



# ORAL HEALTH OF AI/AN CHILDREN 1-5 YEARS OF AGE

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# THANK YOU FOR PARTICIPATING IN 2018!

- Fort Hall
- Grand Ronde
- Lake Roosevelt CHC
- Lummi
- Marimn Health
- Nimiipuu Health
- Port Gamble S'Klallam
- Puyallup
- Siletz
- Sophie Trettevick
- Tulalip
- Warm Springs
- Yakama
- Yellowhawk

# SURVEY METHODS

- Probability sample of tribal and IHS Service Units with a dental clinic
- Dentists, hygienists & therapists screened AI/AN children 1-5 years of age in community-based settings
  - Medical & well child clinics
  - Early Head Start, Head Start & other preschool settings
  - WIC
  - Kindergarten
  - Community events
- Dental clinic patients were not screened

# NUMBER OF SITES AND CHILDREN

- Screening goal:
  - 400 children per IHS Area equally divided by age – 80 per age year
  - Some IHS Areas did not meet the screening goal
- 73 IHS Service Units participated
  - 43% of the 170 IHS Service Units
  - NOTE: Some Service Units include multiple tribal programs. A total of 82 IHS/tribal programs participated
- 9,275 AI/AN children aged 1-5 years were screened
  - Represents approximately 7% of the estimated 2017 user population aged 1-5 years (n=135,786)
  - The majority of the children screened were 3-4 years of age

# NUMBER OF CHILDREN SCREENED (BLUE HIGHLIGHTED CELLS = DID NOT MEET GOAL FOR AGE)

IHS Area	Number of Service Units	Number of Children Screened						Total
		1 Year	2 Years	3 Years	4 Years	5 Years		
Alaska	5	40	42	142	203	121	548	
Albuquerque	5	69	81	155	213	111	629	
Bemidji	6	68	79	282	235	99	763	
Billings	8	154	163	328	410	202	1,257	
California	7	65	79	103	98	89	434	
Great Plains	4	101	143	237	296	108	885	
Nashville	6	102	116	231	236	161	846	
Navajo	6	61	85	135	147	99	527	
Oklahoma City	6	155	187	417	570	204	1,533	
Phoenix	6	86	85	106	127	77	481	
<b>Portland</b>	<b>12</b>	<b>136</b>	<b>146</b>	<b>218</b>	<b>346</b>	<b>126</b>	<b>972</b>	
Tucson	2	23	40	105	183	49	400	
<b>Total</b>	<b>73</b>	<b>1,060</b>	<b>1,246</b>	<b>2,459</b>	<b>3,064</b>	<b>1,446</b>	<b>9,275</b>	

Screening goal: 400 children per IHS Area equally divided by age – 80 per age year



## NUMBER OF CHILDREN SCREENED

- Impact of not reaching screening goals
  - Potential changes in oral health status more difficult to detect
  - If a particular age year is underrepresented, Area and clinic results may not reflect the overall population



# IHS NATIONAL RESULTS



*Since 2010, ECC has steadily declined nationally, and untreated ECC in AI/AN preschool children has significantly declined.*

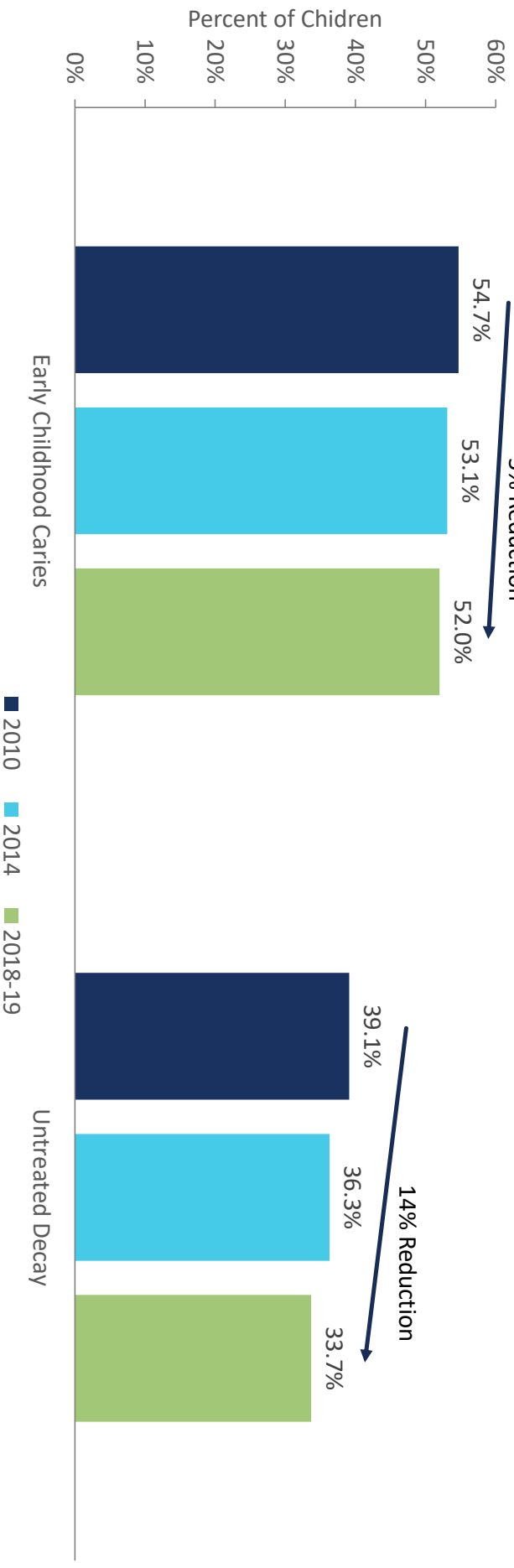


## KEY FINDING #1



# FINDING #1: SINCE 2010, ECC HAS STEADILY DECLINED NATIONALLY, AND UNTREATED ECC IN AI/AN PRESCHOOL CHILDREN HAS SIGNIFICANTLY DECLINED.

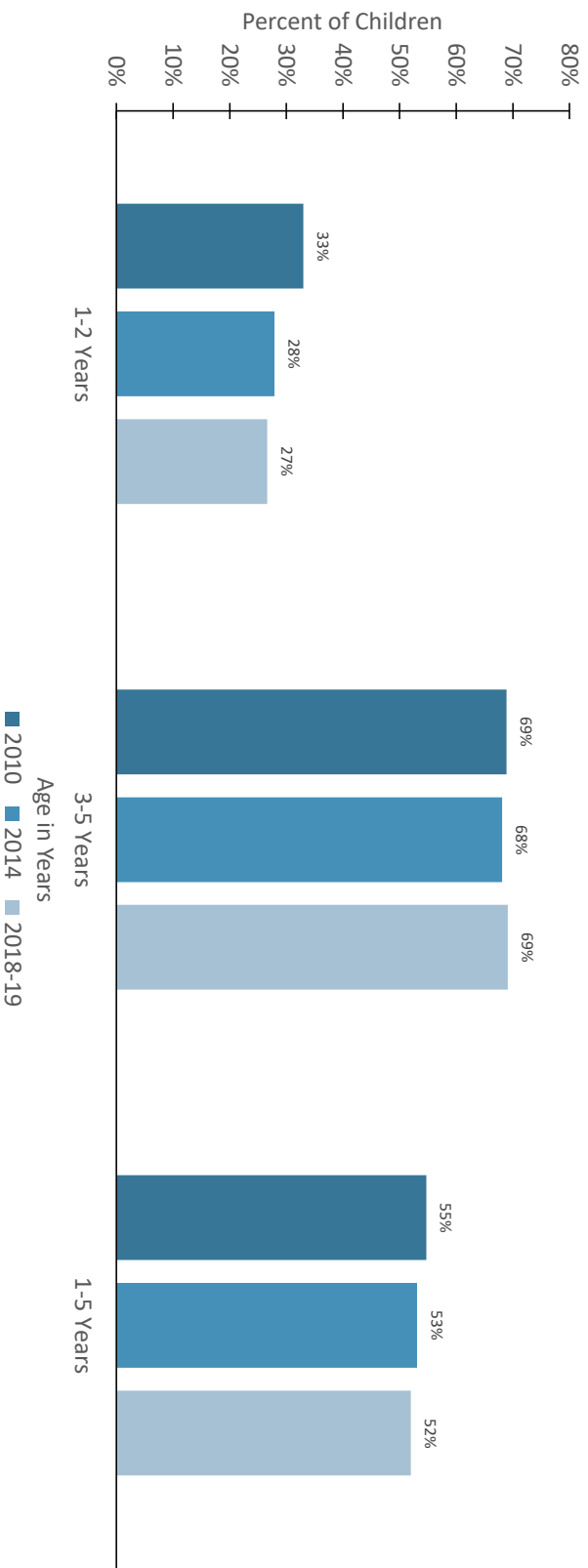
Percentage of 1-5 year old AI/AN children with ECC and untreated decay by survey year



*Limited to the 53 service units that participated in the 2010, 2014 and 2018-19 IHS oral health surveys*

**NATIONAL TRENDS IN DECAY EXPERIENCE BY AGE, 2010 TO 2018-19  
 LIMITED TO THE 53 SERVICE UNITS THAT PARTICIPATED IN THE 2010, 2014 AND 2018-19 SURVEYS**

Percentage of AI/AN Children with Decay Experience by Age, 2010-2018

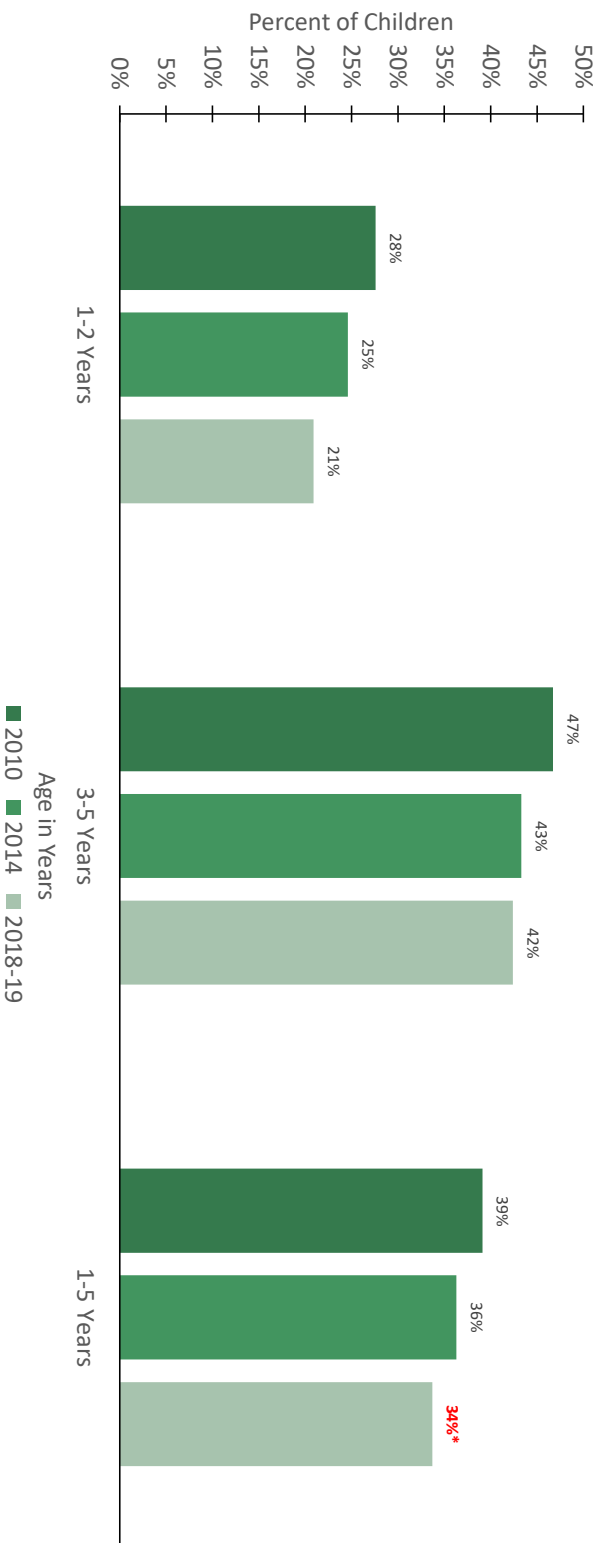


\* Statistically significant difference, p<0.05

Data is from the 53 service units that participated in the 2010, 2014 and 2018-19 surveys

NATIONAL TRENDS IN UNTREATED DECAY BY AGE, 2010 TO 2018-19  
 LIMITED TO THE 53 SERVICE UNITS THAT PARTICIPATED IN THE 2010, 2014 AND 2018-19 SURVEYS

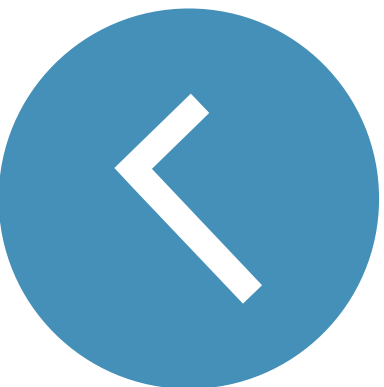
Percentage of AI/AN Children with Untreated Decay by Age, 2010-2018



\* Statistically significant difference,  $p < 0.05$

Data is from the 53 service units that participated in the 2010, 2014 and 2018-19 surveys

**FINDING #1: SINCE 2010, ECC HAS STEADILY DECLINED NATIONALLY, AND UNTREATED ECC IN AI/AN PRESCHOOL CHILDREN HAS SIGNIFICANTLY DECLINED.**



**MET HEALTHY PEOPLE 2020  
PERCENTAGE REDUCTION GOAL (10%)  
FOR UNTREATED DECAY**



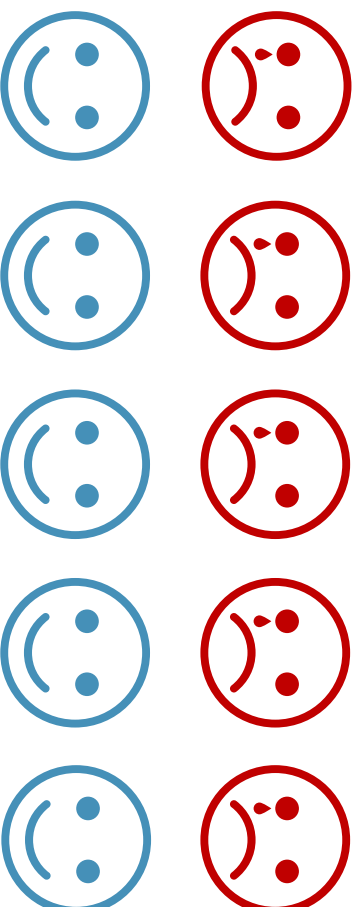
**MIRRORS NATIONAL TRENDS WITH  
NON-SIGNIFICANT DECLINE IN DECAY  
EXPERIENCE AND SIGNIFICANT  
DECLINE IN UNTREATED DECAY\***

*ECC, however, continues to be a serious health problem for many AI/AN preschool children, despite declining rates.*

## KEY FINDING #2

**FINDING #2: ECC, HOWEVER, CONTINUES TO BE A SERIOUS HEALTH PROBLEM FOR MANY AI/AN PRESCHOOL CHILDREN, DESPITE DECLINING RATES.**

*More than 5 out of every 10 AI/AN children (54%) between 1-5 years of age has ECC.*

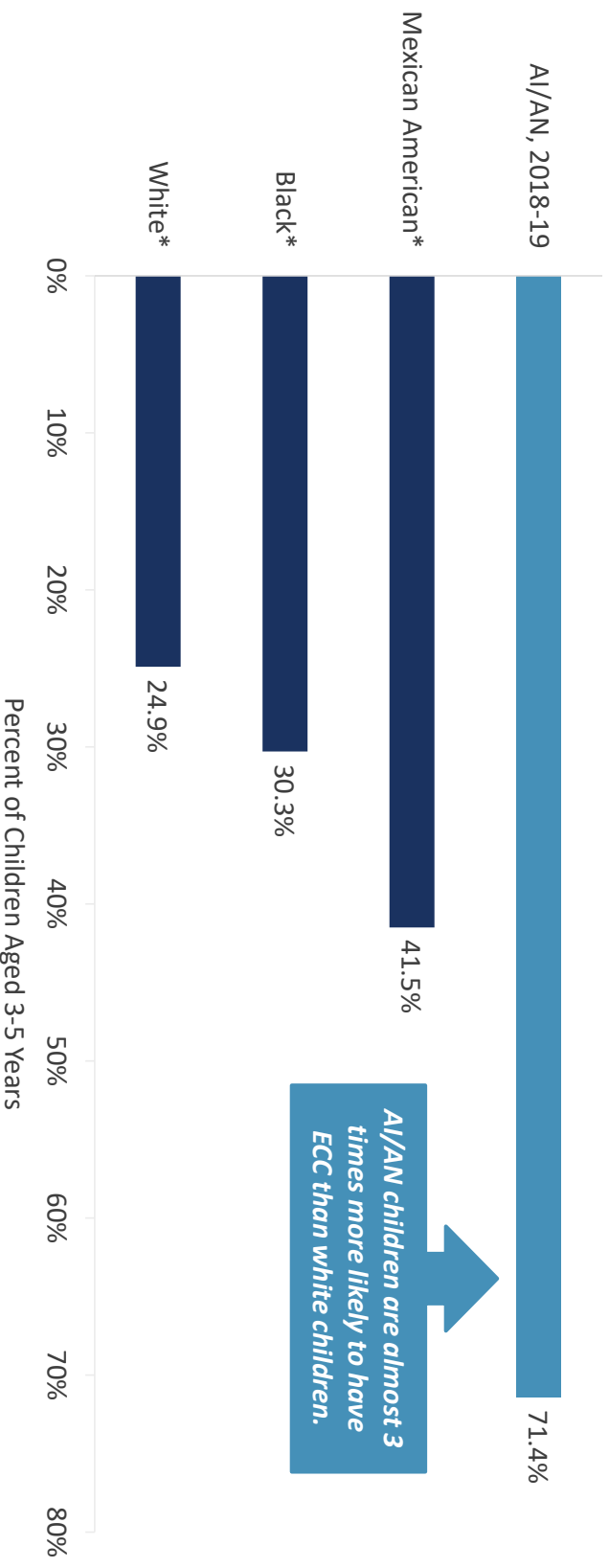


**FINDING #2: ECC, HOWEVER, CONTINUES TO BE A SERIOUS HEALTH PROBLEM FOR MANY AI/AN PRESCHOOL CHILDREN, DESPITE DECLINING RATES.**

- ECC can cause needless pain, suffering and infection
- ECC may affect a child's ability to eat, communicate and learn
- Many children with ECC must be treated in a hospital setting at a cost exceeding \$6,000 per child

## FINDING #2: ECC, HOWEVER, CONTINUES TO BE A SERIOUS HEALTH PROBLEM FOR MANY AI/AN PRESCHOOL CHILDREN, DESPITE DECLINING RATES.

Percentage of 3-5 year old children with ECC

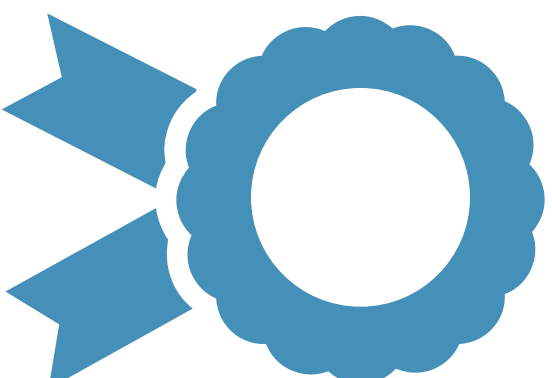


\* Data Source: National Health and Nutrition Examination Survey (NHANES), 2013-14

PORTLAND AREA 2018-19



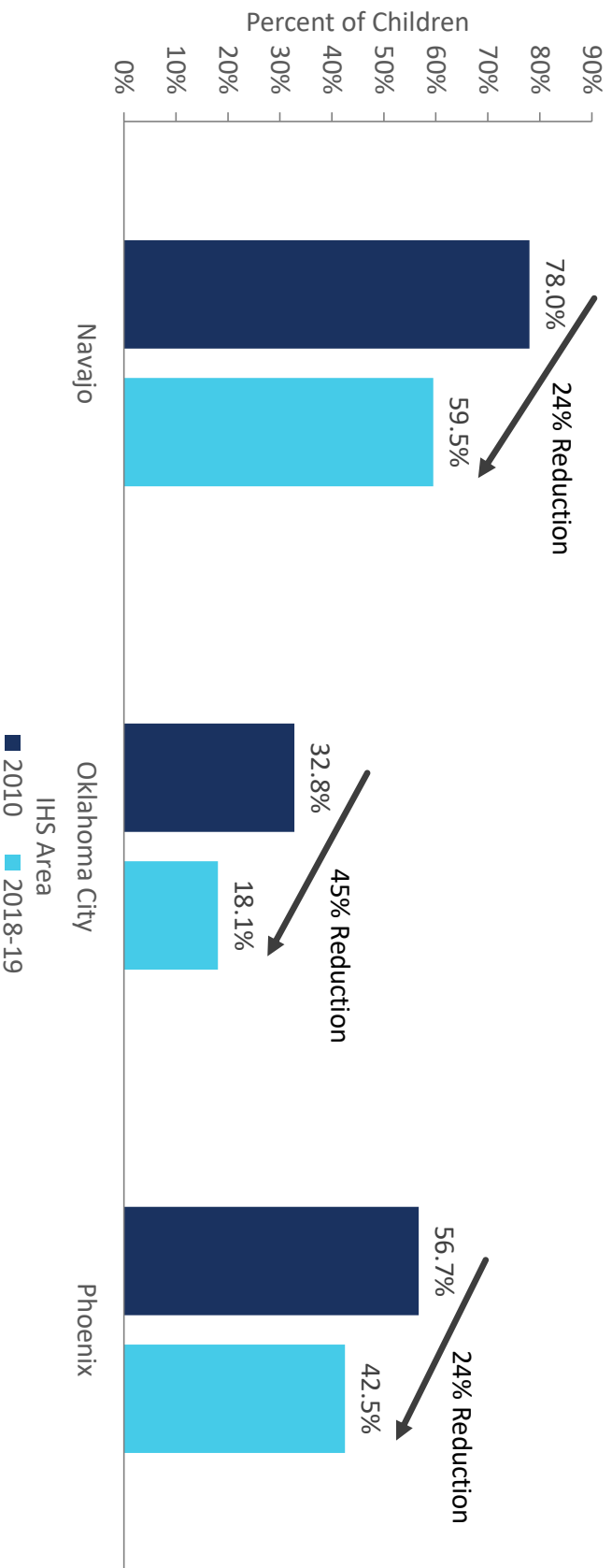
*Some IHS Areas have had dramatic, statistically significant reductions in the prevalence of ECC.*



## KEY FINDING #3

# FINDING #3: SOME IHS AREAS HAVE HAD DRAMATIC, STATISTICALLY SIGNIFICANT REDUCTIONS IN THE PREVALENCE OF ECC.

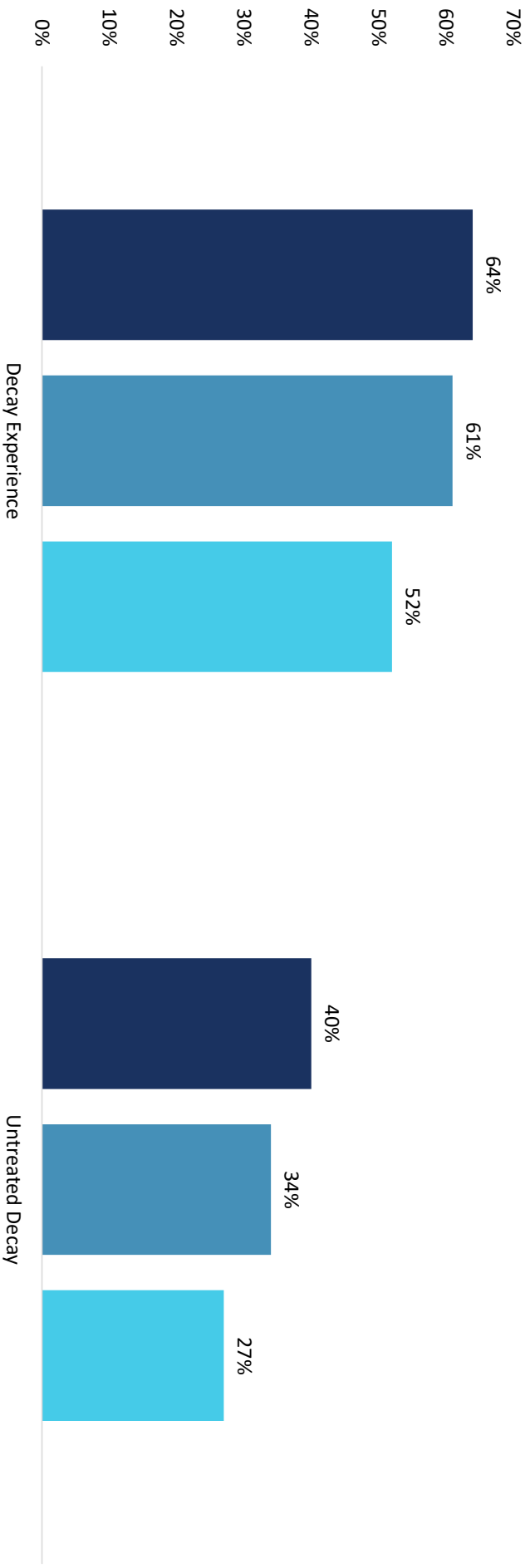
Percent of 1-5 year old AI/AN children with ECC for select IHS Areas, 2010 and 2018-19



*Limited to the 53 service units that participated in the 2010, 2014 and 2018-19 IHS oral health surveys*

# PORTLAND AREA SPECIFIC RESULTS

Percent of 2-5 Year Olds with Decay Experience and Untreated Decay



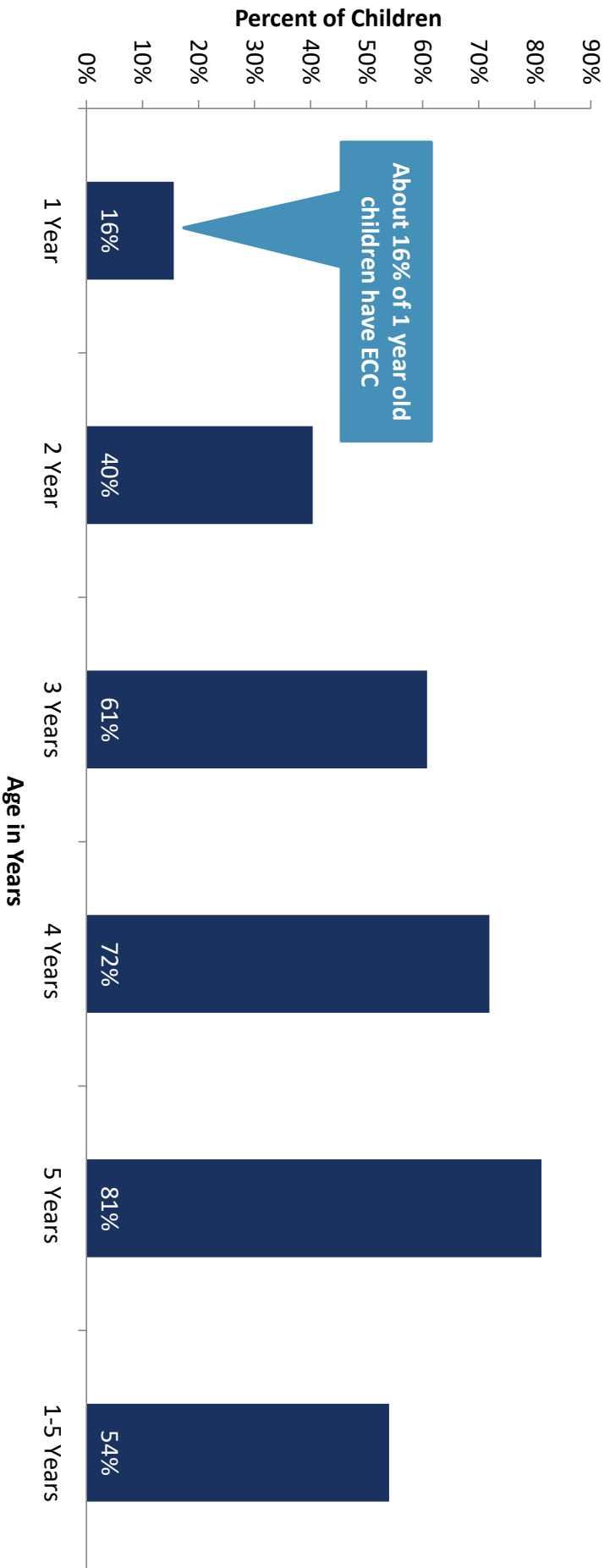
*Includes all clinics that participated in each year.*

*One out of every six one-year old AI/AN children suffer from early childhood caries.*

## KEY FINDING #4

# FINDING #4: ONE OUT OF EVERY SIX ONE-YEAR OLD AI/AN CHILDREN SUFFER FROM ECC.

Percent of AI/AN Children with ECC by Age, 2018-19



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*Dental sealants on primary molars may be underutilized.*

## KEY FINDING #5

***Only 2% of 1-2 year olds and 10% of 3-5 year olds have sealants.***

## **FINDING #5: DENTAL SEALANTS ON PRIMARY MOLARS MAY BE UNDERUTILIZED.**

- Sealants reduce the risk of new decay by 76%\*
- The American Dental Association and the American Academy of Pediatric Dentistry both recommend the use of sealants in primary (baby) molars\*
- The IHS Division of Oral Health recommends the use of glass ionomer sealants for partially erupted teeth and pre-cooperative patients

\*Wright JT, et al. Evidence-based Clinical Practice Guideline for the Use of Pit- and Fissure Sealants. American Academy of Pediatric Dentistry, American Dental Association. *Pediatr Dent* 2016; 38(5):E120-E36

## IMPLICATIONS



The oral health of some AI/AN preschool children is improving



Regardless of these improvements, AI/AN children continue to suffer disproportionately from the burden of oral disease



To address this disparity, IHS and tribal programs must continue to...

- Engage the individual, family, community, tribal leadership, plus health and social service providers
- Ensure that all AI/AN preschool children have access to age appropriate, evidence-based primary prevention strategies along with methods for managing the early stages of disease
- Ensure that if primary or secondary prevention fails, children have access to appropriate restorative dental care

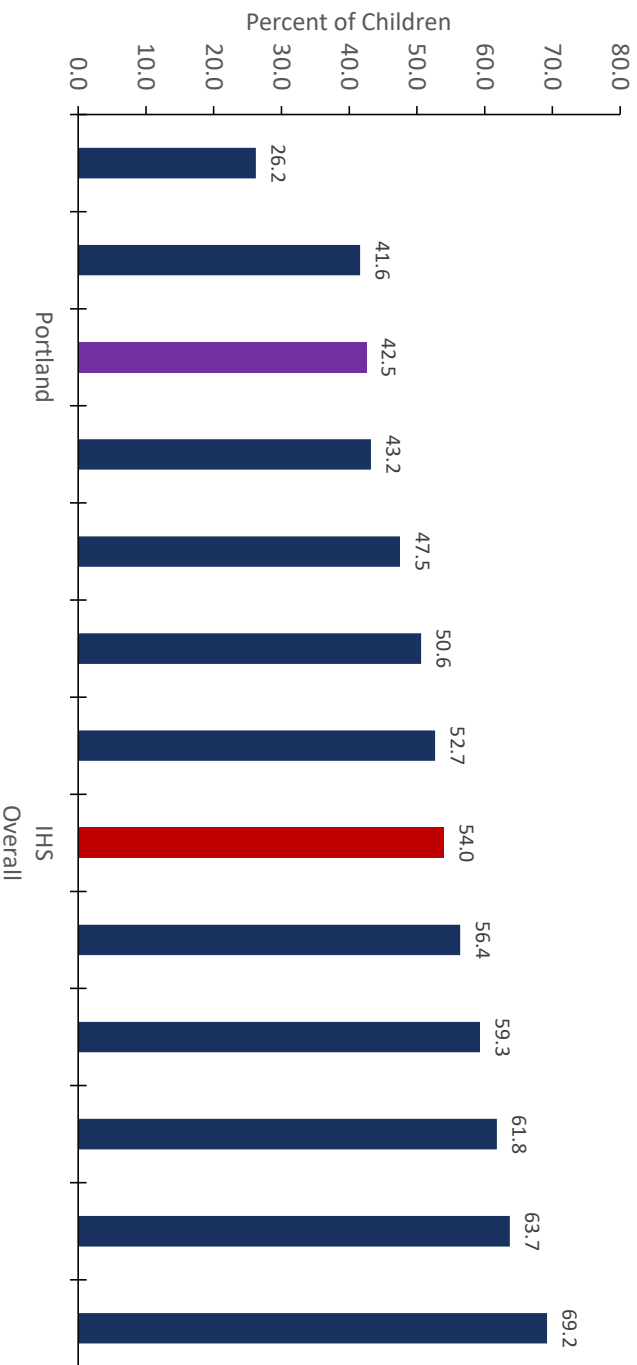




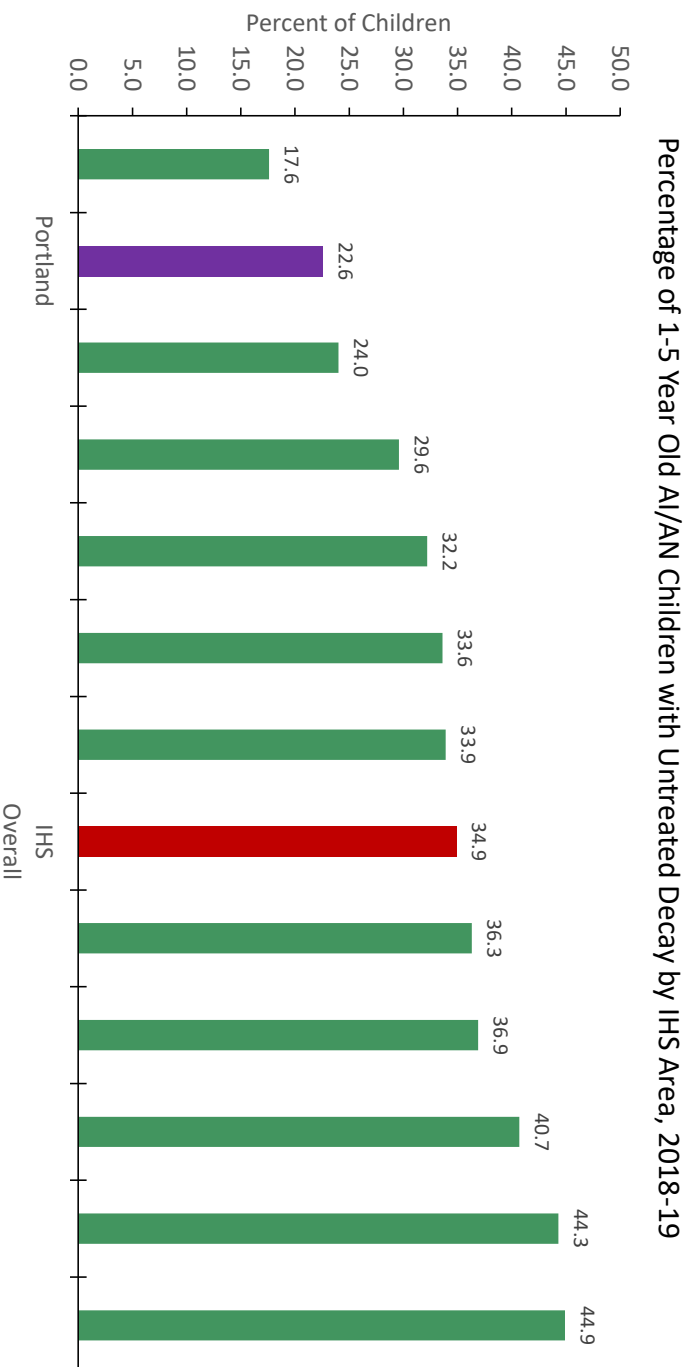
# HOW DOES THE PORTLAND AREA RANK?

**PREVALENCE OF DECAY EXPERIENCE BY IHS AREA, 2018-19  
INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY**

Percentage of 1-5 Year Old AI/AN Children with Decay Experience by IHS Area, 2018-19

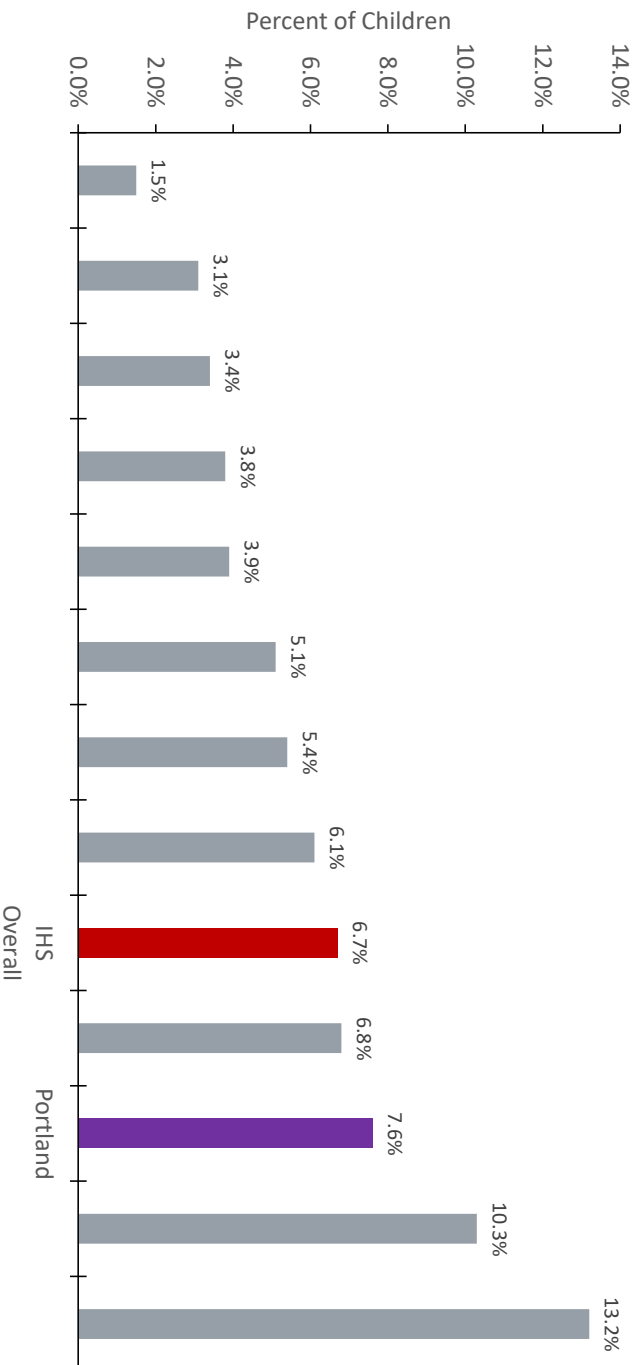


**PREVALENCE OF UNTREATED DECAY BY IHS AREA, 2018-19  
INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY**



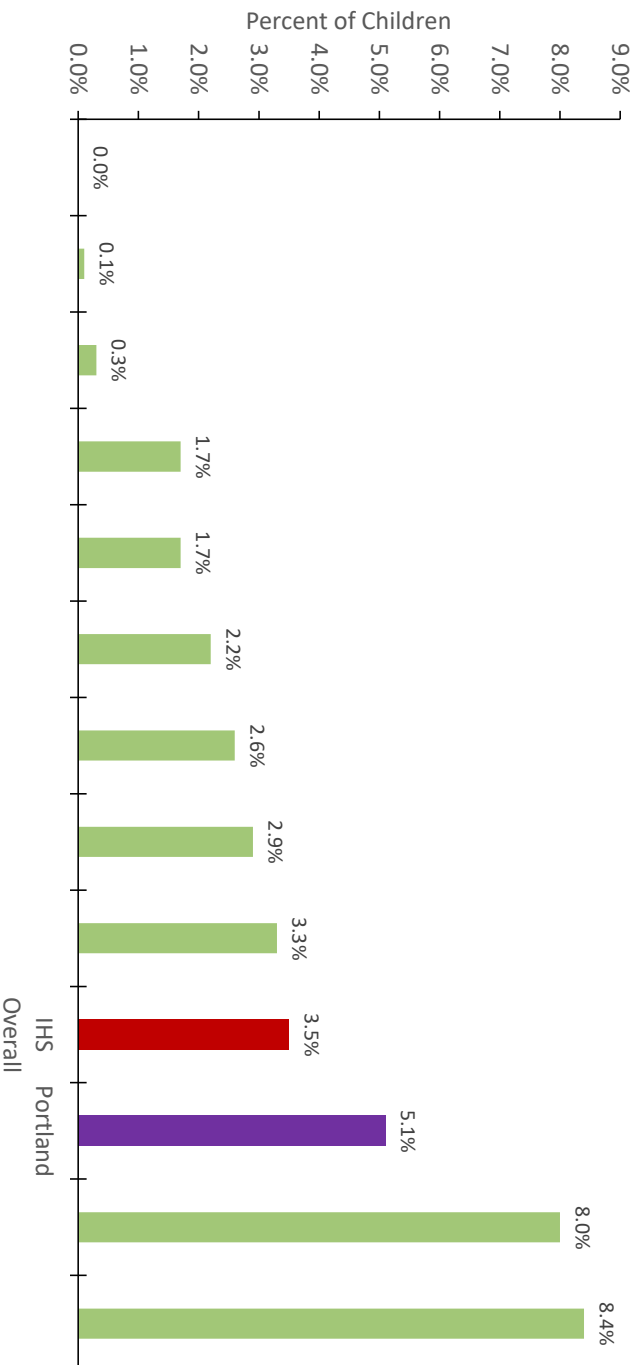
**PREVALENCE OF DENTAL SEALANTS BY IHS AREA, 2018-19**  
**INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY**

Percentage of 1-5 Year Old AI/AN Children with Dental Sealants by IHS Area, 2018-19



**PREVALENCE OF ARRESTED DECAY BY IHS AREA, 2018-19**  
**INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY**

Percentage of 1-5 Year Old AI/AN Children with Arrested Decay by IHS Area, 2018-19

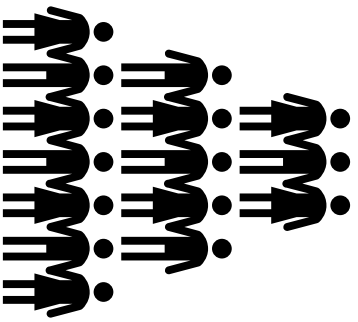




# RESULTS – PORTLAND AREA CLINICS

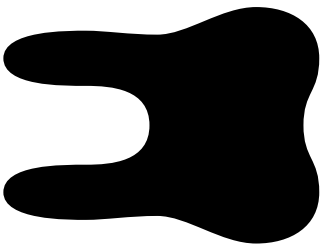
**WARNING: CLINIC DIFFERENCES MAY BE DUE TO DIFFERENCES IN THE AGE DISTRIBUTION OF CHILDREN SCREENED OR SMALL SAMPLE SIZES**





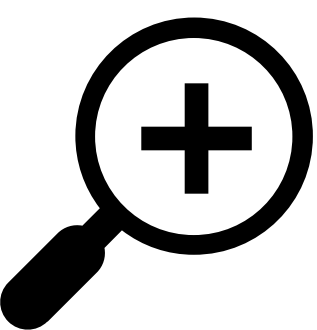
**TULALIP**

**MOST SCREENED**



**PORT GAMBLE S'KLALLAM**

**LOWEST DECAY EXPERIENCE**



**GRAND RONDE**

**HIGHEST DENTAL SEALANTS**

**THE WINNERS ARE...**

## PORTLAND AREA CLINICS NUMBER OF CHILDREN SCREENED

Clinic /Tribe	1 Year	2 Years	3 Years	4 Years	5 Years	TOTAL
A	0	5	6	40	13	64
B	10	10	10	10	10	50
C	12	11	11	10	11	55
D	10	5	8	11	0	34
E	8	13	24	19	5	69
F	5	5	5	5	5	25
G	12	18	9	12	2	53
H	11	19	18	58	51	157
I	1	1	9	17	3	31
J	13	6	5	31	5	60
K	47	41	39	38	3	168
L	6	10	12	11	9	48
M	1	2	50	70	5	128
N	0	0	12	14	4	30
Portland Area Total	136	146	218	346	126	972
IHS Total	1,060	1,246	2,459	3,064	1,446	9,275



# PORTLAND AREA CLINICS ORAL HEALTH STATUS OF CHILDREN SCREENED

*Warning: Clinic differences may be due to differences in the age distribution of children screened or small sample sizes.*

Clinic/Tribe	Decay Experience (%)	Untreated Decay (%)	Dental Sealants (%)
A	65.5	19.9	0.0
B	28.0	20.4	42.1
C	43.3	21.3	13.8
D	28.7	12.7	0.0
E	36.2	27.5	2.1
F	29.0	19.7	7.3
G	10.8	7.2	9.2
H	56.3	29.9	11.7
I	59.8	22.7	4.5
J	52.4	25.0	7.3
K	20.0	8.4	0.6
L	71.2	36.7	0.0
M	61.0	36.6	3.9
N	52.2	41.5	8.5
Portland Area Total	42.5	22.6	7.6
<b>IHS Total</b>	<b>54.0</b>	<b>34.9</b>	<b>6.7</b>