

# MCH & Immunization Conference

## September 2012

Brad Whistler, DMD  
Dental Official

DPH Section of Women's, Children's and Family Health



# Today's Speakers

- Brad Whistler, DMD, Dental Official, Oral Health Program  
– Section of Women's, Children's and Family Health
- Mary Williard, DDS – Alaska Native Tribal Health Consortium
- Sharon Schlicht, RDH, MPH, Health Program Manager, Oral Health Program



# Today's discussion

## Brad

- Early childhood caries – overview
- Community water fluoridation
- Fluoride supplements
- Medicaid dental access and anticipatory guidance

## Mary

- Caries risk assessment - oral evaluation
- Fluoride varnish application

## Sharon

- Dental sealants (a school-based approach)



# Early Childhood Caries

- Dental decay typically discussed in pre-school aged children
- Varying definitions from:
  - Any dental decay in primary (baby teeth)
  - Dental decay in upper front primary teeth) – often referred to as severe early childhood caries
- ECC as discussed in comparison with what used to be termed as nursing caries or baby bottle tooth decay



# Early Childhood Caries

## Protective and risk factors:

- Water fluoridation
- Fluoride toothpaste
- Fluoride supplements
- Fluoride varnish and topical fluorides
- Xylitol
- Diet
- Feeding practices
- Maternal active dental decay
- Active dental decay in siblings
- Early dental visit



## Child Dental Decay

Early Childhood Caries (ECC) often starts on primary upper front teeth – often most visible on the back side of the teeth.

Most recent information from the national NHANES indicates ECC has increased in young children.

ECC prevalence is much higher in American Indian/Alaska Native children – e.g., YKHC reports about 400 children under the age of 6 from the area have full mouth reconstruction typically done in hospitals under general anesthesia at an average cost of \$6,000 per case (facility, anesthesia and dental costs).



# Check for Normal Healthy Teeth



# Check for Early Signs of Decay: White Spots





## Check for Later Signs of Decay: Brown Spots

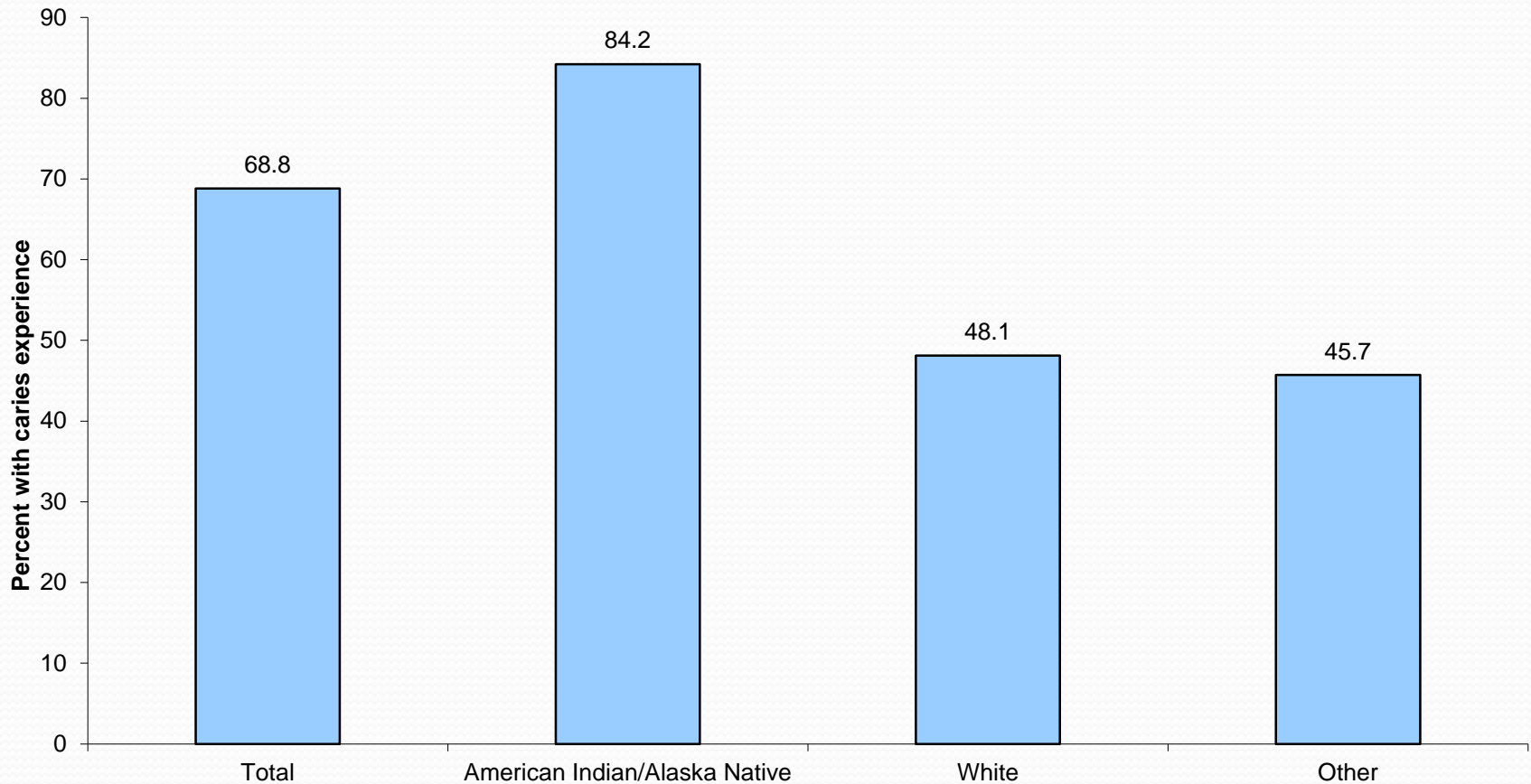


Check for Advanced/Severe Decay – can progress rapidly and typically affects upper front teeth



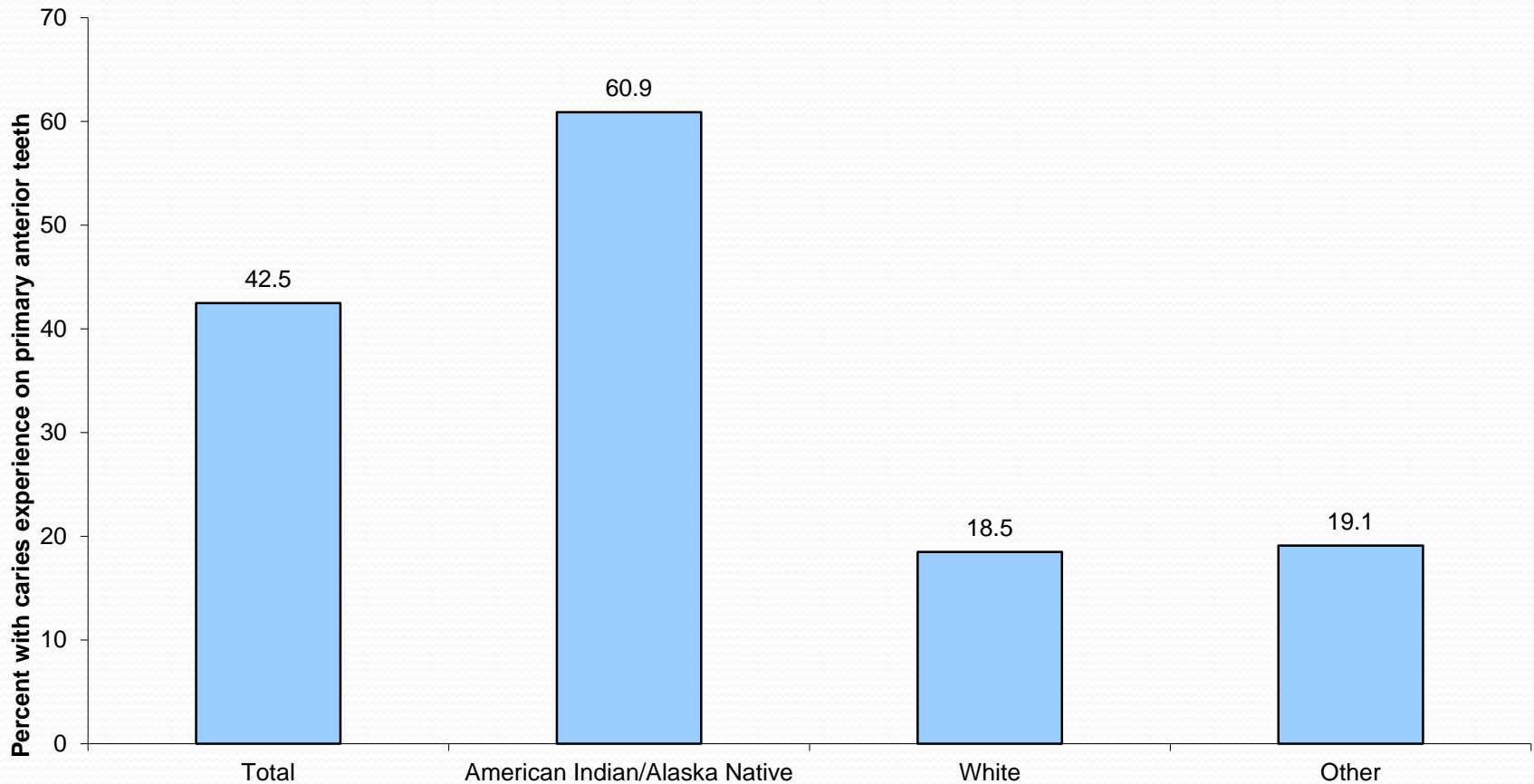
# Caries Experience – Alaska Head Start (2005)

Percent of Head Start Children with Caries Experience by Race



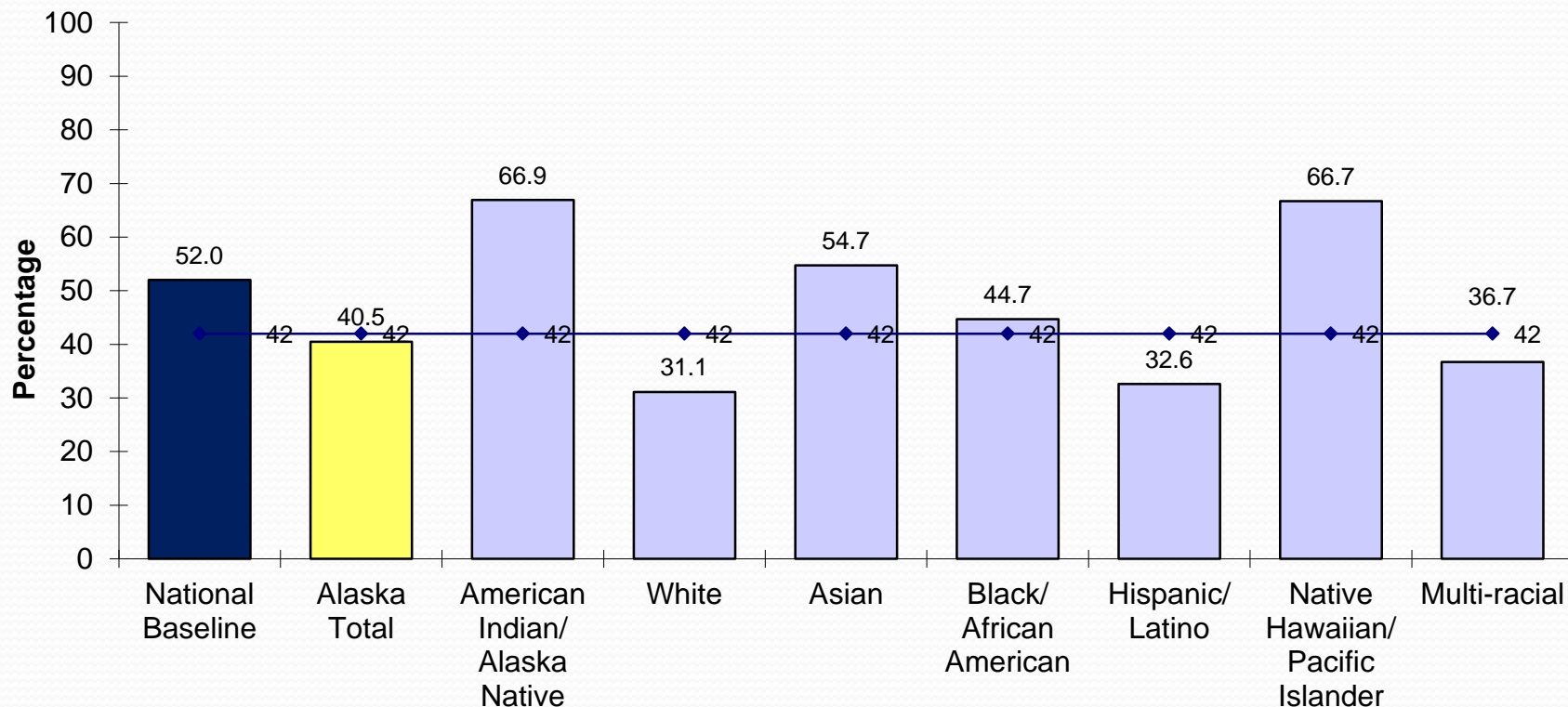
# Caries Experience Primary Anterior Teeth – Alaska Head Start (2005)

Head Start Children - - Caries Experience on Primary Anterior Teeth  
Percent with Caries Experience on Primary Anterior Teeth by Race/Ethnicity (n=570)



# Caries Experience: Alaska Kindergarteners (2007)

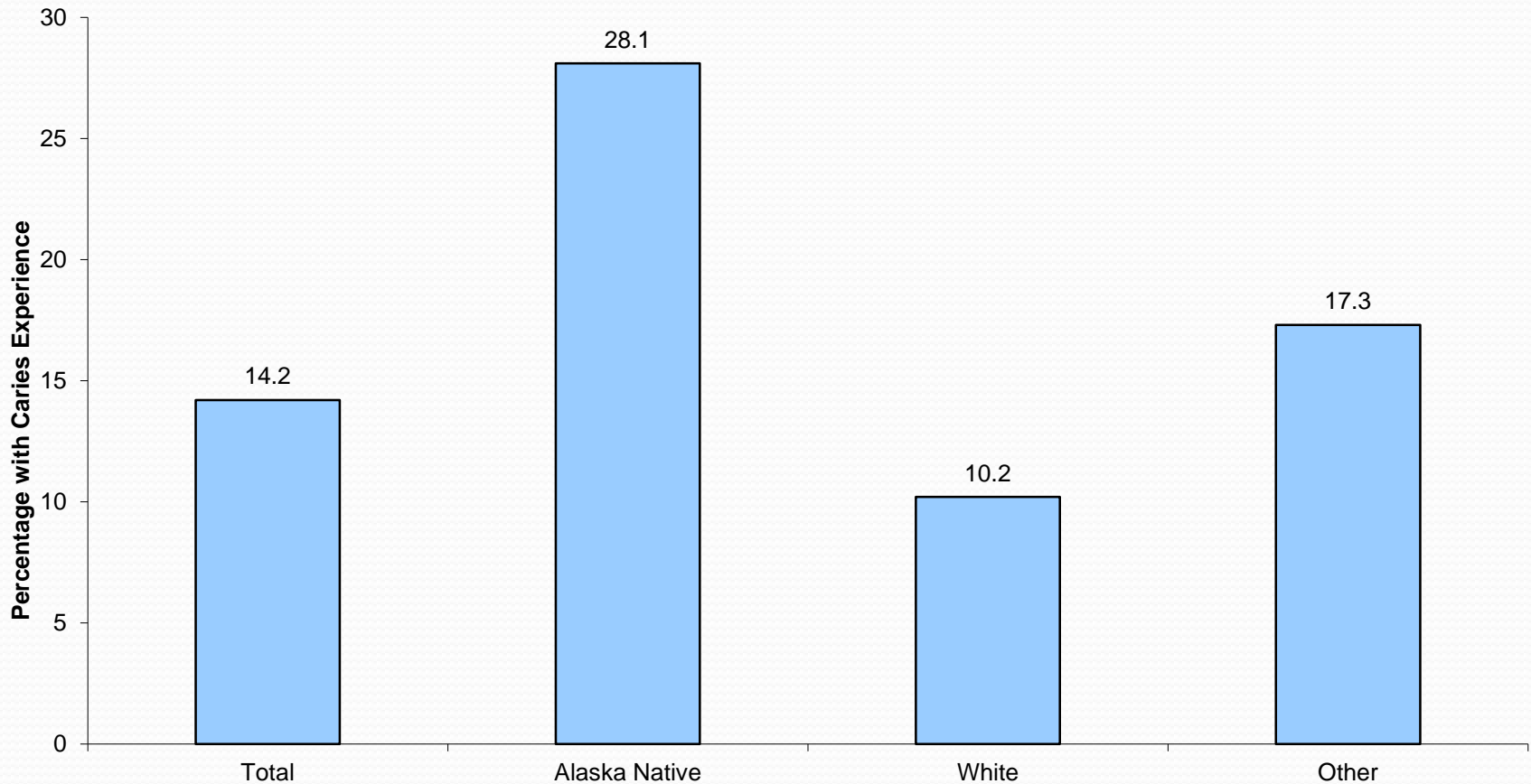
Percent of Kindergarten with Caries Experience by Race - 2007



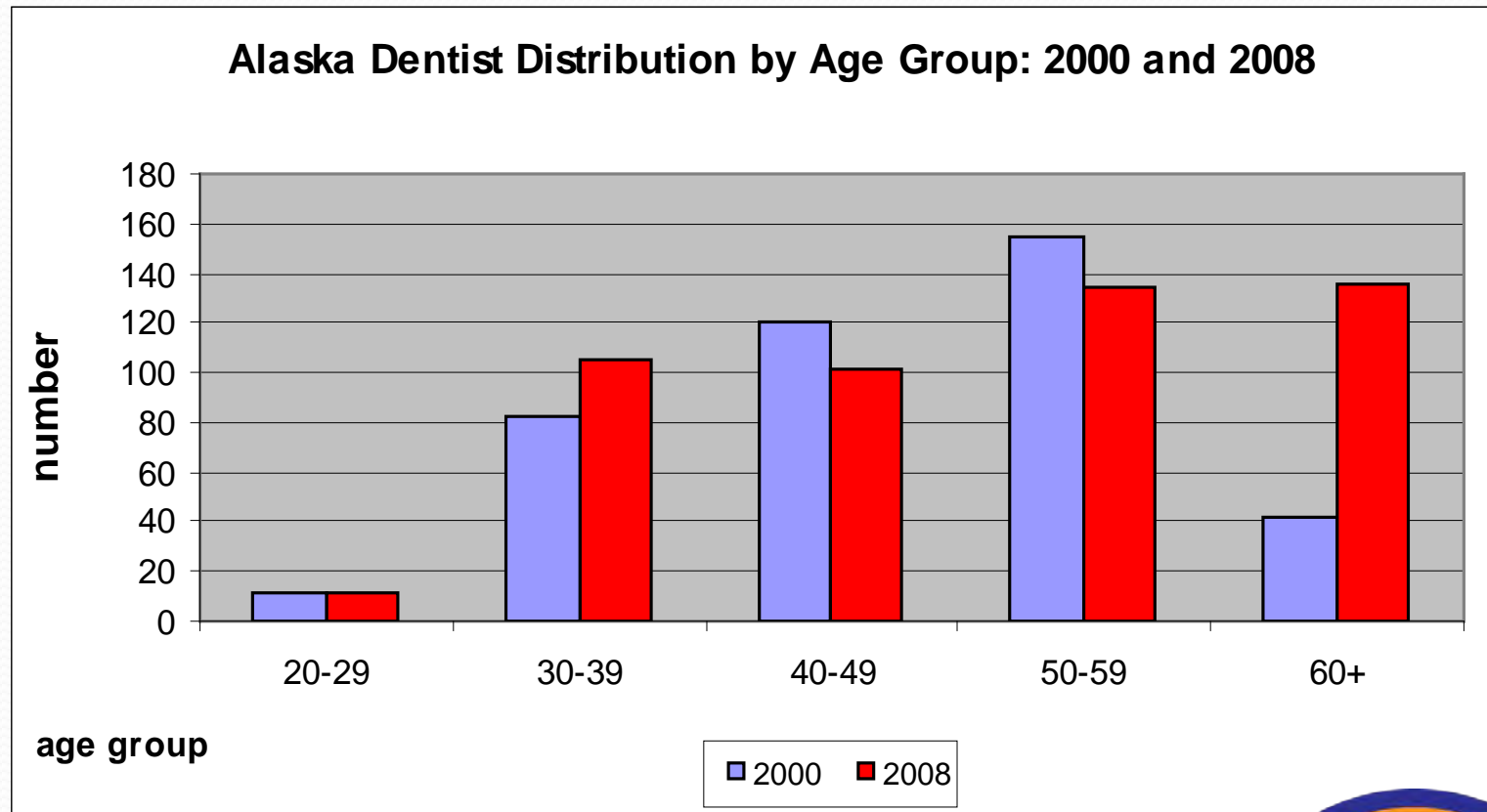
◆ Healthy People 2010 Goal (6-8 year olds)

# Caries Experience: Alaska Kindergarteners (2007)

Percent of Kindergarteners with Caries Experience on Primary Anterior Teeth by Race

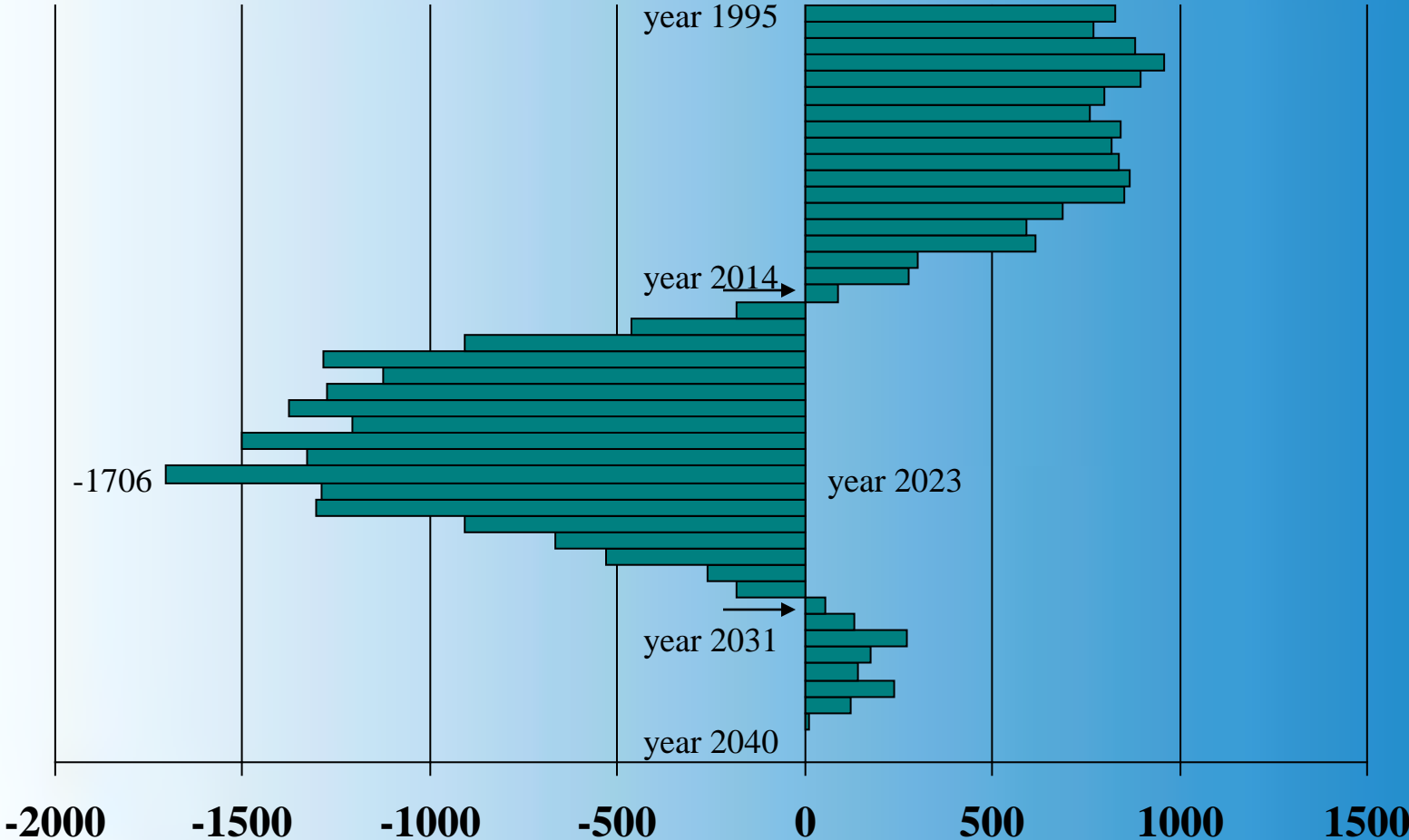


# Dentist Demographics



# Estimated Additions of Dentists to the Dental Workforce: 1995-2040

(Valachovic et al. JDE, 2001)



**Assumptions: number of graduates remains at 4050  
retirement age of 65**



Source: American Association of Dental Schools



# Dental Implications

- Likely Alaska (and U.S.) will see more dentists retire than new dentists begin practice over the next decade.
- Dentists typically see children at age 3-4; too late for many children with ECC to avoid full mouth rehabilitation – not all private dental practices participate in Medicaid
- Medical providers are seeing children, including children enrolled in Medicaid, for well child exams.
- Approach – involve medical providers in evaluation/triage for dental decay and preventive dental services (e.g., fluoride varnish)



# Oral Evaluation & Fluoride Varnish

- Medicaid reimbursement for trained MD/DO/NP/PA for oral evaluation and fluoride varnish – can be billed on the CMS-1500 form.
- Oral evaluation – D0145: covered 2 exams/year on children under 3 years of age (\$57.72)
- Fluoride varnish – D1206: Covered to a maximum of 4-times per year (\$28.50)
- Requires documentation of training
- See <http://www.smilesforlife.org> (training, certificates and resources) – Smiles for Life National Oral Health Curriculum



## Positioning Child for Oral Examination

- Position the child in the caregiver's lap facing the caregiver.
- Sit with knees touching the knees of caregiver.
- Lower the child's head onto your lap.
- Lift the lip to inspect the teeth and soft tissue.



## Fluoride Varnish (Off label use)

- Developed as a cavity liner (FDA approved for that purpose) – off-label use as a topical fluoride.
- Has not been associated with fluorosis
- 5% sodium fluoride or 2.26% fluoride in a viscous resinous base in an alcoholic suspension with flavoring agent (e.g., bubble gum)
- Application does not replace the dental home nor is it equivalent to comprehensive dental care



## Applying Fluoride Varnish (Off label use)



# AAPD Caries Risk Assessment Tool (CAT)

		Low Risk	Moderate Risk	High Risk
Caries Risk Indicators	<b>Clinical Conditions</b>	<ul style="list-style-type: none"> <li>- No carious teeth in past 24 months</li> <li>- No enamel demineralization (enamel caries "white-spot lesions")</li> <li>- No visible plaque; no gingivitis</li> </ul>	<ul style="list-style-type: none"> <li>- Carious teeth in the past 24 months</li> <li>- 1 area of enamel demineralization (enamel caries "white-spot lesions")</li> <li>- Gingivitis</li> </ul>	<ul style="list-style-type: none"> <li>- Carious teeth in the past 12 months</li> <li>- More than 1 area of enamel demineralization (enamel caries "white-spot lesions")</li> <li>- Visible plaque on anterior (front) teeth</li> <li>- Radiographic enamel caries</li> <li>- High titers of mutans streptococci</li> <li>- Wearing dental or orthodontic appliances</li> <li>- Enamel hypoplasia</li> </ul>
	<b>Environmental Characteristics</b>	<ul style="list-style-type: none"> <li>- Optimal systemic and topical fluoride exposure</li> <li>- Consumption of simple sugar or foods strongly associated with caries initiation primarily at mealtimes</li> <li>- Regular use of dental care in the established dental home</li> </ul>	<ul style="list-style-type: none"> <li>- Suboptimal systemic fluoride exposure with optimal topical exposure</li> <li>- Occasional between meal exposures to simple sugar or foods strongly associated with caries</li> <li>- Mid-level caregiver socioeconomic status (ie, eligible for school lunch program or SCHIP)</li> <li>- Irregular use of dental services</li> </ul>	<ul style="list-style-type: none"> <li>- Suboptimal topical fluoride exposure</li> <li>- Frequent (ie, 3 or more) between-meal exposures to simple sugars or foods associated strongly with caries</li> <li>- Low-level caregiver socioeconomic status (ie, eligible for Medicaid)</li> <li>- No usual source of dental care</li> <li>- Active caries present in the mother</li> </ul>
	<b>General Health Conditions</b>			<ul style="list-style-type: none"> <li>- Children with special health care needs</li> <li>- Conditions impairing saliva composition/flow</li> </ul>

# Community Water Fluoridation

- U.S. population with access to optimally fluoridated water is increasing – approaching 75% of U.S. population on public water systems with optimally fluoridated water (state fluoridation mandates).
- Dental fluorosis, white flecking or striations in tooth enamel, has also increased
- Water fluoridation opponents (Fluoride Action Network) increasingly active in activities to question fluoridation safety (web presence, their own journal and national/state spokespersons).
- Opponents use of National Research Council report focused on natural occurring levels of fluoride in communities with water in excess of 2.0 mg/L and 4.0 mg/L fluoride.
- Opponents use of messaging to reduce risks of enamel fluorosis in children at low risk for dental decay (e.g., infant formula)



# What is dental fluorosis?

Risk of fluorosis with fluoride ingestion in children under age 8

**Mild dental fluorosis**

**Mild dental fluorosis**





# What is dental fluorosis?

Focus primarily on front teeth which finish development by age 2 – but increase in fluorosis also relates to posterior teeth

## Moderate



## Moderate to severe



## Recommended Fluoride Supplement Schedule – now a risk-based approach

	Fluoride Concentration in Community Drinking Water		
Age	<0.3 ppm	0.3–0.6 ppm	>0.6 ppm
0–6 months	None	None	None
6 mo–3 yrs	0.25 mg/day	None	None
3 yrs–6 yrs	0.50 mg/day	0.25 mg/day	None
6 yrs–16 yrs	1.0 mg/day	0.50 mg/day	None

MMWR: Recommendations for Using Fluoride to Prevent and Control Dental Caries in the US:  
<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>.

# Medicaid: Dental Services

- Covers comprehensive dental services for children (low income is a risk factor for dental decay)
- Adults, including pregnant women, now are covered for dental services – emergent and up to a \$1,150 annual limit for other dental services
- EPSDT guidance for dental (moving from an age 3 to an age 1 dental visit). Need for discussion of early dental visits with pregnant women.
- Trends in dental utilization for Medicaid children.



# Dental access for pregnant women (PRAMS)

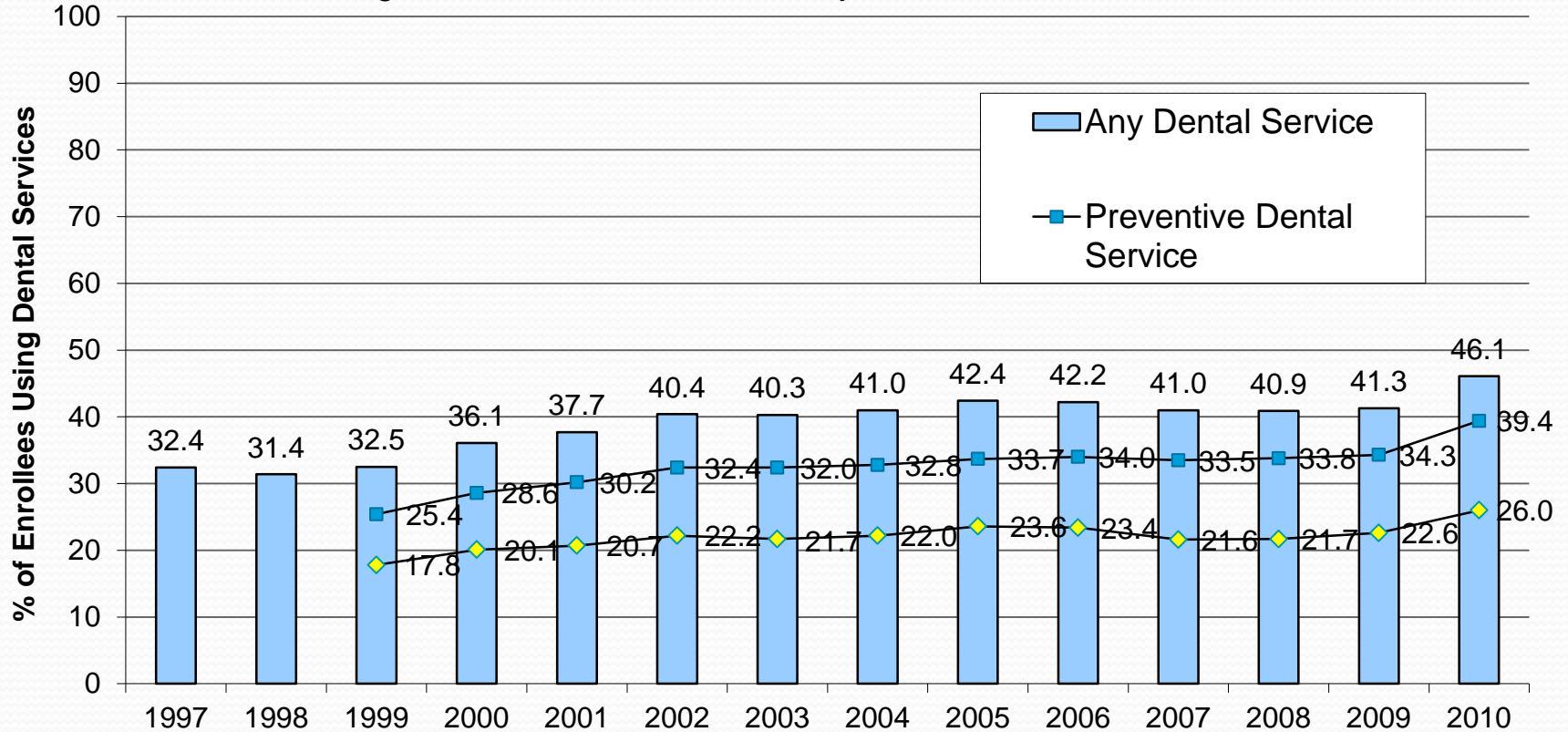
## % Went to a dentist during pregnancy

	2004	2005	2006	2007	2008
Yes	39.93	37.13	40.57	39.54	44.36
No	59.34	59.55	58.08	57.97	53.51
Blank	0.74	3.32	1.35	2.50	2.13
Total	10002	10098	10746	10805	11164



# Medicaid: Child Dental Utilization (Trends)

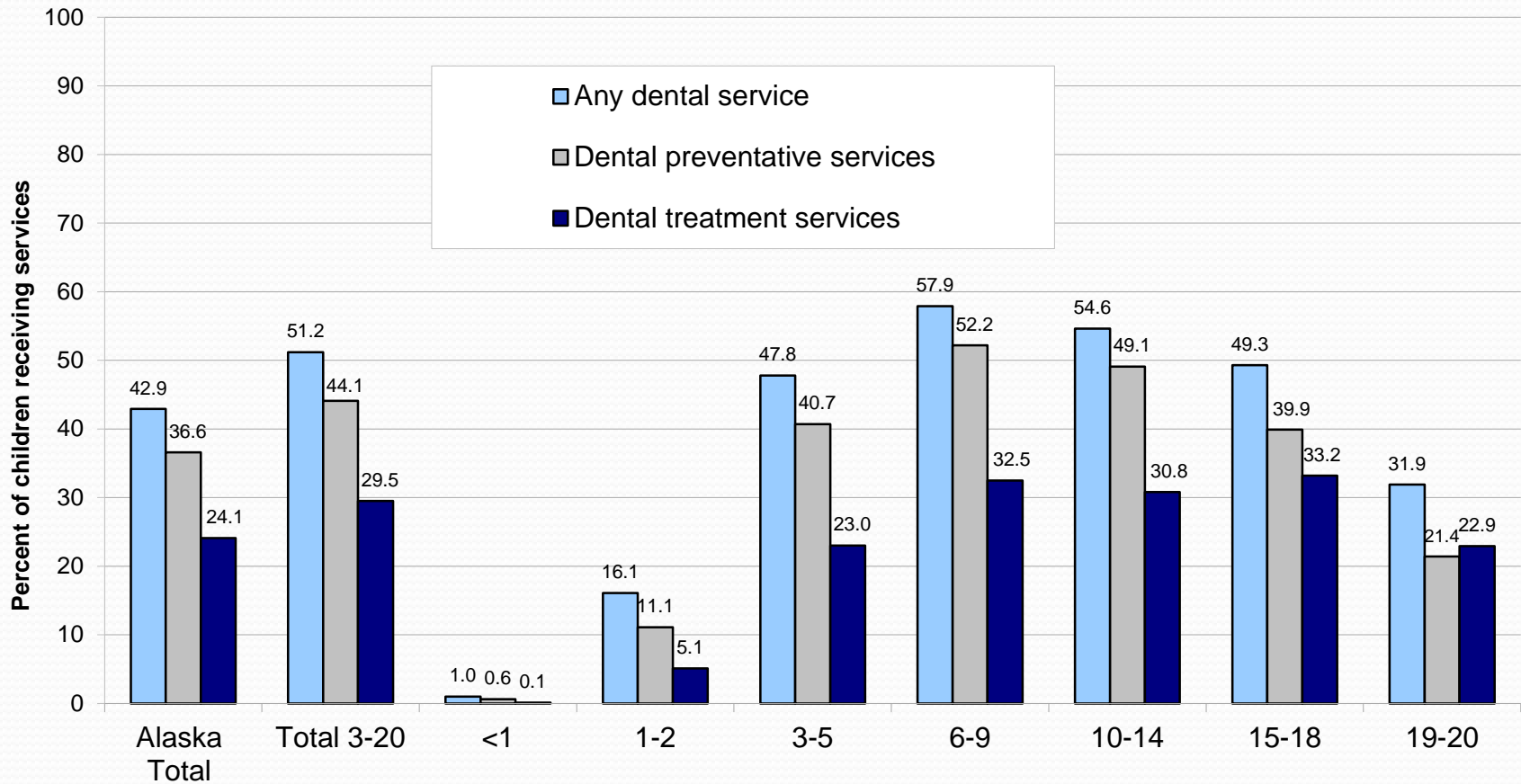
Percent of Children Enrolled in Medicaid (Aged 1-20)  
Using Medicaid Dental Services, by Federal Fiscal Year 1999-2010



Source: AK MMIS CMS-416 – Annual EPSDT Participation Report 3/31/2011

# Medicaid: Child Dental Utilization (by age group)

Medicaid - Percent of children receiving dental services by age & type of service, FFY2010



Source: AK MMIS CMS-416 – Annual EPSDT Participation Report 3/31/2011

# Questions??

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