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

KATHY PHIPPS, DRPH

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					
		1 Year	2 Years	3 Years	4 Years	5 Years	Total
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
Portland	**12**	**136**	**146**	**218**	**346**	**126**	**972**
Tucson	2	23	40	105	183	49	400
Total	**73**	**1,060**	**1,246**	**2,459**	**3,064**	**1,446**	**9,275**

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

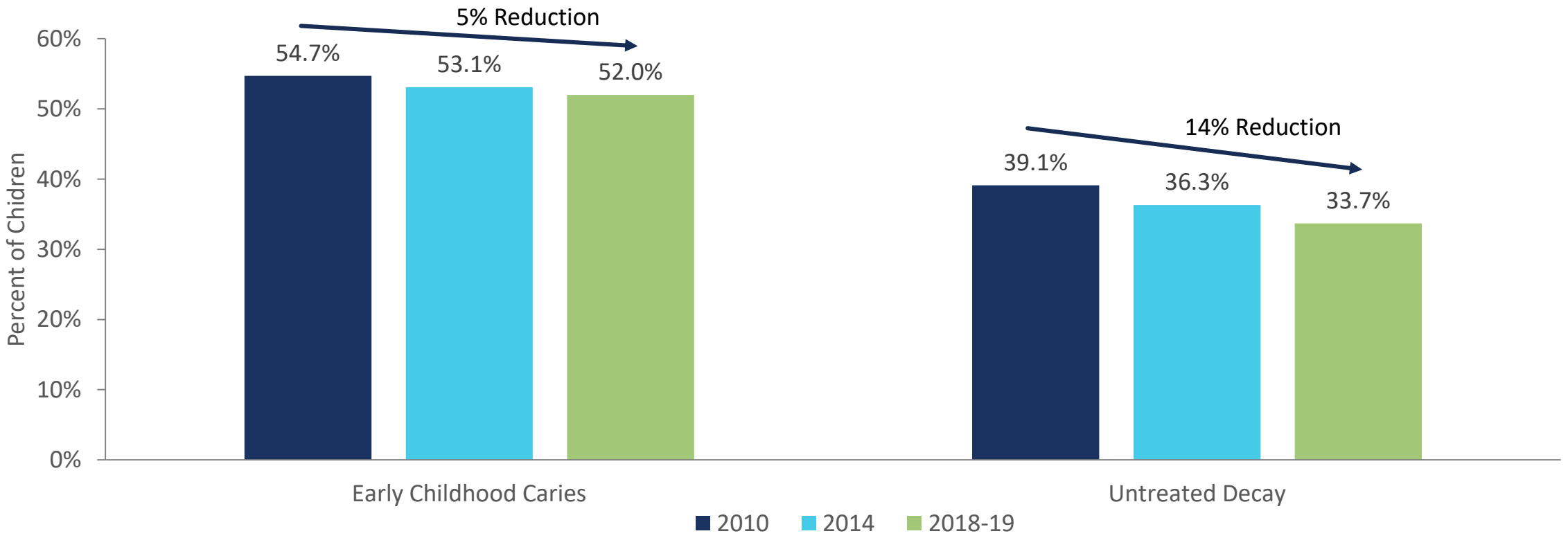
KEY FINDING #1

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



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

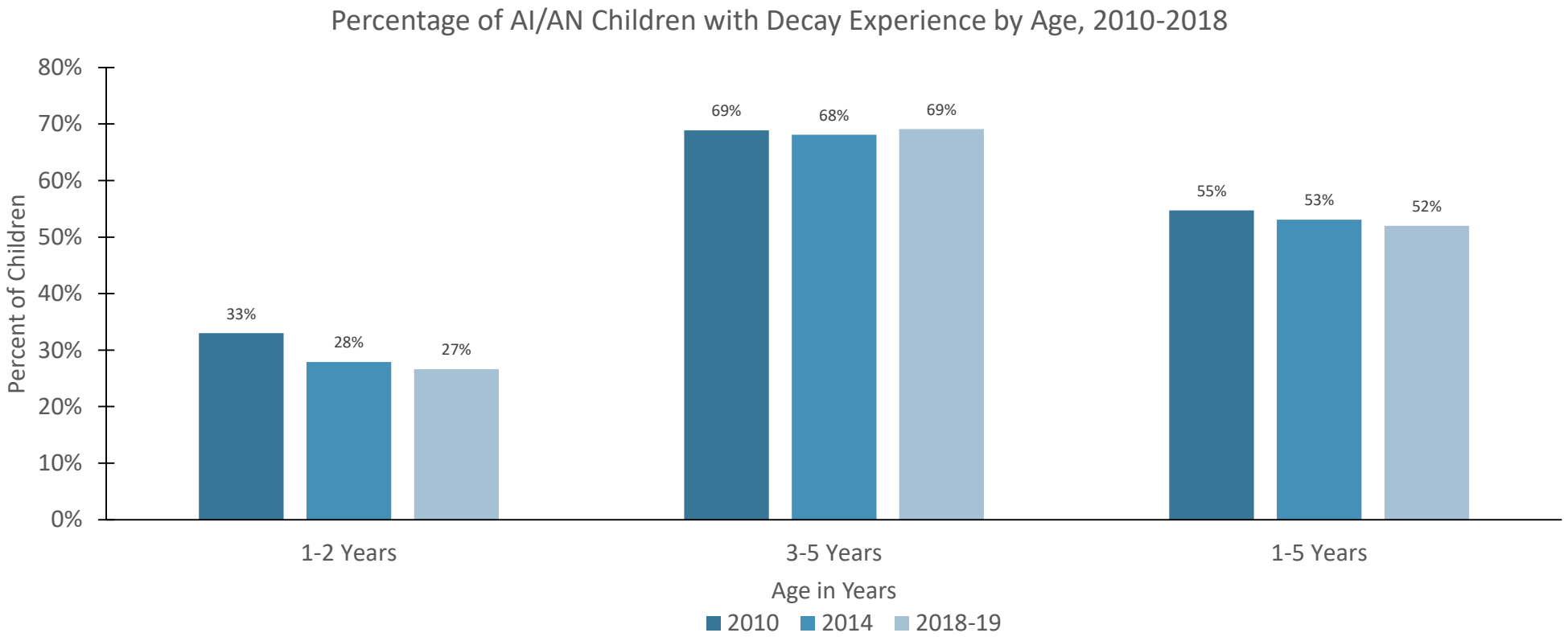
Percentage of 1-5 year old AI/AN children with ECC and untreated decay by survey year



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

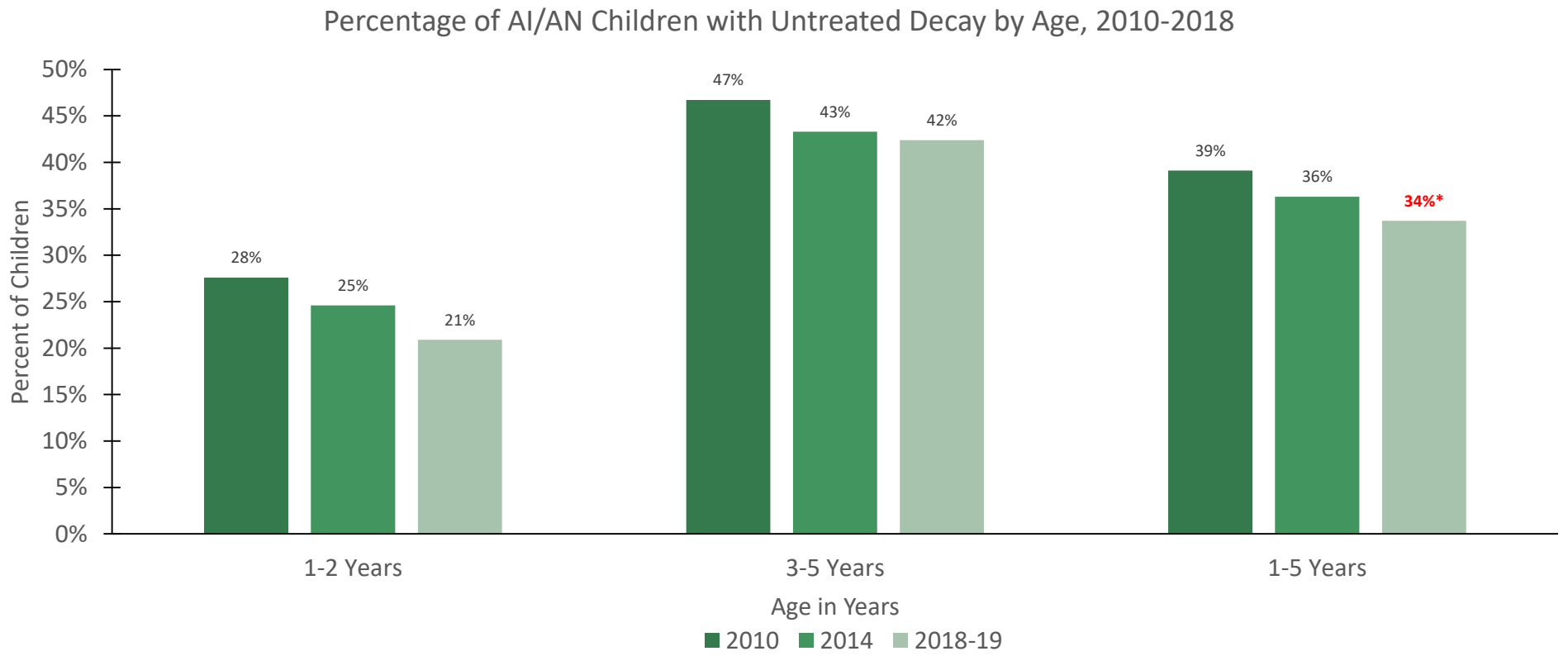


* Statistically significant difference, p<0.05

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



* 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*

KEY FINDING #2

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

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

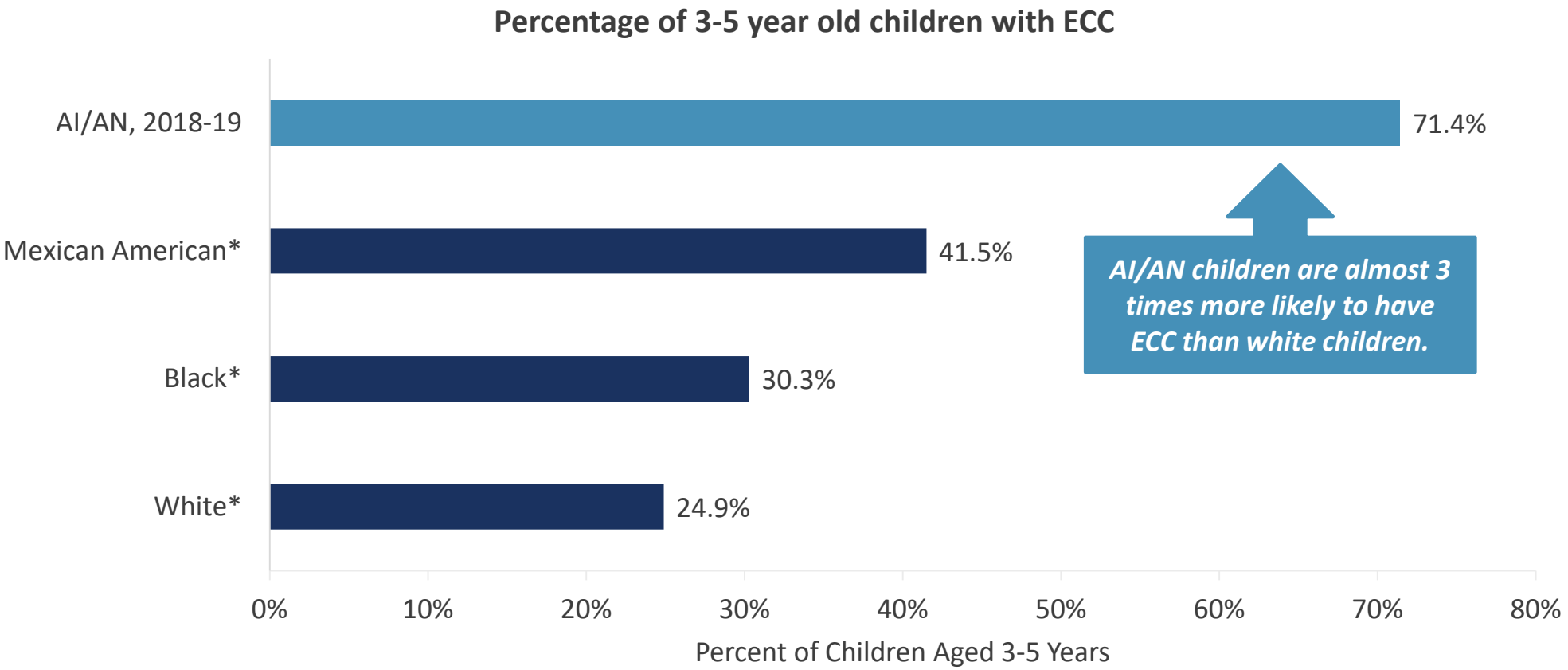
More than 5 out of every 10 AI/AN children (54%) between 1-5 years of age has ECC.



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

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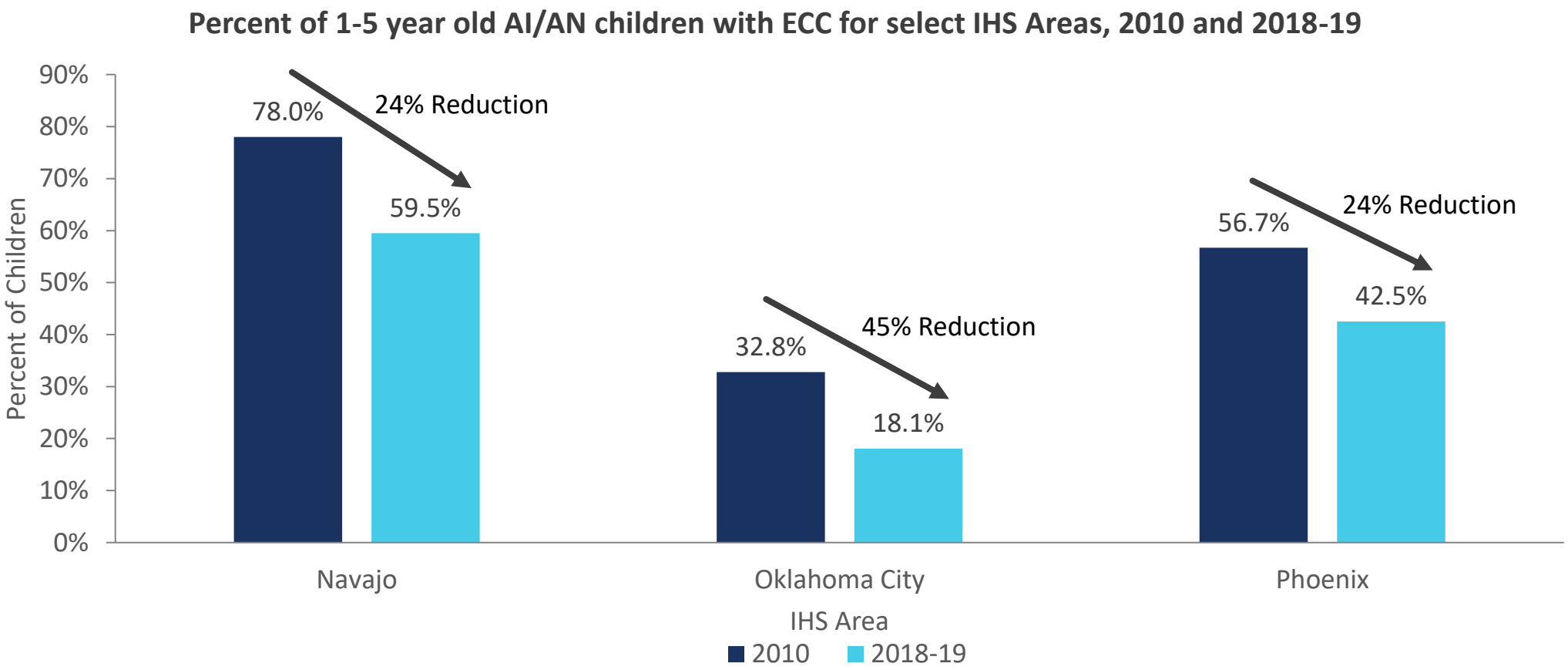
* Data Source: National Health and Nutrition Examination Survey (NHANES), 2013-14

KEY FINDING #3

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

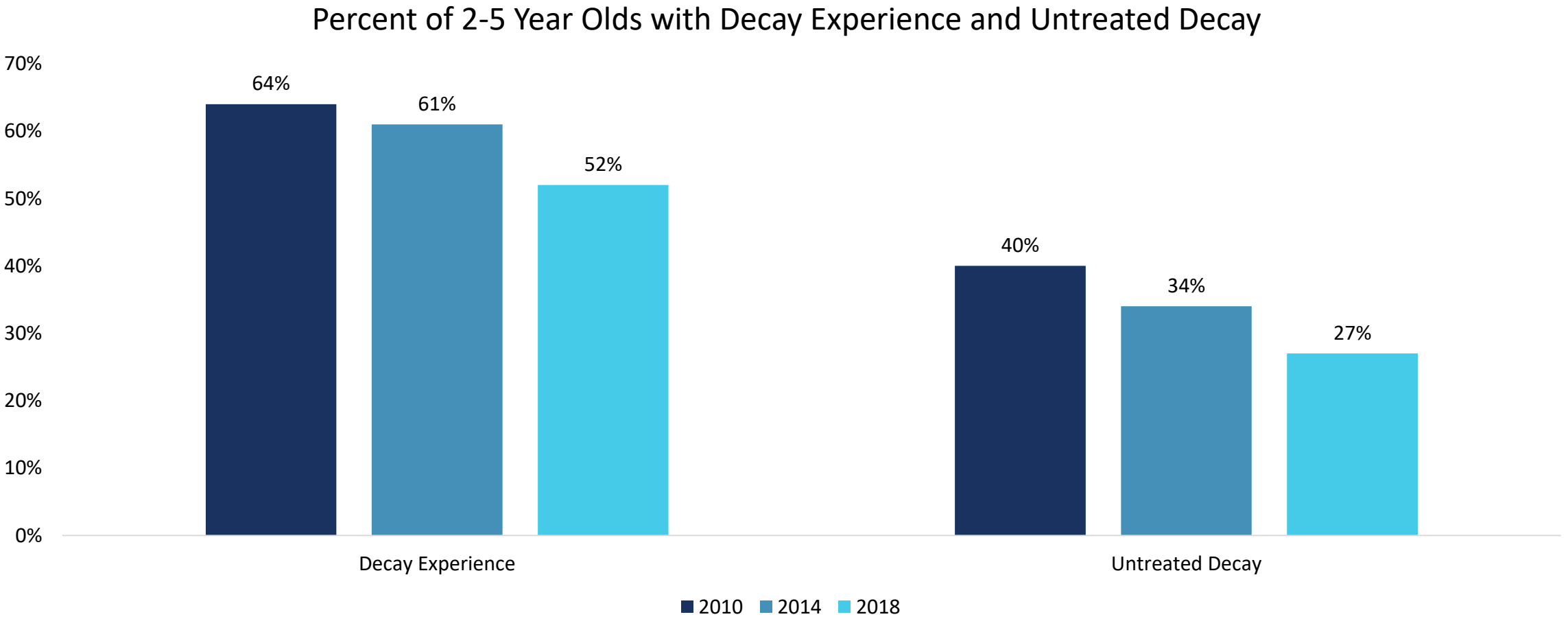


FINDING #3: SOME IHS AREAS HAVE HAD DRAMATIC, STATISTICALLY SIGNIFICANT REDUCTIONS IN THE PREVALENCE OF ECC.



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

PORTLAND AREA SPECIFIC RESULTS

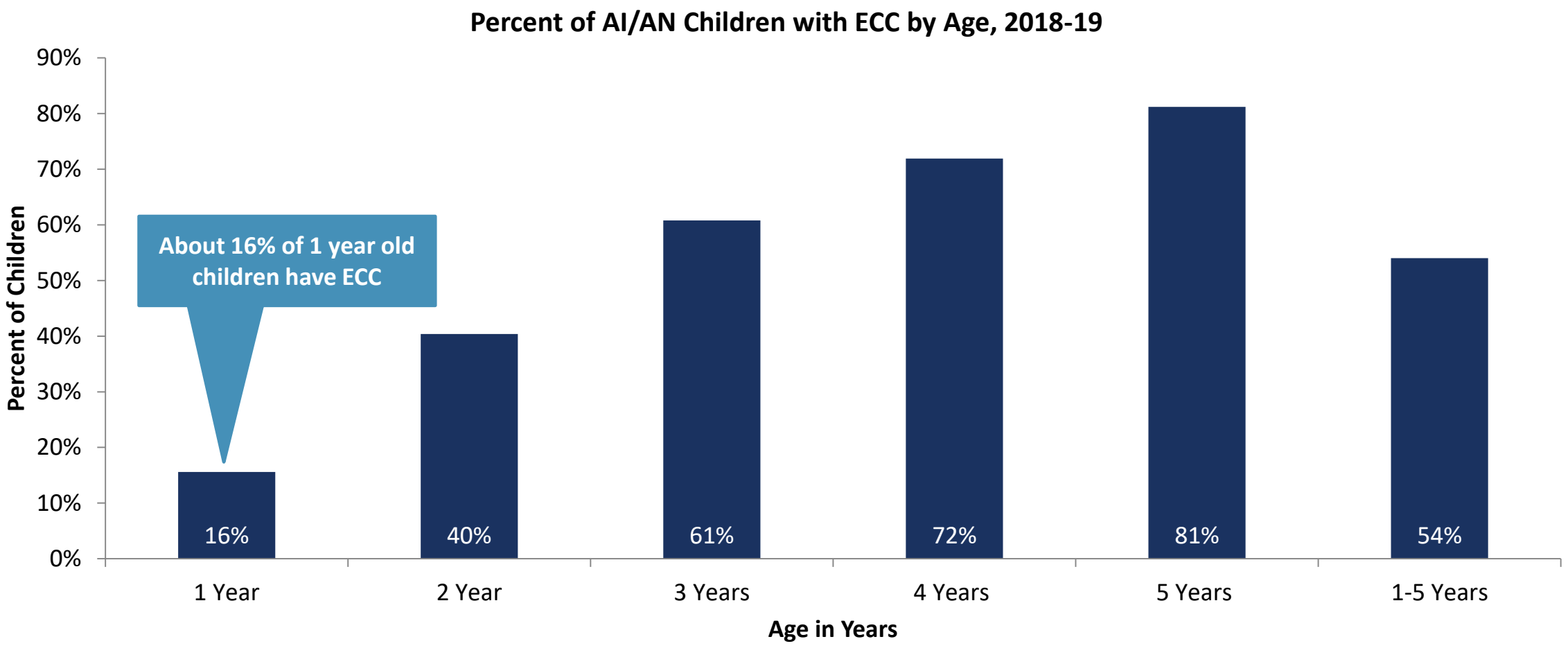


Includes all clinics that participated in each year.

KEY FINDING #4

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

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



KEY FINDING #5

Dental sealants on primary molars may be underutilized.

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

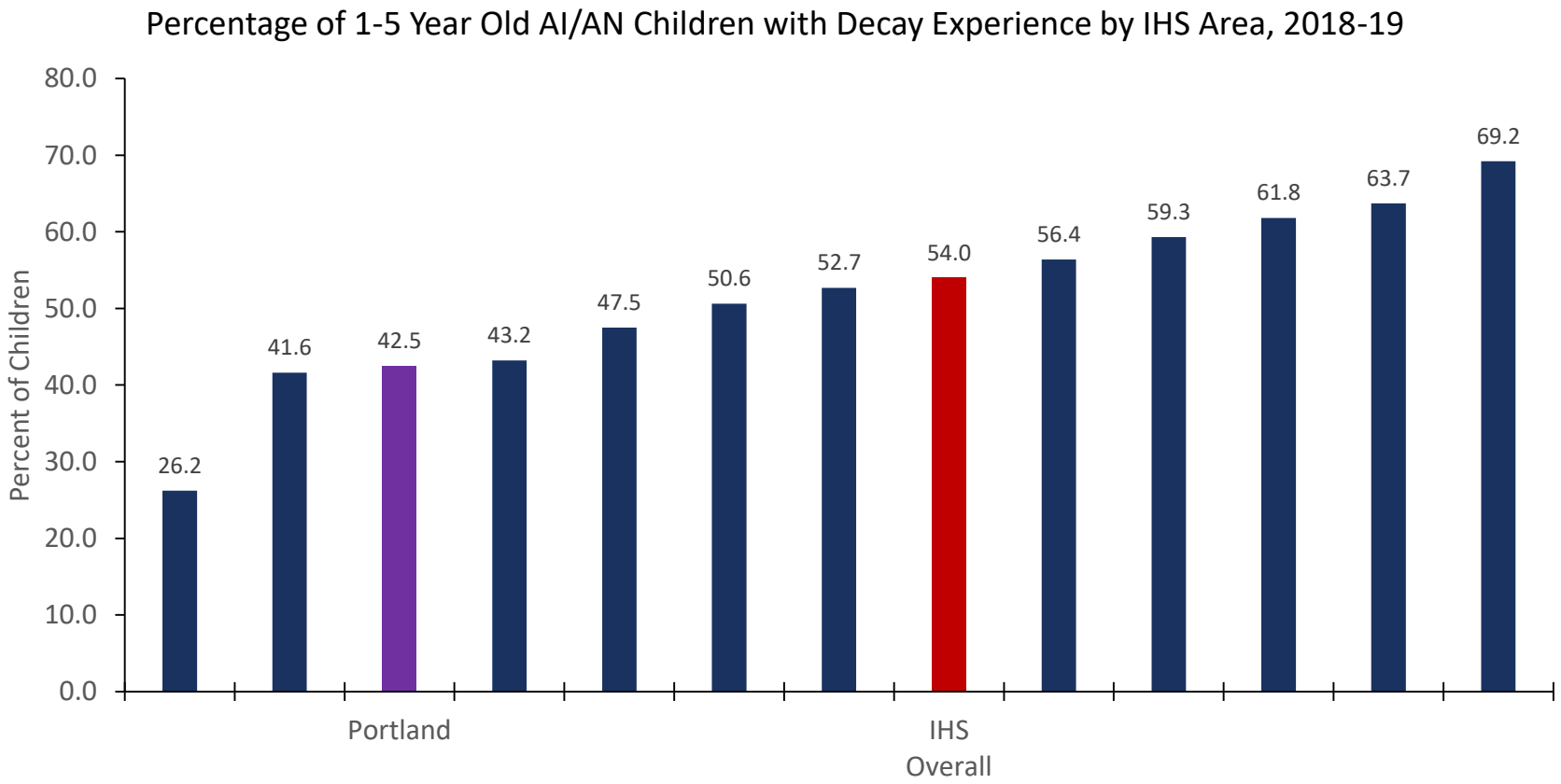


To address this disparity, IHS and tribal programs must continue to…

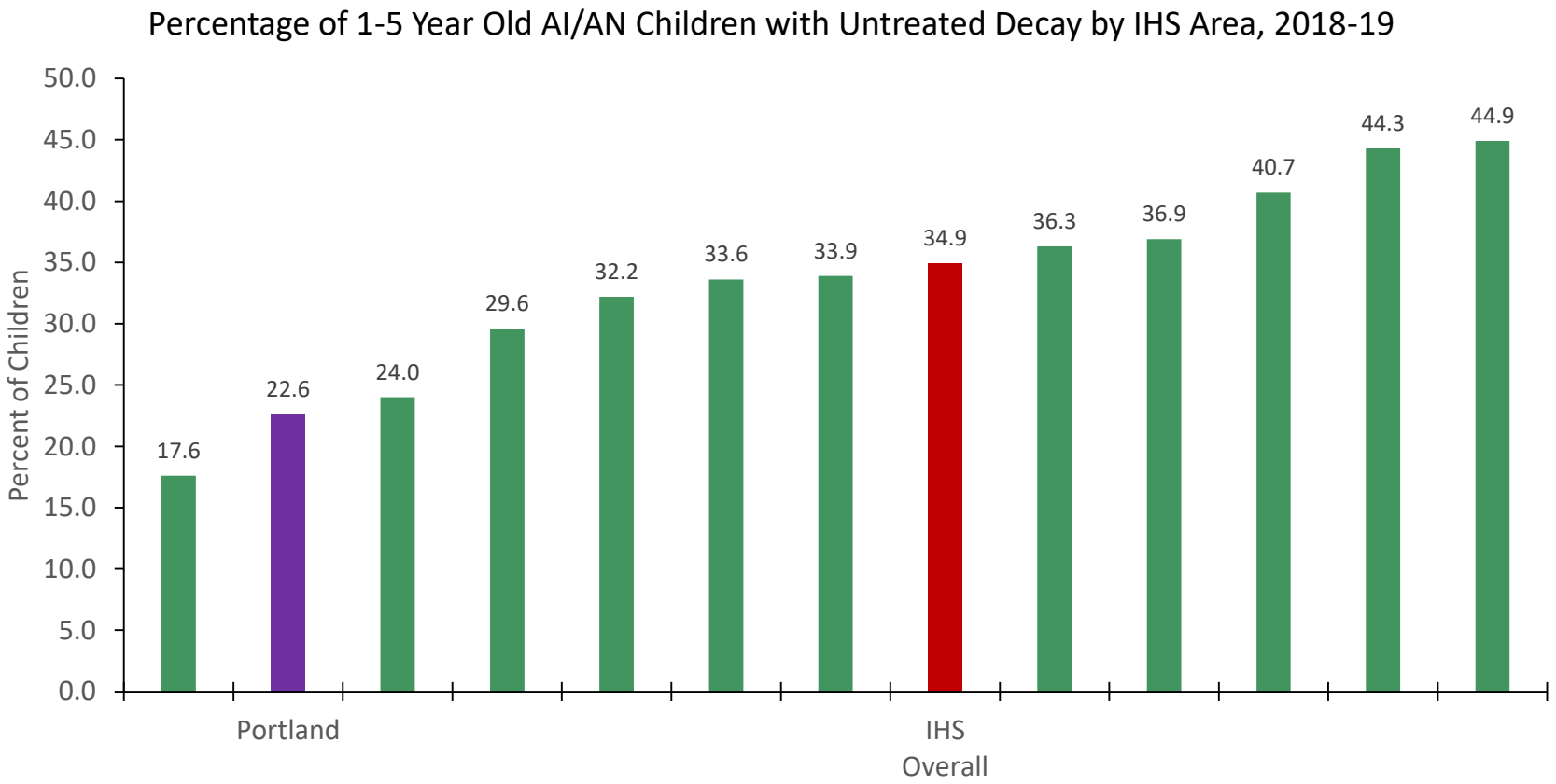
- Engage the individual, family, community, tribal leadership, plus health and social service providers
- Ensure that all AI/AN preschool children have access to age appropriate, evidence-based primary prevention strategies along with methods for managing the early stages of disease
- Ensure that if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

HOW DOES THE PORTLAND AREA RANK?

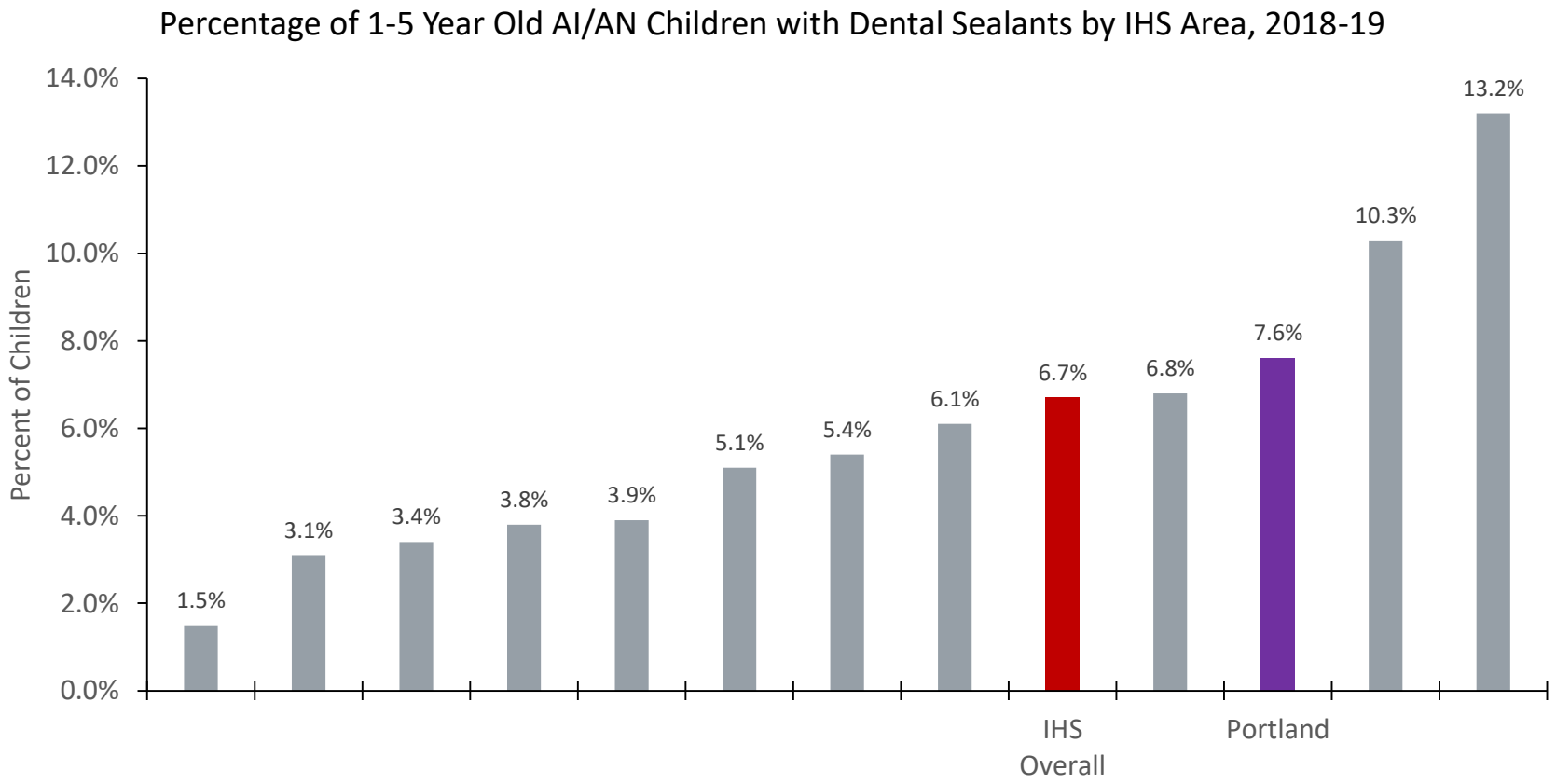
PREVALENCE OF DECAY EXPERIENCE BY IHS AREA, 2018-19
INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY



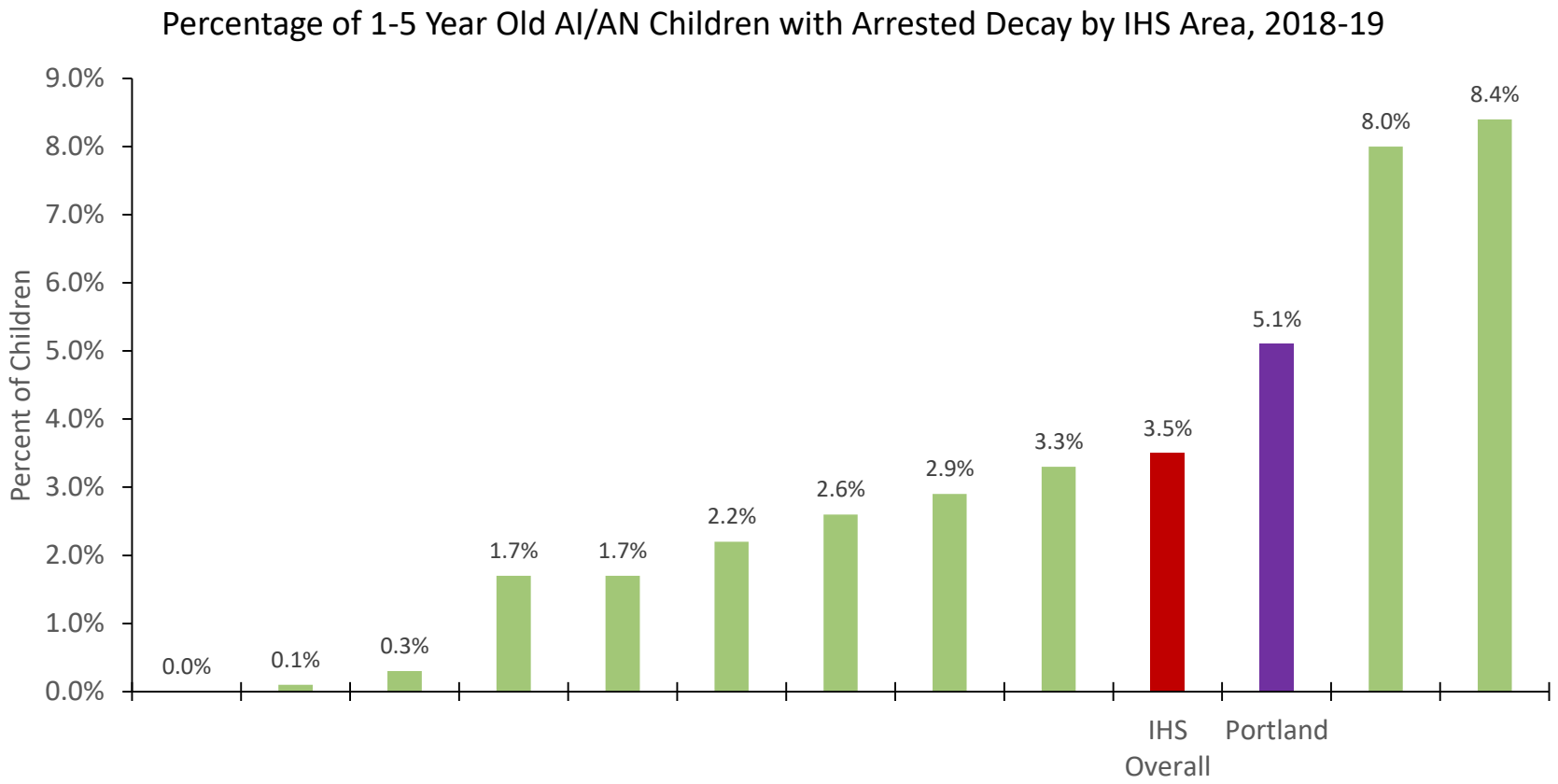
PREVALENCE OF UNTREATED DECAY BY IHS AREA, 2018-19
INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY



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



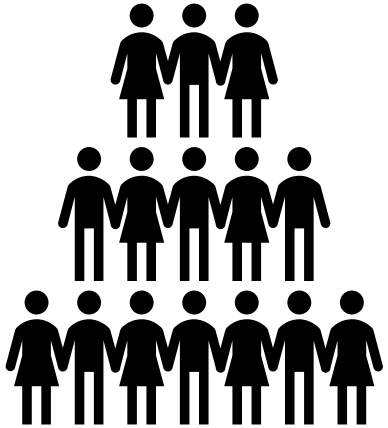
PREVALENCE OF ARRESTED DECAY BY IHS AREA, 2018-19
INCLUDES ALL CLINICS THAT PARTICIPATED IN THE 2018-19 SURVEY



RESULTS – PORTLAND AREA CLINICS

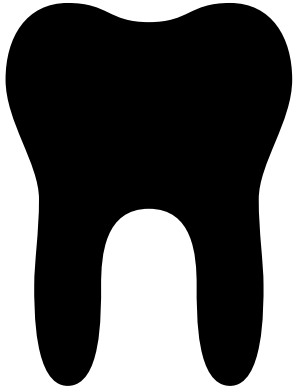
WARNING: CLINIC DIFFERENCES MAY BE DUE TO DIFFERENCES IN THE AGE DISTRIBUTION OF CHILDREN SCREENED OR SMALL SAMPLE SIZES

Most Screened



TULALIP

Lowest Decay Experience



PORT GAMBLE S'KLALLAM

Highest Dental Sealants



GRAND RONDE

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
IHS Total	**54.0**	**34.9**	**6.7**