

WARM SPRINGS IHS IMPLEMENTS A NON-INVASIVE APPROACH TO CARIES IN CHILDREN

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CONFEDERATED TRIBES OF WARM SPRINGS

- Approximately 5,208 members
- Approximately 6,500 clinic users
- Approximately 110 – 120 births annually



HISTORICAL CARIES EXPERIENCE OF WARM SPRINGS CHILDREN

- >90% Head Start children with caries experience
- On average from 2010 – 2013, about 80 children annually required treatment for caries under general anesthesia (GA). (the annual birth cohort = ~ 110).
- Over 1000 GA cases since 1998.

WHAT HAVE WE DONE AT WARM SPRINGS TO TRY TO CONTROL CARIES IN CHILDREN?

- Community water fluoridation since the 1980s
 - BBTD prevention counseling programs
 - Early and regular exams of children at Early Head Start and Head Start
 - Use of xylitol and fluoride varnish
 - Implementation of all activities of the IHS ECC initiative, including the use of early access to care, FV, GIC sealants, ITRs.
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ADDING SILVER NITRATE TO OUR OTHER CARIES CONTROL EFFORTS

- Heard about this using silver nitrate about 6 years ago
 - Reviewed the literature
 - Talked with dentists using it
 - Concluded it is safe and would likely enhance the effectiveness of our current program.
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STEPS IN PREPARING TO IMPLEMENT THE SILVER NITRATE PROTOCOL

1. Discussion with our Dental Director and CEO
 2. Approval by the Tribal Health & Welfare Committee
 3. Notification to the IHS Division of Oral Health
 4. Presentations to Head Start staff and parents
 5. Patient education brochure
 6. Developed an informed consent
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SILVER NITRATE TREATMENT PROTOCOL

- Decision on whether the child is a candidate for this approach
 - Written informed consent
 - Baseline surface-specific exam
 - 25% silver nitrate solution followed by fluoride varnish (5 applications in 3 months recommended)
 - Ask about adverse events at each visit
 - Periodic surface-specific follow-up exams
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HOW ARE WE EVALUATING THE PROGRAM?

- % treated teeth and surfaces arrested
 - Reduction in invasive restorations
 - Level of satisfaction by kids and parents.
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OUR SELECTION CRITERIA FOR THE PROTOCOL

- Child has active caries (d1⁺, meaning cavitated or non-cavitated)
 - Child is not symptomatic (no pulpitis, ulceration, fistula or abscess).
 - Primary target age is 0 – 6 years
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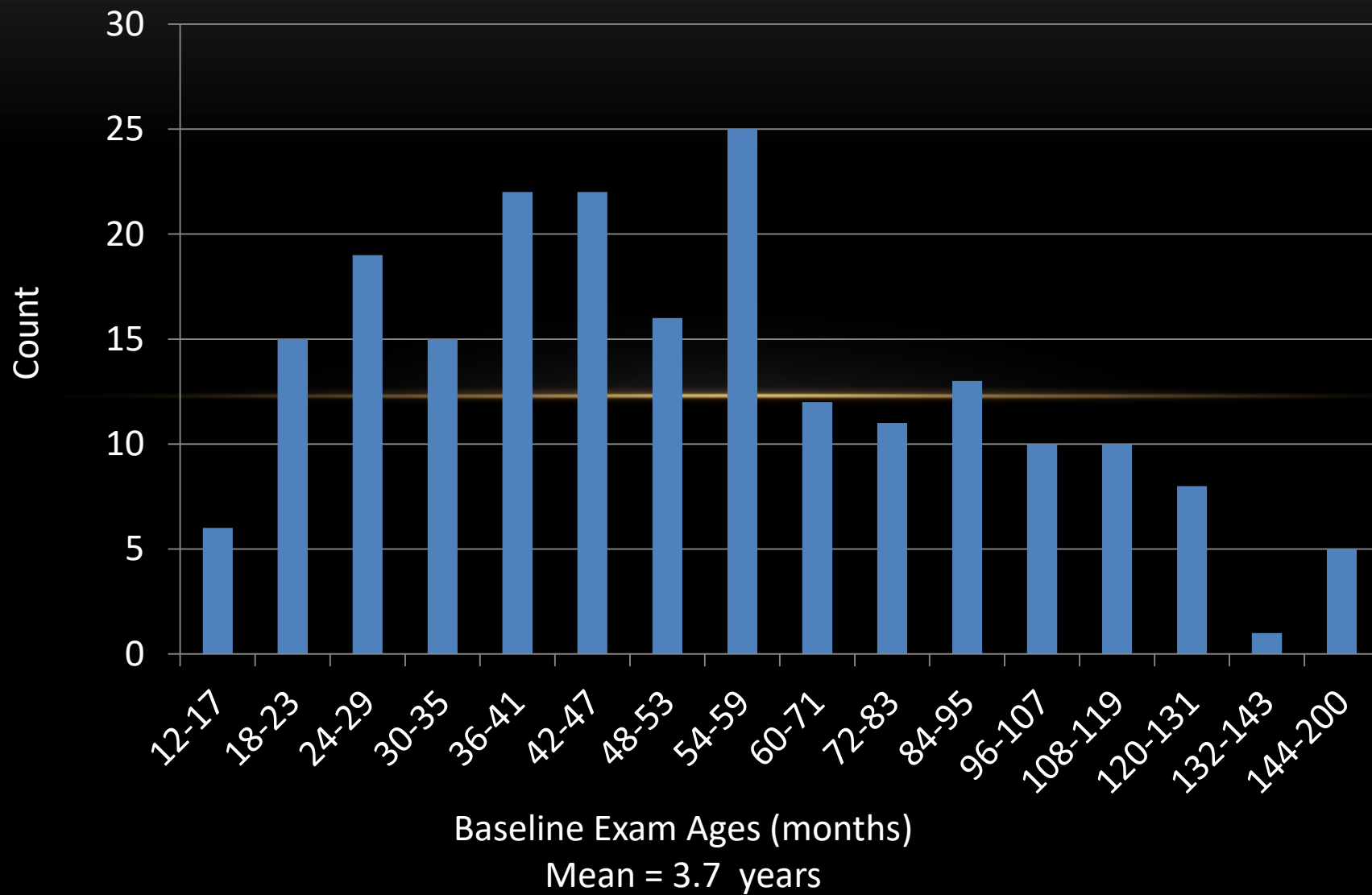
OUR 3-YEAR EXPERIENCE WITH THIS MODEL

- First child treated in September 2013
 - As of October 14, 2016, we had enrolled 238 children.
 - 215 (90.0%) were still in the protocol
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OUR 3-YEAR EXPERIENCE WITH THIS MODEL (CONTINUED)

- Parents have been consistently pleased
 - Children have been very easy to work with
 - Even the younger children are generally cooperative after the 2nd treatment.
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Baseline Age Distribution:
Warm Springs alpha Site (n=238)



CLINICAL OUTCOMES

RESTORATIONS

Has using this non-invasive approach changed the types of restorations I use for the children I treat?

Children in Project (n=238)	
Child-Years in Project: 182	
Type	Count
Amalgam	3
Crown	9
Esthetic GI	21
Functional GI	90
Resin	7
Total Restorations	129
Teeth with Decay at Baseline	547

ANESTHESIA

Has using this non-invasive approach changed my use of type of anesthesia for the children I treat?

Children in Project (n=238)	
Child Years in Project: 182	
Type of Anesthesia	Count
General	11
Local	20
N ₂ O	78
None	67

RATE OF NEW CARIES FORMATION

Has using this non-invasive approach changed the rate at which treated children get new caries lesions.

Children in Project (n=238)		
% Children NNCS=0		
Follow-up Exam	n	% NNCS =0
6m	113	86%
12m	86	73%
18 m	50	74%
24 m	45	62%
'n' = # who had this exam		

“COLLATERAL BENEFIT” OF TREATING CARIES IN CHILDREN WITH SILVER NITRATE

2nd molar treated for deep caries in the fissures



“Collateral benefit” to the untreated 1st molar



CONCLUSION

- After 33 years, I believe I finally have something that works. 😊
 - It's safe, fast, easy and inexpensive.
 - I like it.
 - The parents like it.
 - The kids love it.
 - We are working to make it even better.
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THANK YOU
