“Two is Too Late”
Oral Health of AI/AN Children

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The findings and conclusions in this presentation are those of the presenter, who is responsible for its content.

No statement in this presentation should be construed as an official position of Indian Health Service or of the U.S. Department of Health and Human Services.
5.2 million self-identify as being AI/AN
> 560 Federally Recognized Tribes

2.6 million registered with IHS
2.9 million report being AI/AN alone

1.6 million have used IHS services in last 3 years

1.1 million live on trust land or in an AI/AN statistical area

Source: US Census, Indian Health Service
Documented Disparities

Mean Number of Decay or Filled Teeth in 2-5 Year Olds
Cavitated Lesions

Caries Experience

Percent of AI/AN Children with Caries Experience

Age in Years

- 1 year: 21%
- 2 years: 44%
- 3 years: 61%
- 4 years: 70%
- 5 years: 75%
- U.S. 2-5 years: 27%

Disparities Among IHS Areas

Percent of 2-5 Year Olds with Caries Experience

- Oklahoma City: 39%
- Nashville: 51%
- Bemidji: 53%
- California: 55%
- Aberdeen: 61%
- Portland: 64%
- Phoenix: 67%
- Tucson: 68%
- Alaska: 68%
- Billings: 69%
- Albuquerque: 78%
- Navajo: 86%

Source: IHS Oral Health Survey 2010
Highest Risk Subpopulation

Percent of Teeth with Decay Experience in AI/AN Children

- **Caries Free**
- **< 30%**
- **30-50%**
- **> 50%**

<table>
<thead>
<tr>
<th>Year</th>
<th>Caries Free</th>
<th>&lt; 30%</th>
<th>30-50%</th>
<th>&gt; 50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Year</td>
<td>79%</td>
<td>6%</td>
<td>12%</td>
<td>2%</td>
</tr>
<tr>
<td>2 Years</td>
<td>56%</td>
<td>28%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>3 Years</td>
<td>39%</td>
<td>34%</td>
<td>15%</td>
<td>12%</td>
</tr>
<tr>
<td>4 years</td>
<td>31%</td>
<td>37%</td>
<td>19%</td>
<td>13%</td>
</tr>
<tr>
<td>5 years</td>
<td>25%</td>
<td>32%</td>
<td>21%</td>
<td>22%</td>
</tr>
</tbody>
</table>

Source: IHS Oral Health Survey 2010
Limitations to IHS Data

- Cross-sectional
- Did not include non-cavitated lesions
- Did not include children < 12 months
Available Longitudinal Data

- **Population**
  - About 235 children followed from birth to 36 months
  - Northern Plains tribal community

- **Disclaimer**
  - Data for children 0-16 months presented at 2012 IADR meeting
  - Data for children 22-36 months is **preliminary** and may be subject to change
Percent with Caries by Age

Unpublished data
Caries Prevalence

Approximate Age in Months

Percent of Children

AI/AN
China 2012
U.S. Low Income California 2011
U.S. Arizona 2001
U.S. Low Income Iowa 2009

Northern Plains Children

Unpublished data
Eruption Patterns in AI/AN Children

Source: National Oral Health Conference Abstract
Summary

- Onset of disease is very early
- Prevalence and severity increases with age
- A subset of AI children have a very aggressive form of the disease
Primary teeth
- Last 5-10 years

Permanent teeth
- May last 90+ years

Should also consider how can we prevent decay in permanent teeth of high risk children?
This child’s problems extend far beyond CIPD.