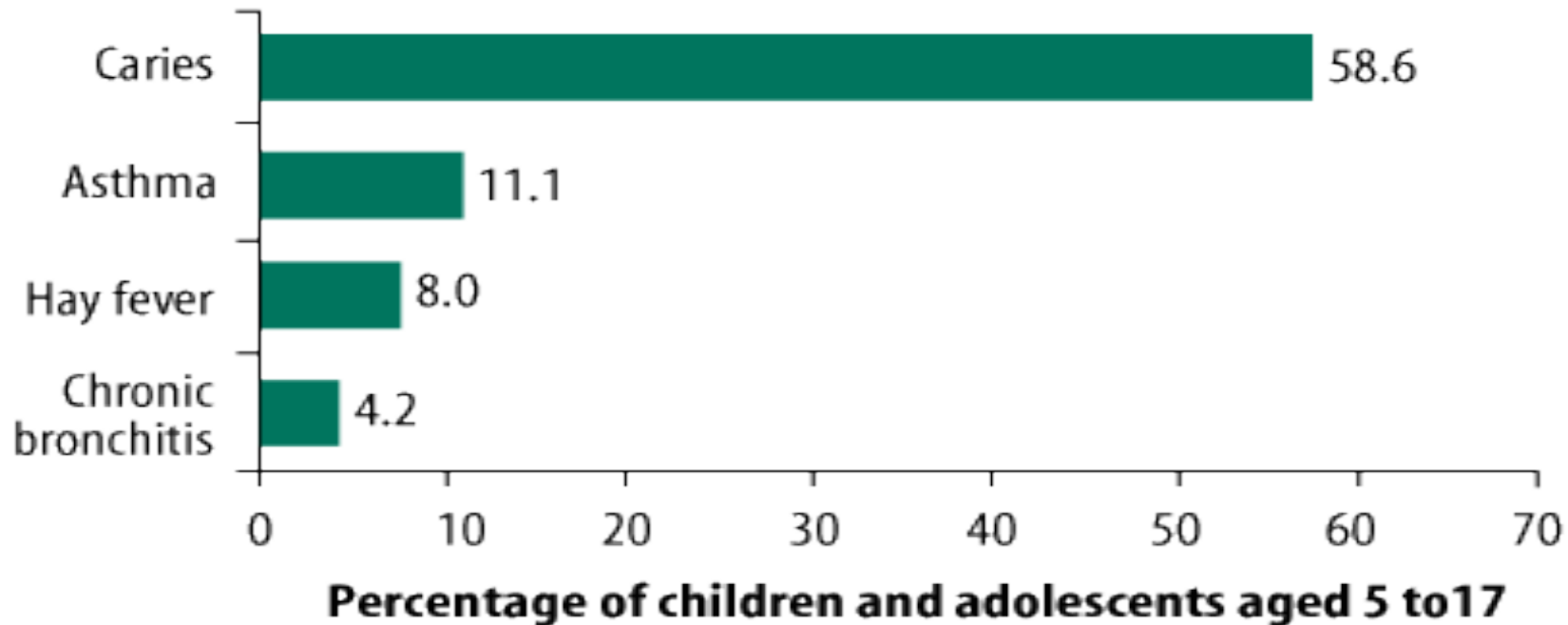
- Minority populations

- Poor

- The Elderly

# *In the US*

**Dental caries is one of the most common diseases among 5- to 17-year-olds**



Note: Data include decayed or filled primary and/or decayed, filled, or missing permanent teeth. Asthma, chronic bronchitis, and hay fever based on report of household respondent about the sampled 5- to 17-year-olds.

Source: NCHS 1996.





# Have you seen these Children?



US



Saudi Arabia





Washington Post February 28<sup>th</sup>, 2007

Mother had trouble finding a dental provider who would accept Medicaid



Deamonte Driver died Sunday after two operations and more than six weeks of hospital care.

## For Want of a Dentist

*Pr. George's Boy Dies After Bacteria From Tooth Spread to Brain*

By MARK OTTO  
Washington Post Staff Writer

Twelve-year-old Deamonte Driver died of a toothache Sunday. A routine \$80 tooth extraction might have saved him.

If his mother had been insured, or if his family had not lost its Medicaid.

If Medicaid dentists weren't so hard to find.

If his mother hadn't been focused on getting a dentist for his brother, who had six rotting teeth.

By the time Deamonte's own aching tooth got any attention, the bacteria from the abscess had spread to his brain, doctors said. After two operations and more than six weeks of hospital care, the Prince George's County boy died.

Deamonte's death and the ultimate cost of his care, which could total more than \$250,000, underscore an often-overlooked concern in the debate over universal health coverage: dental care.

Some poor children have no dental



Alvena Driver (above) shields the scared scalp of her son Deamonte after his brain surgery. The family lost its Medicaid coverage, which postponed dental care.

coverage at all. Others travel three hours to find a dentist willing to take Medicaid patients and accept the incumbent paperwork. And some, including Deamonte's brother, get in for a tooth cleaning but have trouble securing an oral surgeon to fix deeper problems.

In spite of efforts to change the system, fewer than one in three children in Maryland's Medicaid program received any dental service at all in 2005, the latest year for which figures are available from the federal Centers for Medicare and Medicaid Services.

The figures were worse elsewhere in the region. In the District, 29.5 percent got treatment, and in Virginia, 24.3 percent were treated, although all three jurisdictions say they have done a better job reaching children in recent years.

"I certainly hope the state agencies responsible for making sure these children have dental care take note so that Deamonte didn't die in vain," said Laurie Norris, a lawyer for the Baltimore-based Public Justice Center who tried to help the Driver family. "They know there is a problem, and they haven't devoted adequate resources to solving it."

50 DENTIST, B5, C2, 1

# Social impact of oral disease in children

- More than **51 million school hours** are lost each year to dental-related illness.
- Poor children suffer nearly **12 times more** restricted-activity days than children from higher-income families.



# Oral health impact



**Pain**



**Infection**



**Poor Feeding**



**Poor Speech**



**Poor Self Esteem**



**Poor School Performance**



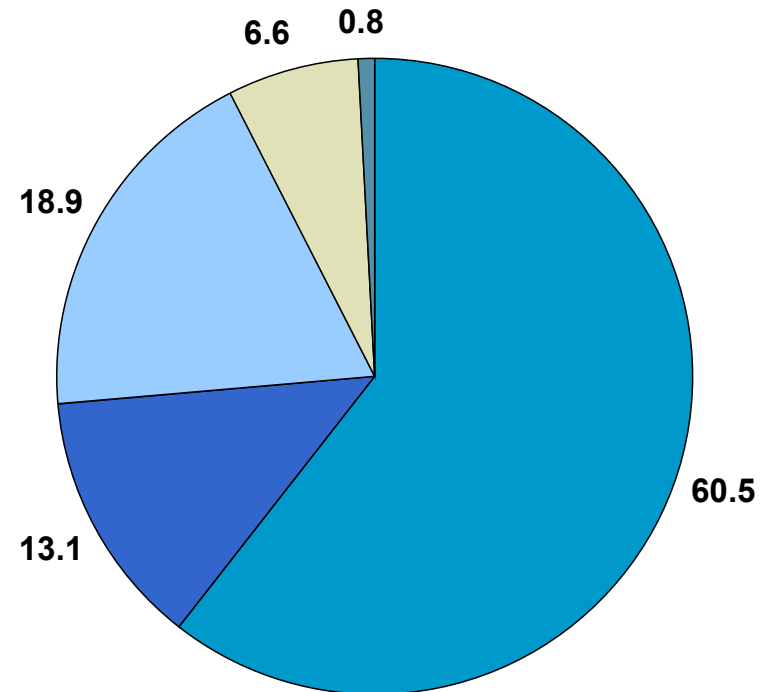
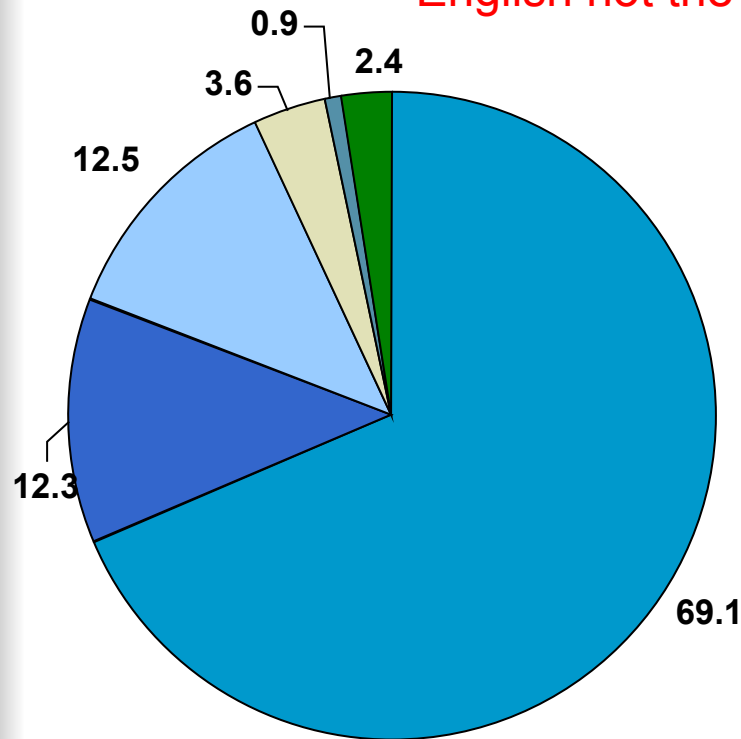
# US Population by Race/Ethnicity

**2000**

**2030**

- 1 out of 5 children, child of an immigrant

- English not the first language





# US Supply of Dental Professionals

Employment of Dental Professions and Occupations, 2008 and Projected 2018

Profession/ Occupation	Number of Jobs, 2008	Number of Jobs, 2018	Projected Increase in Growth (%), 2008-2018
Dentists	141,900	164,000	16
General dentists	120,200	138,600	15
Dental hygienists	174,100	237,000	36
Dental assistants	295,300	400,900	36
Dental laboratory technicians	46,000	52,400	14

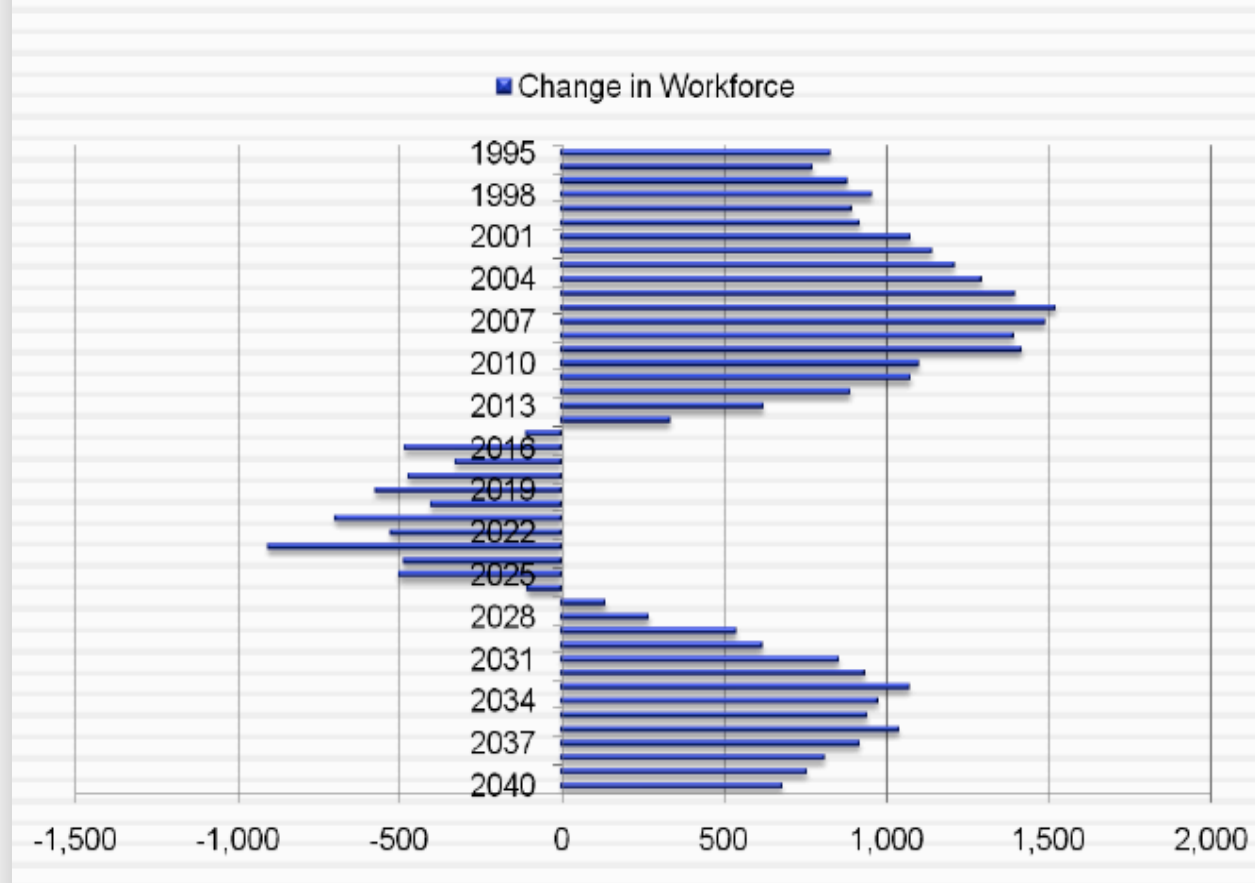
SOURCES: BLS, 2010b,c,d,e.

Improving Access to Oral Health Care for Vulnerable and Underserved Populations (2011).

National Academy of Sciences.

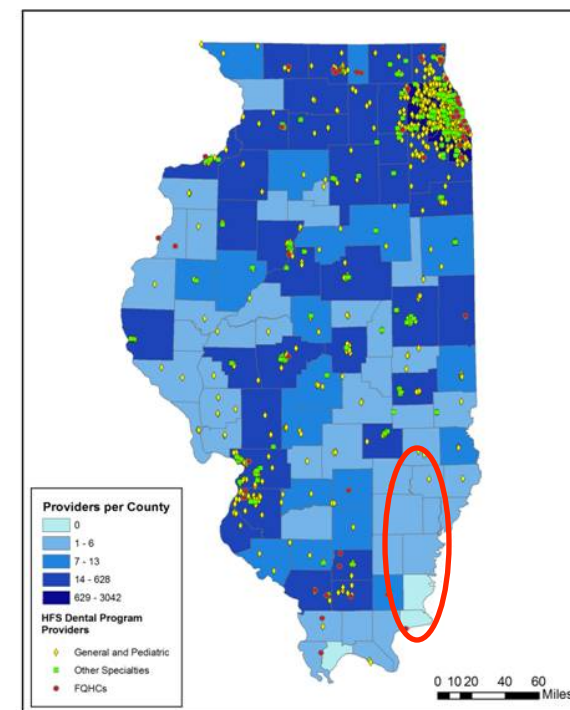
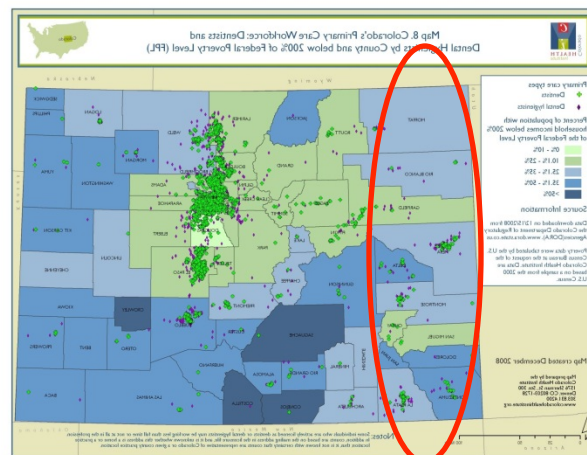
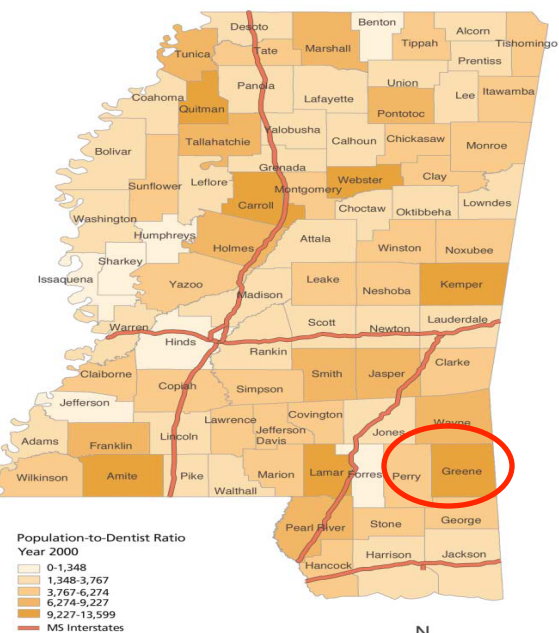
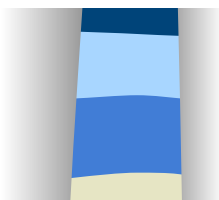
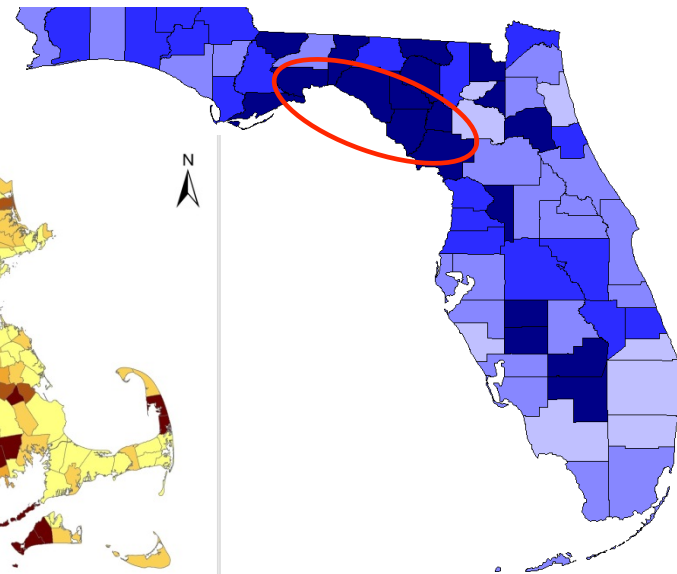
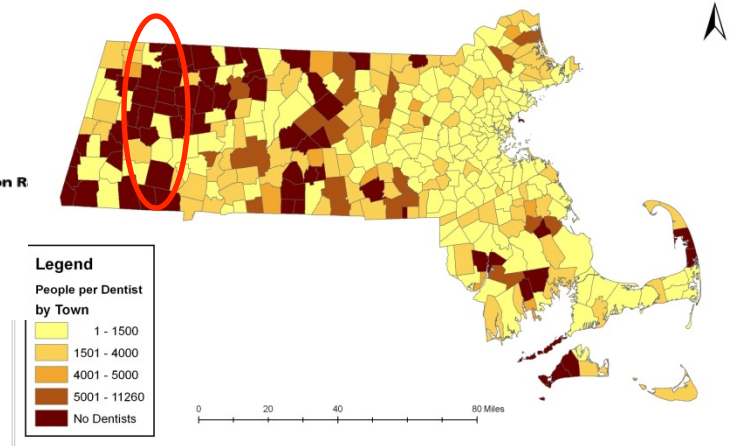
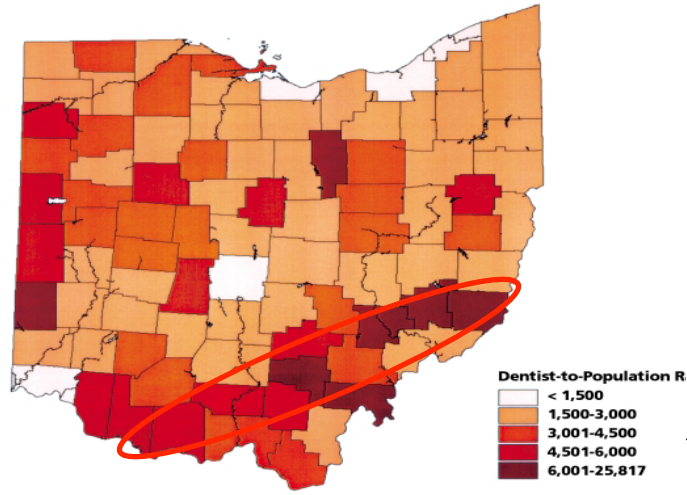


# Estimated Changes in Number of Dentists in the Dental Workforce, 1995- 2040



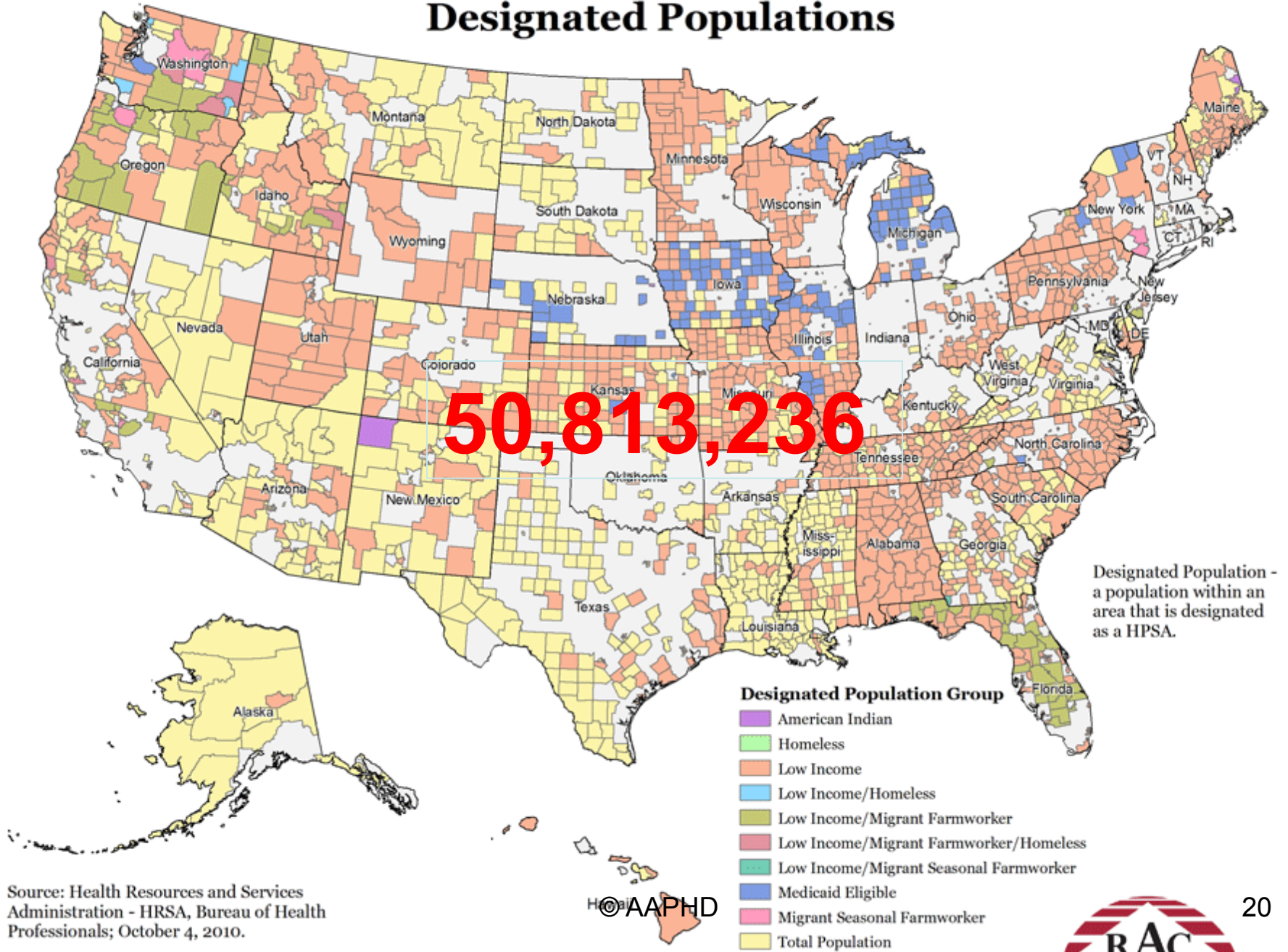
**From 2014 to 2027, it is estimated that more dentists will leave the workforce than enter it**

These data assume that the number of graduates remains at 4,850 after 2007 and retirement age is 65



sity

# Health Professional Shortage Areas (HPSA) - Dental Health Designated Populations



Source: Health Resources and Services Administration - HRSA, Bureau of Health Professionals; October 4, 2010.

Note: Alaska and Hawaii not shown to scale

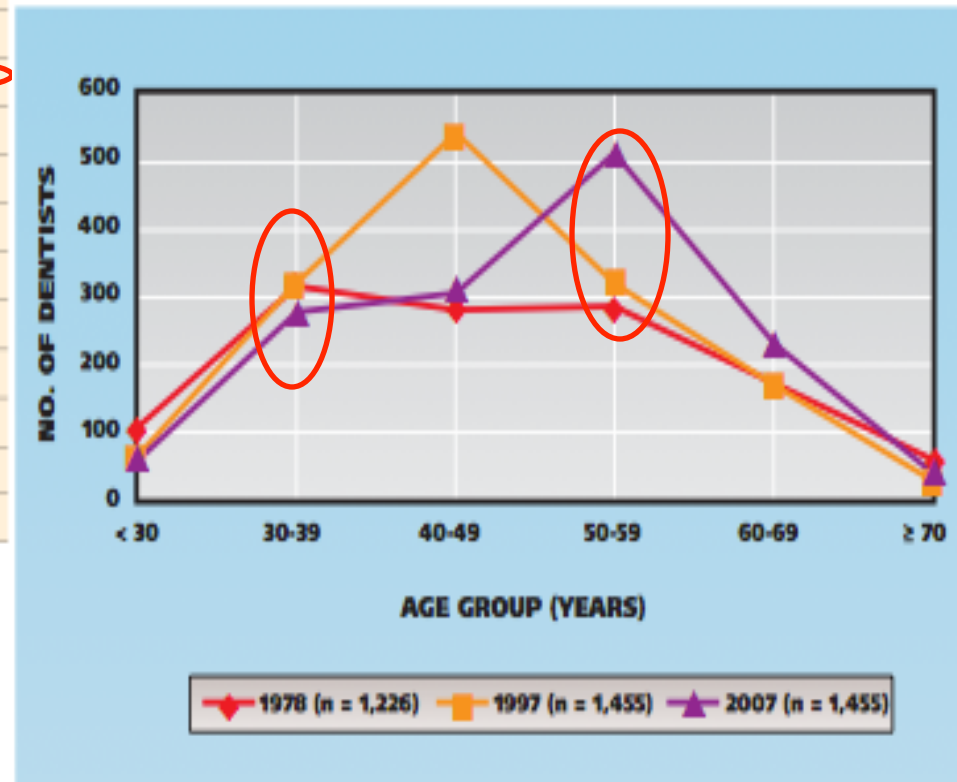
©AAPHD



# Iowa

**County population-to-dentist ratio trends in Iowa, 1997, 2002 and 2007.**

POPULATION-TO-DENTIST RATIO	NO. OF COUNTIES		
	Year		
	1997	2002	2007
≤ 1,500:1	6	4	2
1,501-2,000:1	10	12	13
2,001-2,500:1	32	22	23
2,501-3,000:1	19	22	16
3,001-3,500:1	10	12	14
3,501-4,000:1	10	6	9
4,001-4,500:1	6	7	5
4,501-5,000:1	2	4	1
> 5,000:1	4	10	16
TOTAL	99	99	99



Kuthy et al. Dentist Workforce Trends in a Primarily Rural State: Iowa: 1997-2007. JADA 2009, 140: 1527-1534

# For Want of a Dentist too!!

**Dylan Stewart**

**Age 5**

**4 filling and 8 crowns**



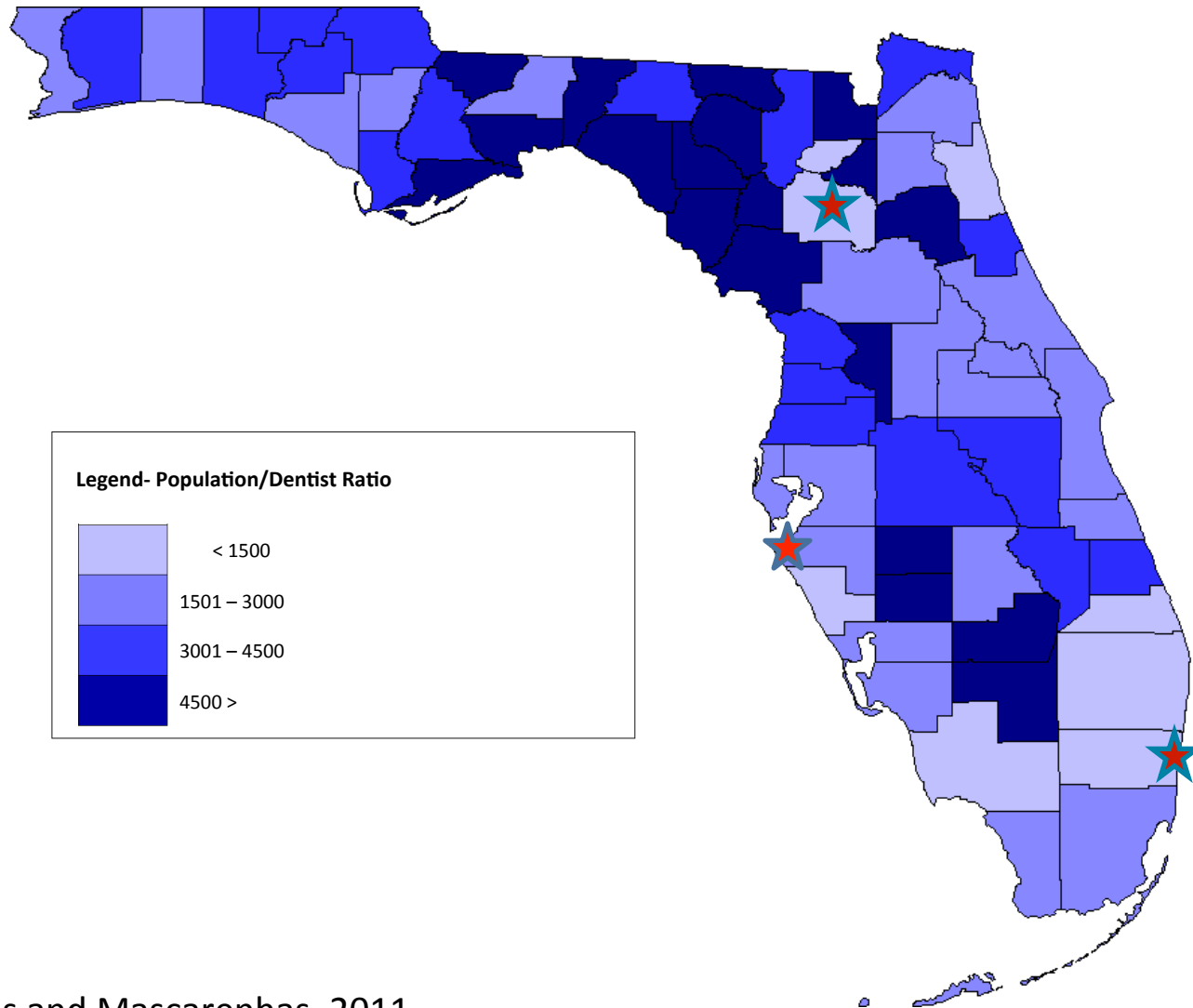
# Dental Care Visits in ER Increasing in Florida



- Over 115,000 ER visits in 2010, costing \$88M
- Increased by 10,000 visits between 2008 and 2010, and costs more than \$ 21M
- Peak hours for ER visits during business hours

\*Source: The Health Council of Southeast Florida, on behalf of the Florida Public Health Institute, review of the past three years of emergency-room Ambulatory Care-Sensitive dental data submitted to the Florida Agency for Healthcare Administration (AHCA) Emergency Department Database.

# Florida Dentist to Population Ratios 2009-2010



Bamashmous and Mascarenhas, 2011

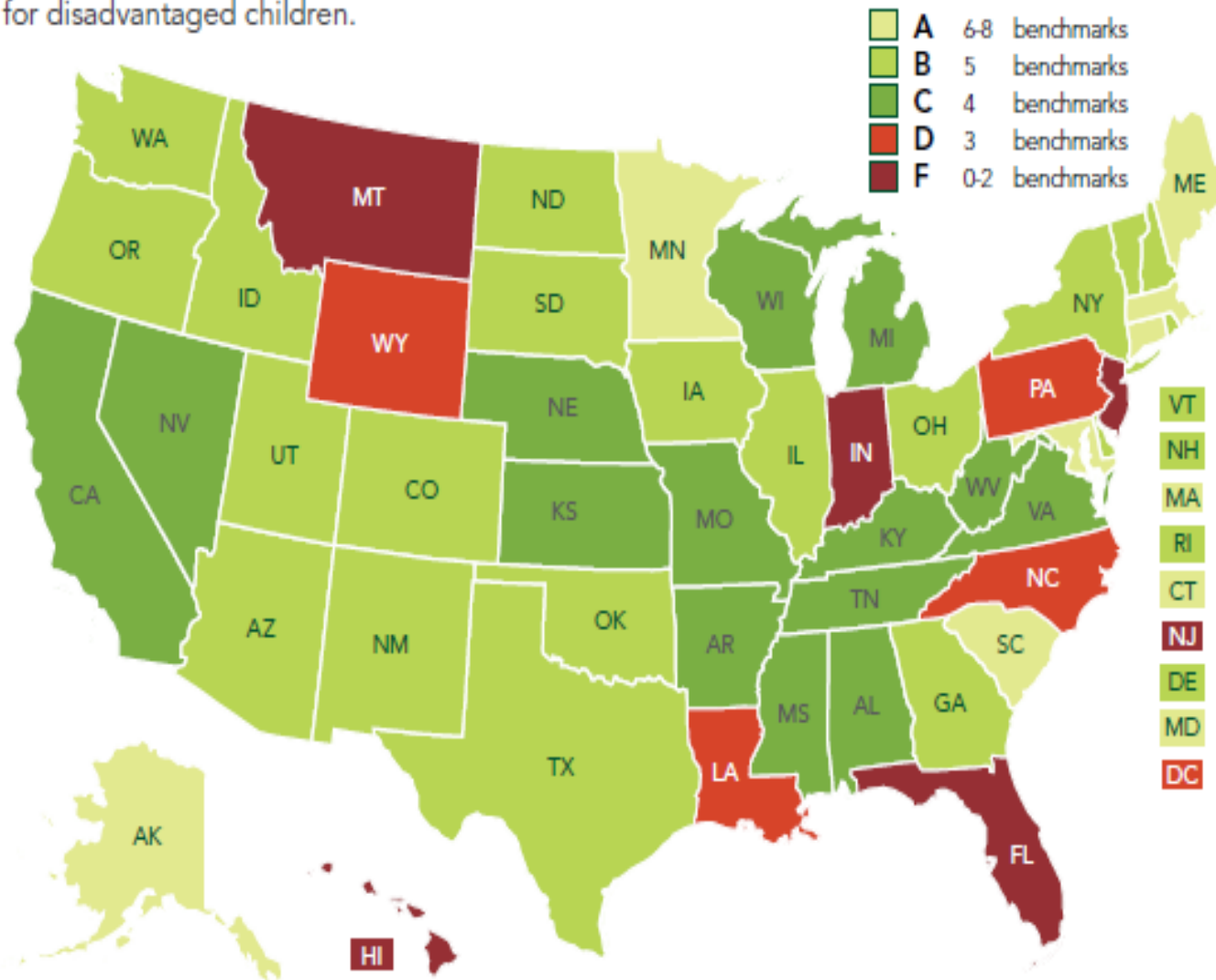
## Dentist Shortage, State by State

Percentage of each state's population that is living in Dental Health Professional Shortage Areas (DHPSAs) and estimated to be unserved (December 2010)

State	Total Population Living in DHPSAs	Estimated Unserved Population in DHPSAs	Total Population (HRSA estimate)	Percent Living in DHPSAs	Percent Unserved	Number of Dentists Needed to Remove Shortage Designation (approximate)
Alabama	1,521,655	1,111,883	4,514,827	33.7%	24.6%	287
Alaska	144,115	76,915	654,052	22.0%	11.8%	13
Arizona	1,323,701	807,346	5,684,787	23.3%	14.2%	135
Arkansas	344,359	188,491	2,738,858	12.6%	6.9%	27
California	2,647,514	1,400,269	35,849,123	7.4%	3.9%	388
Colorado	476,156	288,888	4,597,702	10.4%	6.3%	70
Connecticut	463,489	341,689	3,501,403	13.2%	9.8%	61
Delaware	242,220	143,220	825,677	29.3%	17.3%	27
District of Columbia	27,595	22,195	560,178	4.9%	4.0%	5
Florida	3,612,032	2,954,578	17,260,294	20.9%	17.1%	788
Georgia	1,402,188	946,123	8,794,398	15.9%	10.8%	201
Hawaii	343,119	168,182	1,269,194	27.0%	13.3%	30
Idaho	427,285	263,785	1,383,295	30.9%	19.1%	52
Illinois	2,141,049	1,746,800	12,704,832	16.9%	13.7%	426
Indiana	264,704	192,104	6,223,030	4.3%	3.1%	48
Iowa	436,022	289,027	2,948,982	14.8%	9.8%	61
Kansas	653,750	457,937	2,731,719	23.9%	16.8%	94
Kentucky	574,983	269,413	4,136,773	13.9%	6.5%	40
Louisiana	2,662,958	1,442,258	4,506,731	59.1%	32.0%	218
Maine	520,812	222,712	1,313,256	39.7%	17.0%	48
Maryland	610,038	415,938	5,554,946	11.0%	7.5%	56
Massachusetts	1,011,505	544,084	6,447,064	15.7%	8.4%	94
Michigan	1,291,460	985,166	10,109,402	12.8%	9.7%	259
Minnesota	468,263	291,908	5,088,140	9.2%	5.7%	55
Mississippi	1,685,858	970,013	2,890,760	58.3%	33.6%	183

# GRADING THE STATES

Pew assessed and graded all 50 states and the District of Columbia on whether and how well they have employed eight sound policy approaches to ensure dental health and access to care for disadvantaged children.



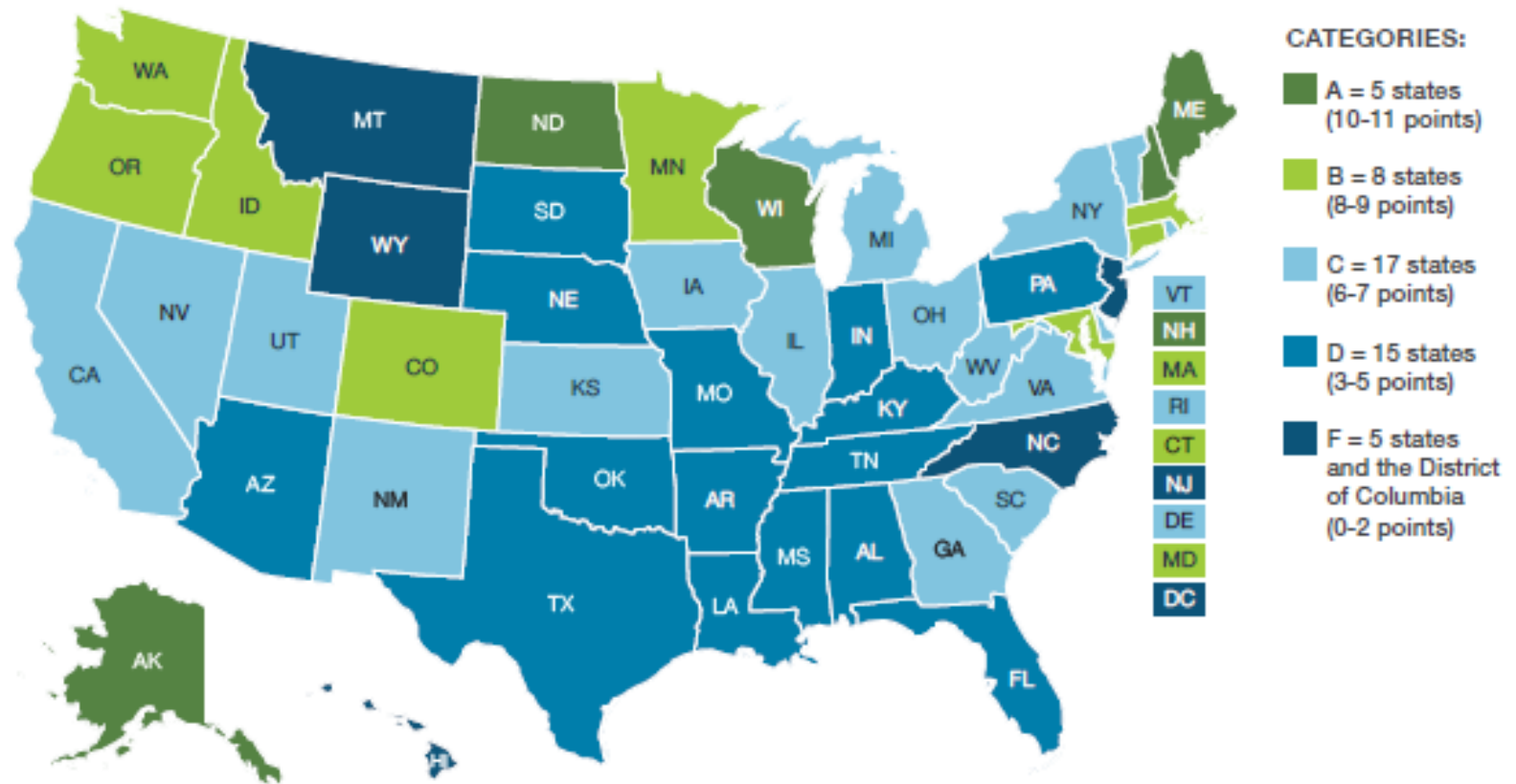
Source: Pew Center on the States, 2011

# PEW Report on Dental Sealants

## HOW THE STATES PERFORMED

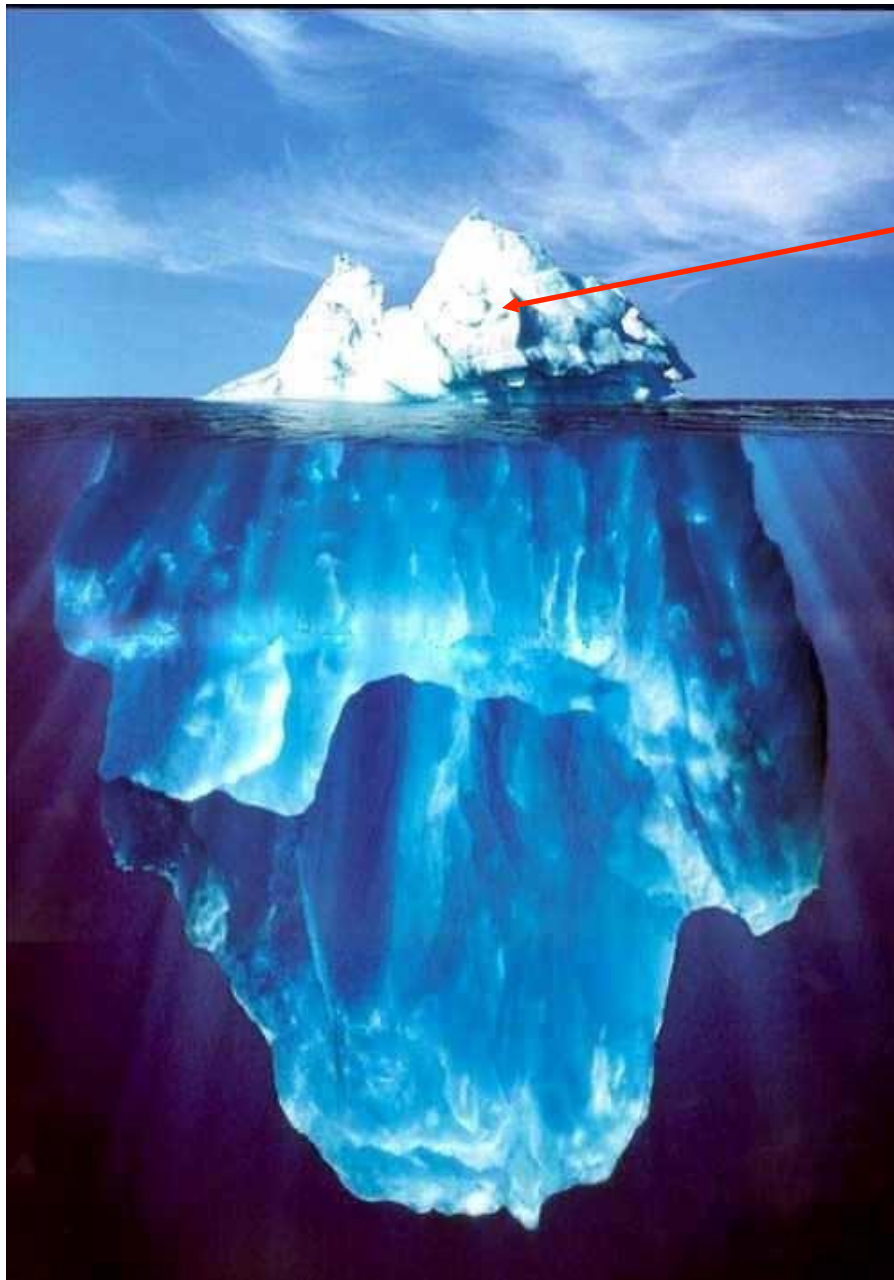
FIGURE 1:  
**OVERALL STATE GRADES**

States were given specific points for each benchmark, and grades — on a scale of A to F — were based on the total points earned. (For an explanation of each benchmark and an overview of how points were assigned, see pages 23–25.)



Source: Pew Center on the States, 2012.









# THE CHILDREN'S TRUST *ORAL HEALTH INITIATIVE*

# Goals

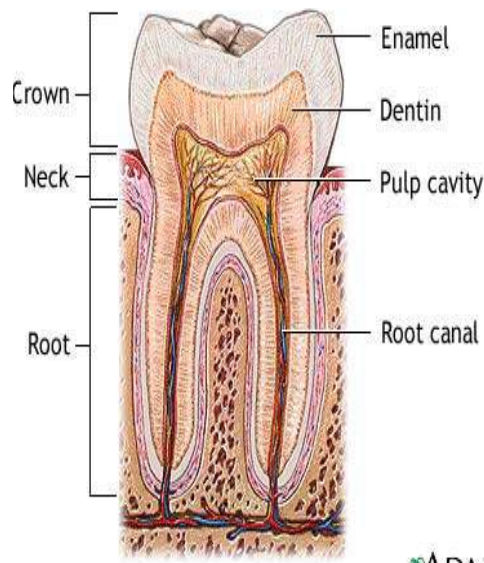
- To train medical staff associated with the Health Connect in Our Schools program in Miami-Dade
  - To screen for oral diseases, particularly dental caries
  - Provide oral health counseling and a fluoride varnish application
  - Make a referral for children identified as needing further treatment from a dentist

# Educational Objectives of Training

- Describe different types of teeth, parts of a tooth, and major supporting structures of a tooth
- Understand factors that affect oral health in children
- List and describe oral diseases in children
- Understand your role as an oral health educator in improving the oral health of children
- Assess the oral health status of a child
- Provide a fluoride varnish application

# Learn About Teeth:

- Incisors
- Canines
- **Premolars**
- Molars



PACT. <http://www2.aap.org/continuing-education/pact/ch-gallery/ch1/index.htm>



# As medical providers you will:

1. Screen the child
2. Provide counseling
  - Educate to avoid bad and adopt good oral health habits
  - Recommend good dietary habits
3. Provide a fluoride varnish application
4. Refer the child

# Cavity Free



# Cavities





# Counseling



# Dental Patient Positioning





# Fluoride Varnish



**5% Sodium  
Fluoride  
(22.6mg F/ml)**



# Refer for Dental Care



## Florida Dental Referral

Name	Address	City	State	Zip	Ph. No.
KidCare Program	<a href="http://www.floridakidcare.org">www.floridakidcare.org</a>	Miami	FL		(888) 540-5437
Medicaid	<a href="http://www.fdhc.state.fl.us/Medicaid/">http://www.fdhc.state.fl.us/Medicaid/</a>	Miami	FL		(888) 367-6554
<b>Providers that may offer reduced fees</b>					
Everglades Health Dental Center (CHI)	19300 SW 376 Street	Florida City	FL	33034	(305) 246-4607
South Regional Health Center	4105 Pembroke Road	Hollywood	FL	33021	(954) 985-4814 (954) 985-4811
Martin Luther King Jr. Clinic (CHI)	810 West Mowry Street	Homestead	FL	33030	(305) 248-4334
Martin Luther King, Clinica Campesina	810 W. Mowry Street	Homestead	FL	33030	(305) 242-2005
Naranja Health Center (CHI)	13805 SW 264 Street	Naranja	FL	33032	(305) 258-6813
South Dade Health Center (CHI)	13600 SW 312th Street	Homestead	FL	33033	(305) 242-6069
Marathon Health Center (CHI)	2855 Overseas Highway, MM 48.	Marathon	FL	33050	(305) 743-4000
North Regional Health Center	601 West Atlantic Blvd.	Pompano Beach	FL	33060	(954) 786-5408
Pauli Hughes Health Center	205 NW 6th Avenue	Pompano Beach	FL	33060	(954) 788-6079
Community Smiles (inside the Lindsey Hopkins Center)	750 N.W. 20th street Bldg. G	Miami	FL	33127	(305) 324-6070 xt. 7051, 7053
Lindsey Hopkins Tech, Community Smiles	750 NW 20th Street	Miami	FL	33127	(305) 324-6070
Camillus Health Concern	336 N. W. 5th Street	Miami	FL	33128	(305) 577-4840 ext. 118
Helen B Bentley Family Health Center	3090 SW 37th Avenue	Miami	FL	33133	(305) 351-1317
May Van Sickle Childrens Dental Clinic	1092 Galiano Street	Coral Gables	FL	33134	(305) 448-6536
Jackson Memorial Hospital	1611 NW 12th Avenue	Miami	FL	33136	(305) 858-6935
Borinquen Health Care Center	3601 Federal Hwy. N.	Miami	FL	33137	(305) 576-6611 xt. 1512, 1513
Miami Beach Community Health Center	710 Alton Rd	Miami Beach	FL	33139	(305) 538-8835 xt. 1163
P.E.T. Health Center	615 Collins Avenue	Miami Beach	FL	33139	(305) 535-5540
Jessie Trice Community Health Center	5361 NW 22nd Ave	Miami	FL	33142	305 637 6400 x 15225
Southside Dental Center	5798 SW 68th Street	Miami	FL	33143	(305) 284-0976
Miami Children's Hospital, Toothtown	3100 SW 62nd Avenue	Miami	FL	33155	(305) 663-8538
West Perrine Health Center (CHI)	18255 Homestead Ave	Miami	FL	33157	(305) 234-7676
Economic Opportunity Family Health Center	18360 NW 7th Avenue	Miami	FL	33169	(305) 694-6270
Norland Center		Miami	FL	33176	(305) 256-5270
Columbia Derring Hospital	9380 S.W. 150th Street Ste. 190	Miami	FL	33176	(305) 256-5270
Doris Ison Health Center (CHI)	10300 S.W. 216th Street	Miami	FL	33190	(305) 253-5100
KID Dental Clinic	1819 NE 26th St.	Wilton Manors	FL	33305	954-567-5650 / 954-390-7654
Broward County Dental Association	1919 N. E. 45th Street, #216	Fort Lauderdale	FL	33308	(954) 772-6456
Northwest Health Center	624 NW 15th Way	Fort Lauderdale	FL	33311	(954) 467-4677
Broward Dental Research Clinic	3501 S. W. Davie Road	Davie	FL	33314	(954) 201-6779
BCHD - Children's Dental - Ft Lauderdale Health Center	2421 SW 6th Avenue	Fort Lauderdale	FL	33315	(954) 467-4820
Children's Diagnostic & Treatment Ctr	1401 South Federal Highway	Fort Lauderdale	FL	33316	(954) 728-1138
Caridad Center (Palm Beach County)	8645 Boynton Beach Blvd	Boynton Beach	FL	33472	(561) 737-6336
Main Street Child's Dentistry	<a href="http://www.mainstreetsmiles.com">www.mainstreetsmiles.com</a>	Dade & Broward	FL		(877)-756-8724
<b>Dental Schools</b>					
Nova Southeastern University	1750 N. E. 167th Street	N. Miami Beach	FL	33162	(305) 949-6202
Nova Southeastern University	3200 S. University Dr. (Sanford L. Ziff Center)	Davie	FL	33328	(954) 262-7500
Univ. of Florida College of Dentistry	750 E. 25th Street	Hialeah	FL	33013	(305) 694-5400
MDC Dental Hygienist School	950 N.W. 20th Street	Miami	FL	33127	(305) 237-4142
Broward College Hygienist School	3501 SW Davie Road, Building 8, Room 159.	Davie	FL	33314	(954) 201-6779
Robert Morgan Center	18180 S.W. 122 Ave	Miami	FL	33177	(305) 253-9920 xt. 212

## Referral List

Abby Wilentz, DDS	Plantation	FL
Afsoon Elmore, DDS	Fern Park	
Ann Freedman-Spoont, DMD	Boca Raton	
Ardalan Pediatric Dentistry	Port St Lucie	
Barkley Circle Dentistry for Children	Fort Myers	
Child and Adult Dentistry	Fort Myers	
Children's Dentistry of Manatee	Bradenton	
Dentistry for Children & Those with Special Needs	Pembroke Pines	
Iris Hernandez, DDS	Kissimmee	
Johnny Johnson & Associates	Palm Harbor	
Michelle S Handel	Boca Raton	
Troy King	Oviedo	

# Provided training to 214 HCLOS staff

- 2 physicians
- 42 registered nurses
- 46 licensed nurse practitioner
- 20 advanced registered nurse practitioner
- 46 medical assistants
- 39 health aides
- 11 social worker
- 1 physician assistant.

# Results of Training

Pre-Test

Post-Test

■  $10.9 \pm 2.6$



■  $18.0 \pm 1.6$

■ 55% correct



■ 90% correct

■ 10% to 80%



■ 60% to 100%

■ 5.6%



■ 90%



**8.5% 1560%**





# THE JOHN T. MACDONALD FOUNDATION *ORAL HEALTH INITIATIVE*



# Goals

- Provide diagnostic, preventive and treatment service to second grade children annually, particularly those uninsured.
- Settings: Greynolds Park, Fulford, and Gertrude K. Edelman Sabal Palm Elementary Schools.



Dr. John T. Macdonald Foundation  
School Health Initiative

# UNIVERSITY OF MIAMI *PREVENTION, EDUCATION, AND ACCESS TO RECEIVE LASTING SMILES* (PEARLS)



# Goals

- Oral health screening, education and preventive services such as sealants and fluoride varnish to children
- Train staff and University of Miami's residents to provide fluoride varnish to school children.
- Settings: John F. Kennedy Middle School, North Miami Middle School, and Booker T Washington High School



# ORAL HEALTH AMERICA *CAPACITY BUILDING GRANT*



# Goals

- Increase access to preventive oral health services
- Increase returned consents forms
- Settings: North Miami



# New Programs:

- Health Foundation of South Florida
  - Community Navigator to Increase Medicaid Enrollment and Dental Home Among Underserved Eligible School Children in North Miami
- Miami Foundation
  - Expand prevention program to additional schools in Miami

# New Programs: Broward

- Mangurian Foundation



# Questions?