

The IHS Early Childhood Caries Collaborative: 5 years later



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Presenters

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- Co-Chair, IHS ECC Collaborative

Learning Objectives

After attending this activity participants will be able to:

- Define early childhood caries and clarify its significance to the social and physical well-being of 0-5 year-old AI/AN preschool children.
- Explain the components of the IHS Early Childhood Caries Collaborative.
- Incorporate effective interventions such as access to care, dental sealants, fluoride varnish, and interim therapeutic restorations to reduce the prevalence of ECC in AI/AN preschool children.

Understanding Early Childhood Caries (ECC)



What is Early Childhood Caries?

ECC is defined as the presence of **one or more** decayed, missing (due to caries), or filled tooth surfaces in any primary tooth in a child under 6 years of age.



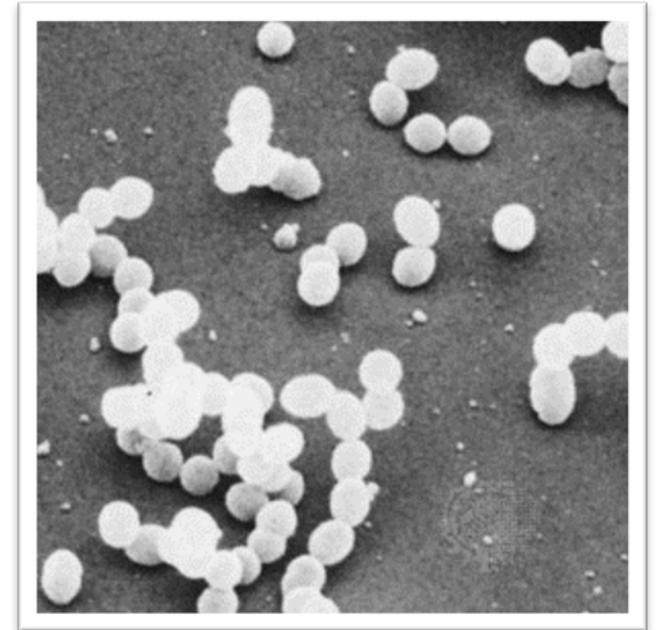
Stages of ECC

ECC has different levels of severity, from non-cavitated lesions to multiple surfaces.



Etiology

- Cariogenic bacteria = mutans streptococci (MS)
 - *Streptococcus mutans*
 - *Streptococcus sobrinus*
- Research suggests that AI/AN children...
 - Acquire MS at a very early age (as young as 1 month)
 - Have a higher total count of MS
 - Have a higher percentage of their oral flora being MS
 - Are more likely to have *Strep sobrinus*
 - May have more virulent strains of MS



Social Effects of ECC



- Pain
- Infection
- Delayed speech development
- Low self-esteem
- Delayed social development
- Missed school days and difficulty concentrating in school

Financial Effects of ECC

- IHS has estimated that it costs thousands of dollars to treat each child with ECC and \$8,000 or more if they are treated under general anesthesia.
- 40-50% of children treated with severe ECC have new decay within 4-12 months.



Events Leading up to the ECC Collaborative



- *1999* – The IHS Oral Health Survey shows that the AI/AN population suffers from ECC at a rate 3 times the general U.S. population
- *1999-2002* – The IHS conducts an ECC demonstration project in 12 sites across the county
- *July 2009* – A team of dedicated dental staff gather at the IHS Dental Updates meeting to discuss the creation of the IHS ECC Initiative
- *March 2010* – After months of preparation and planning, the IHS ECC Collaborative is unveiled across all of the IHS dental programs in the country

The IHS Early Childhood Caries Collaborative



IHS Early Childhood Caries Collaborative

- Oct. 1, 2009 – September 30, 2014
- Overall goal was to reduce the prevalence of ECC and untreated decay rates
- Collaborations focused on early access and included:
 - Physicians and mid-level providers
 - Clinical and public health nurses
 - Community health representatives
 - Pharmacists
 - Head Start, WIC, Daycares
- More information on the IHS ECC Collaborative can be found at www.ihs.gov/doh/ecc

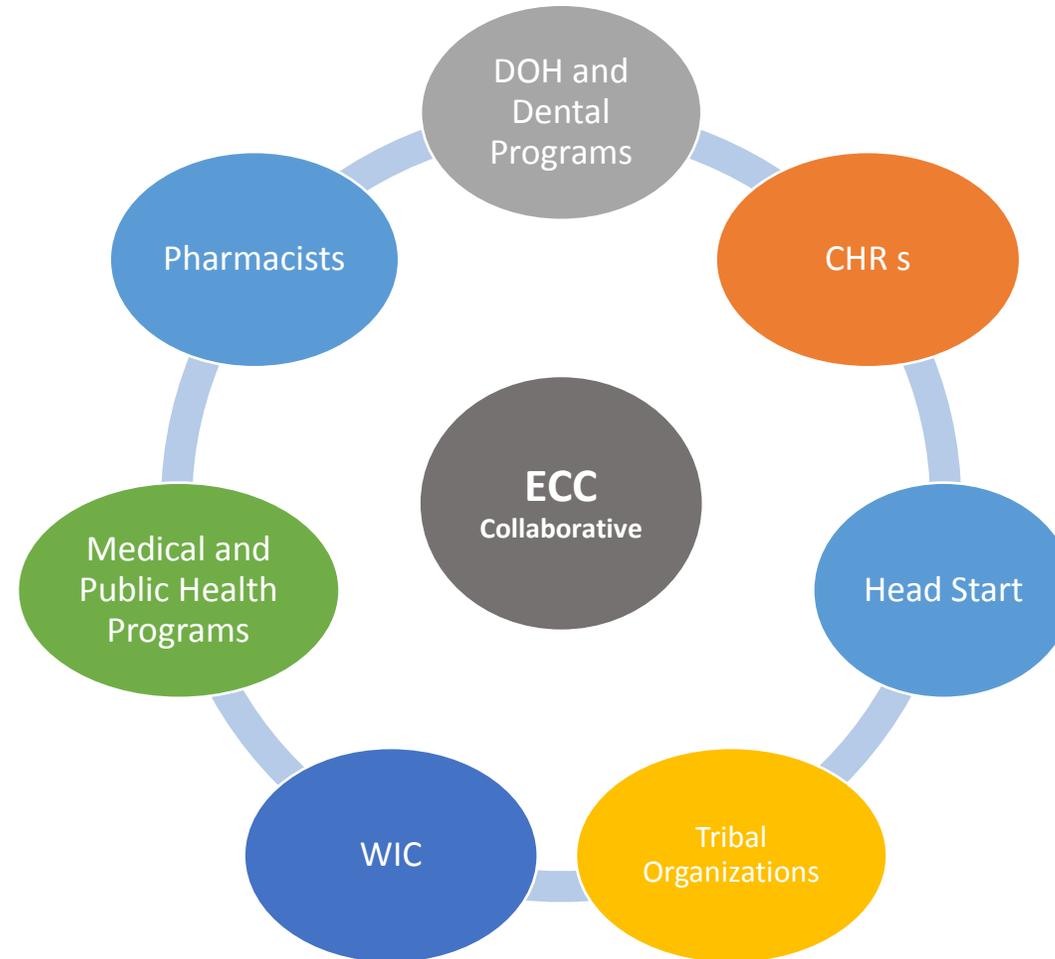


What is meant by “collaborative?”



- Medical and community partners provided oral health assessments, fluoride varnish applications, and referrals to dental clinics.
- Included:
 - Physicians
 - Pharmacists
 - Community health representatives
 - Clinical and public health nurses
 - Head Start teachers
 - WIC staff
 - Tribal health boards/tribal councils

ECC is a health issue, not just a dental issue



How was *this* Collaborative any different than ECC initiatives of the past?

- It included the establishment of a **national oral health surveillance system** to monitor the prevalence of ECC.
- It included a more **formal approach at reaching out** to multiple community partners.
- It involves not just prevention of ECC but also **early intervention**.
- It included **printed materials, online courses**, and support at the Area and National levels.



IHS ECC Collaborative Objectives



- Increase access by **25%**
- Increase dental sealants by **25%**
- Increase patients receiving fluoride varnish by **25%**
- Increase interim therapeutic restorations by **50%**

Components of the ECC Collaborative

- Regular communications by national team
- ECC Collaborative Partner Packet
- ECC video vignettes
- Continuing dental education courses
- National, Area, and local presentations
- 2-year coaching and sharing of best practices through the Virtual Learning Community Program (VLCP) – 54 sites
- Fluoride varnish, glass ionomer sealant and restorative products
- Creation of ECC website for patients, dental staff, and collaborative partners



ECC Collaborative Packets

- Distributed in 2010 and again in 2013 to 322 dental programs and to national contacts of prospective collaborative partners.

The Public Health Nurse's Role in ECC Prevention & Early Intervention

Early childhood caries (ECC) is any tooth decay in a child under 6 years of age. Early childhood caries is a devastating problem in young children. Not only can it cause pain and loss of teeth, but it also affects self-esteem, speech development, nutrition, and school attendance. Preventing ECC is hard because dietary habits help contribute to this disease, and because young children don't always make it in to the dentist at an early age. So when they do make it to the dentist, often times it is too late. There's where YOU can help.

The IHS has started a new initiative to draw attention to this problem, which affects more than half of Native American children. Below is information on how you can help make a difference.

Time Period (Age)	Why you may see this
11 months	Immunizations: Hep B, AHR, Fluoride, Step 1
15 months	Immunizations: Hep B, AHR, Fluoride, Step 1
18 months	Immunizations: Hep B
18-23 months	Immunizations: Afluenza
3-4 years	Immunizations: PPV, DTP, Hep B, Early Head Start vision, hearing
4-6 years	Immunizations: DTP, Hep B, Head Start vision, hearing

IHS EARLY CHILDHOOD CARIES INITIATIVE
Healthy Teeth • Healthy Families

Together, we CAN make a difference!

WIC's Role in ECC Prevention & Early Intervention

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Head Start's Role in ECC Prevention & Early Intervention

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The Medical Provider's Role in Early Childhood Caries Prevention

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The CHR Role in ECC Prevention & Early Intervention

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Early Childhood Caries Videos

www.ihs.gov/doh/ecc



Continuing Dental Education

- Caries Stabilization – sealants and ITRs
- Fluoride Varnishes
- CDE promoting open access and case management



IHS ECC Website

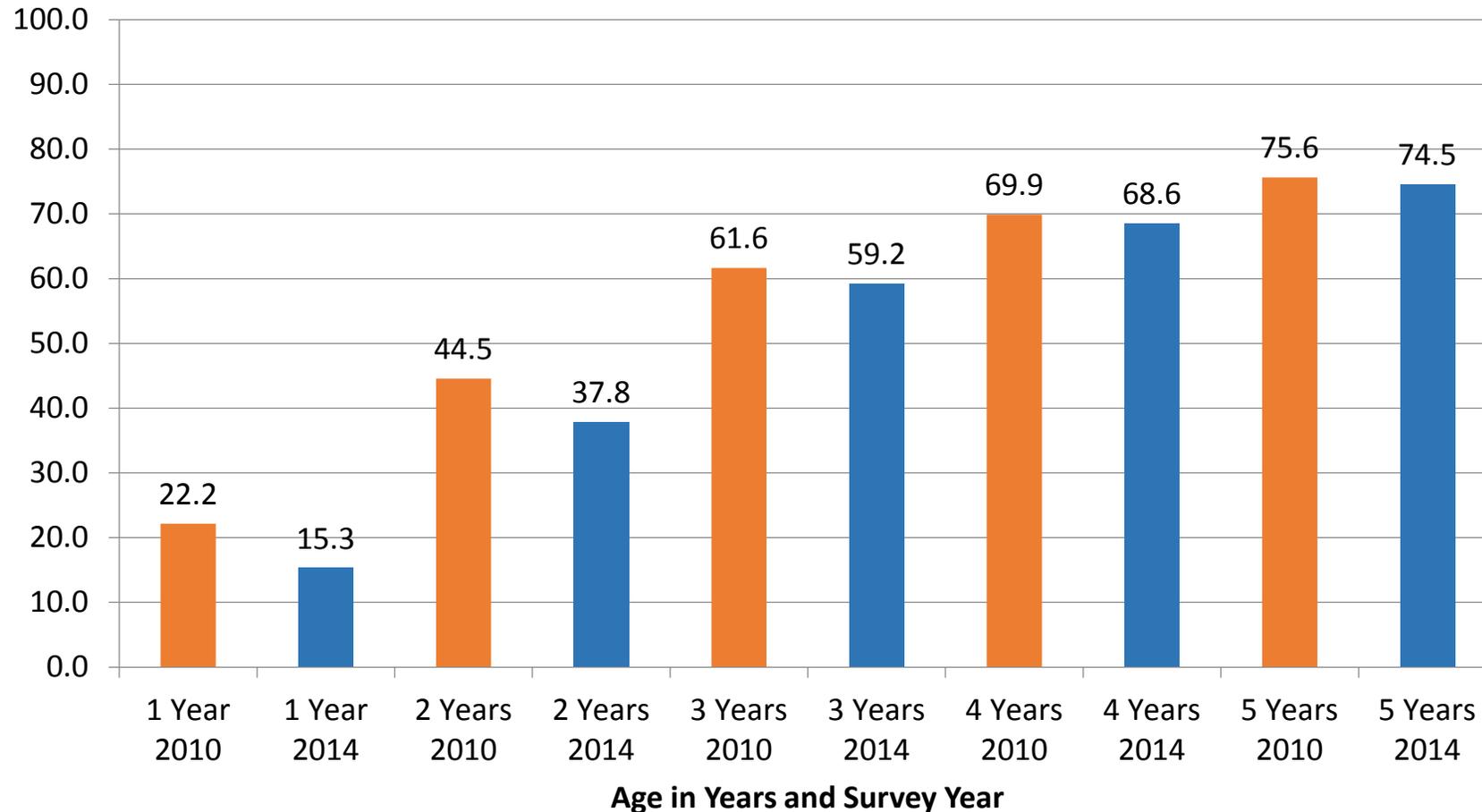
- Best Practices Reported
- Educational materials
- ECC Packet
- FAQs
- Glass Ionomer Placement Video
- Resources
- www.ihs.gov/doh/ecc

The screenshot displays the IHS ECC website interface. At the top, it features the U.S. Department of Health and Human Services logo and the Indian Health Service logo. The main navigation bar includes a search bar, a 'Please Login' button, and a 'Dental Portal' link. The central content area is titled 'IHS Early Childhood Caries Collaborative' and contains a large graphic with the text 'IHS ECC' and 'Healthy Teeth Healthy Families'. Below this, there is a detailed description of the collaborative's mission and a list of references. On the right side, there are several informational boxes: 'ECC Collaborative Information' with sub-sections for 'Best Practices', 'BSS', 'Caries Stabilization', 'ECC Packet', 'ECC Program Spotlight', 'Frequently Asked Questions (FAQs)', and 'Fluoride Varnish'. A 'Recruit & Retain' button is visible in the bottom right corner.

Results

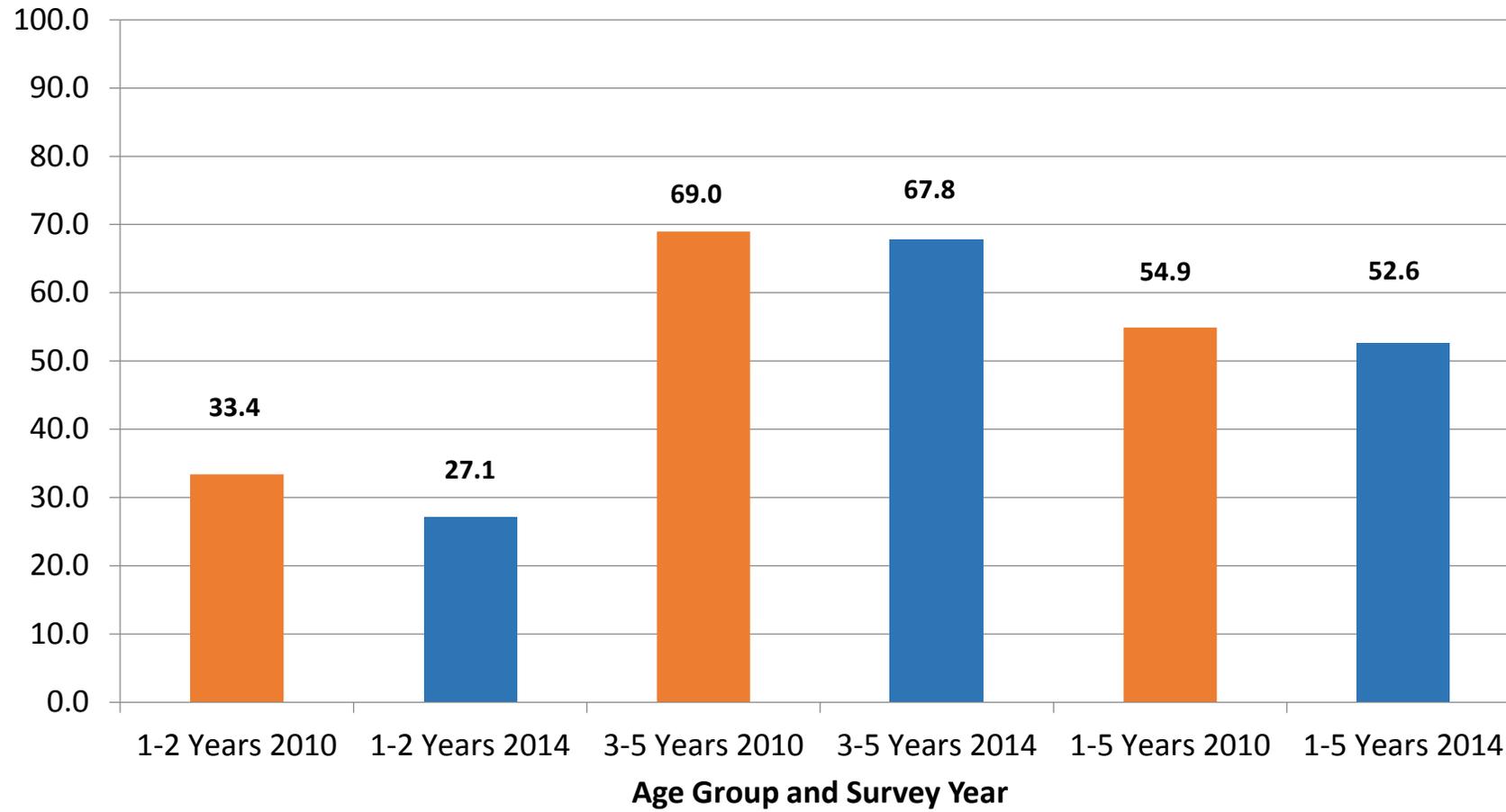


Percent of AI/AN Children with Decay Experience, 2010 vs. 2014 *Limited to Service Units that Participated in Both Surveys*



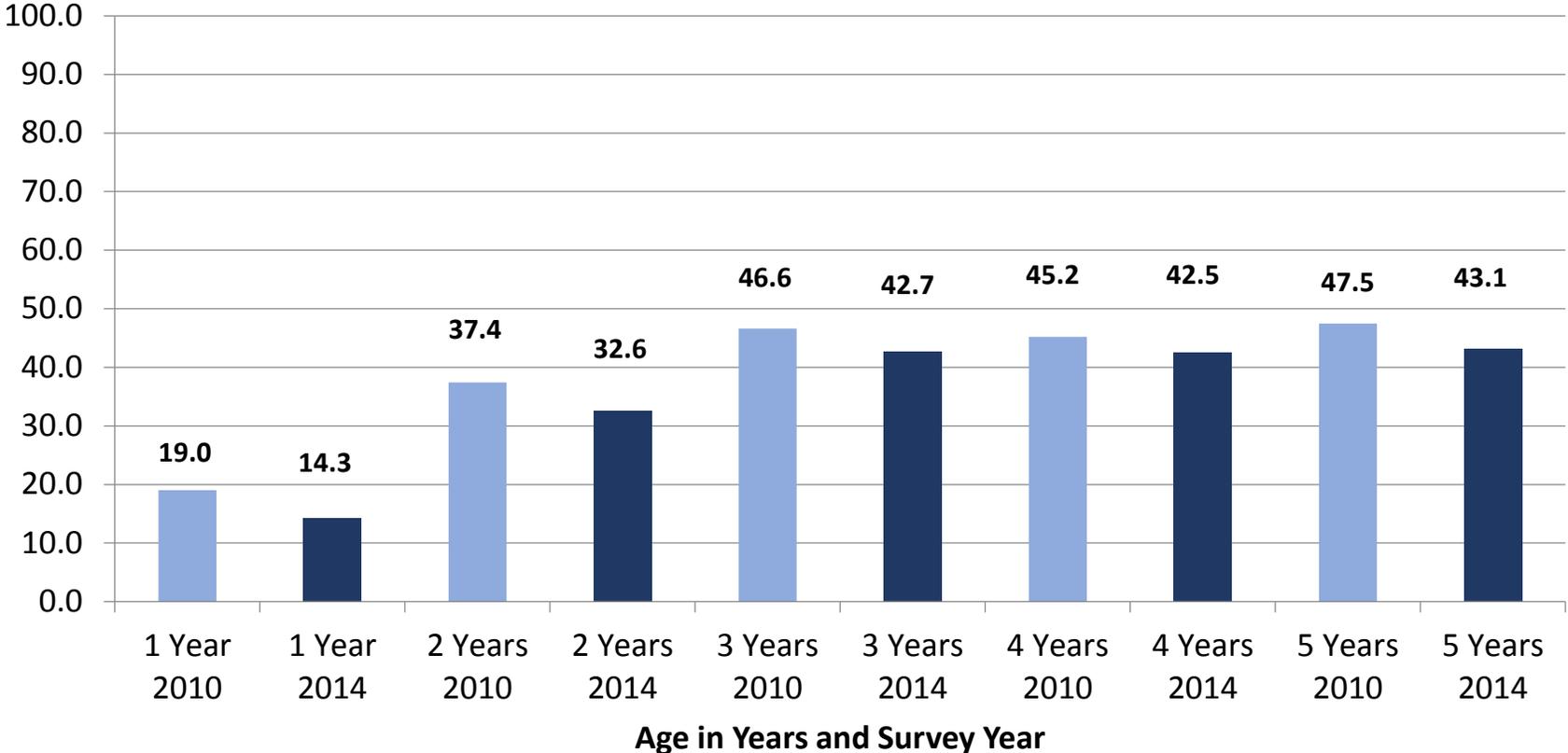
59 Service Units participated in both 2010 (n=8,155) and 2014 (n=9,118)

Percent of AI/AN Children with Decay Experience, 2010 vs. 2014
Limited to Service Units that Participated in Both Surveys



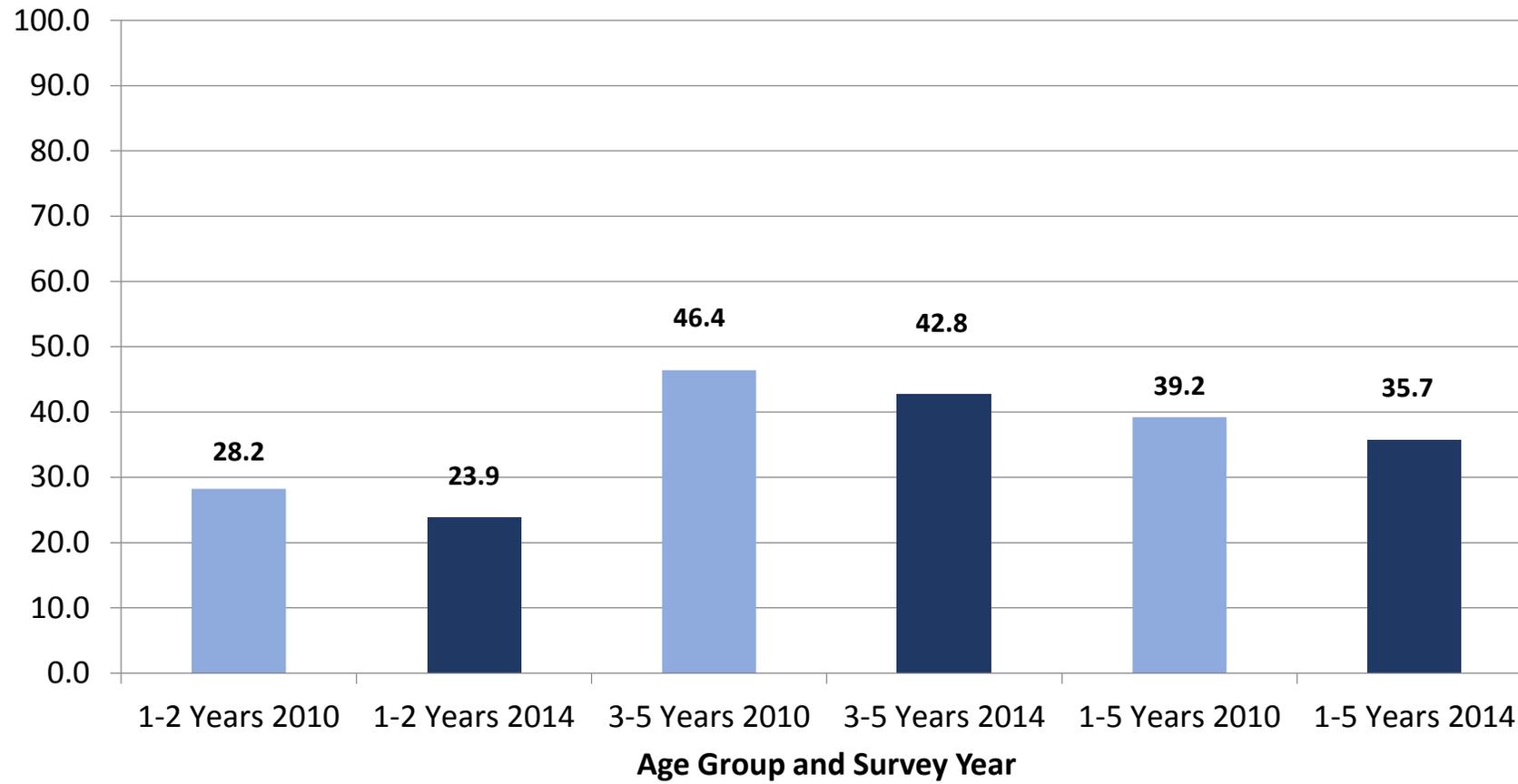
59 Service Units participated in both 2010 (n=8,155) and 2014 (n=9,118)

Percent of AI/AN Children with Untreated Decay, 2010 vs. 2014
Limited to Service Units that Participated in Both Surveys



59 Service Units participated in both 2010 and 2014, screening 8,155 in 2010 and 9,118 in 2014.

Percent of AI/AN Children with Untreated Decay, 2010 vs. 2014 *Limited to Service Units that Participated in Both Surveys*



59 Service Units participated in both 2010 and 2014, screening 8,155 in 2010 and 9,118 in 2014.

Figure 9: Change in access to care, 2005-2009 vs. 2010-2014

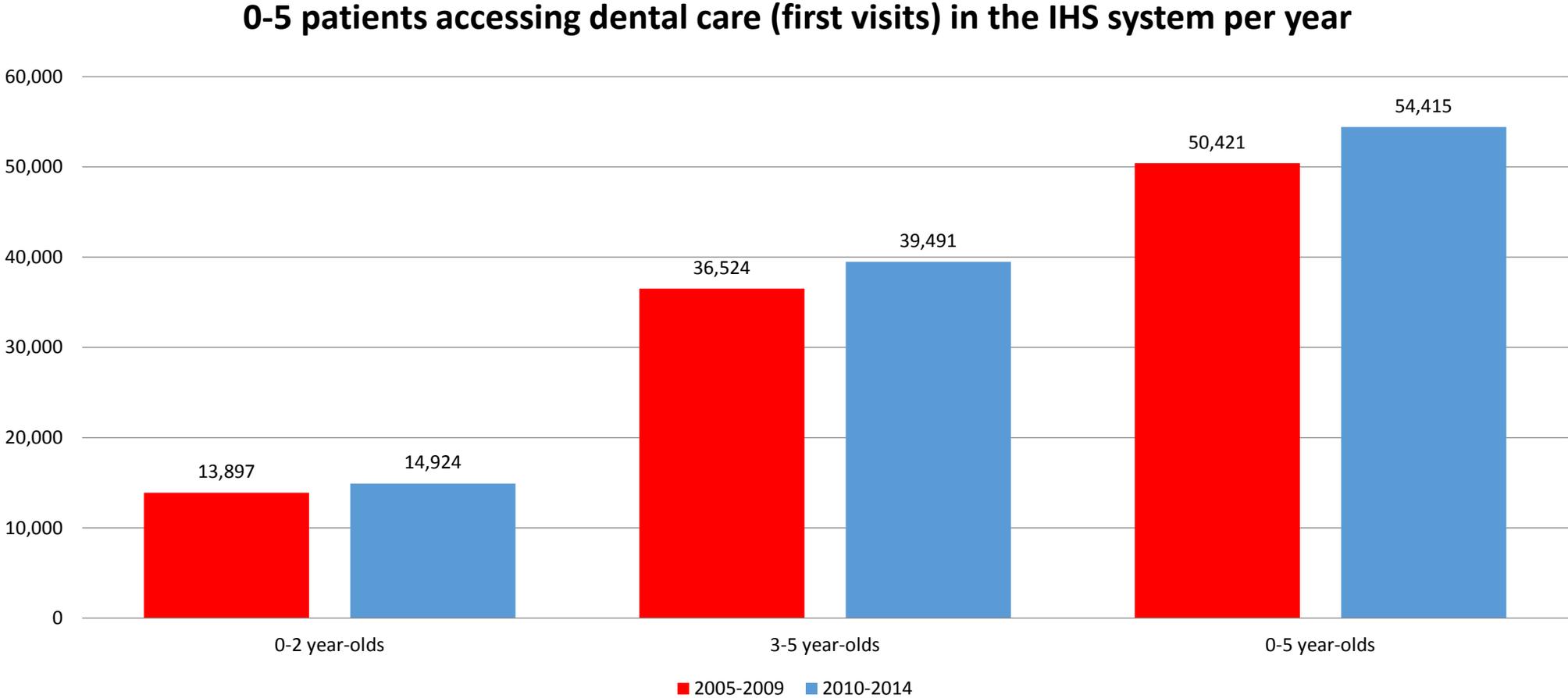


Figure 10: Change in sealants, 2005-2009 vs. 2010-2014

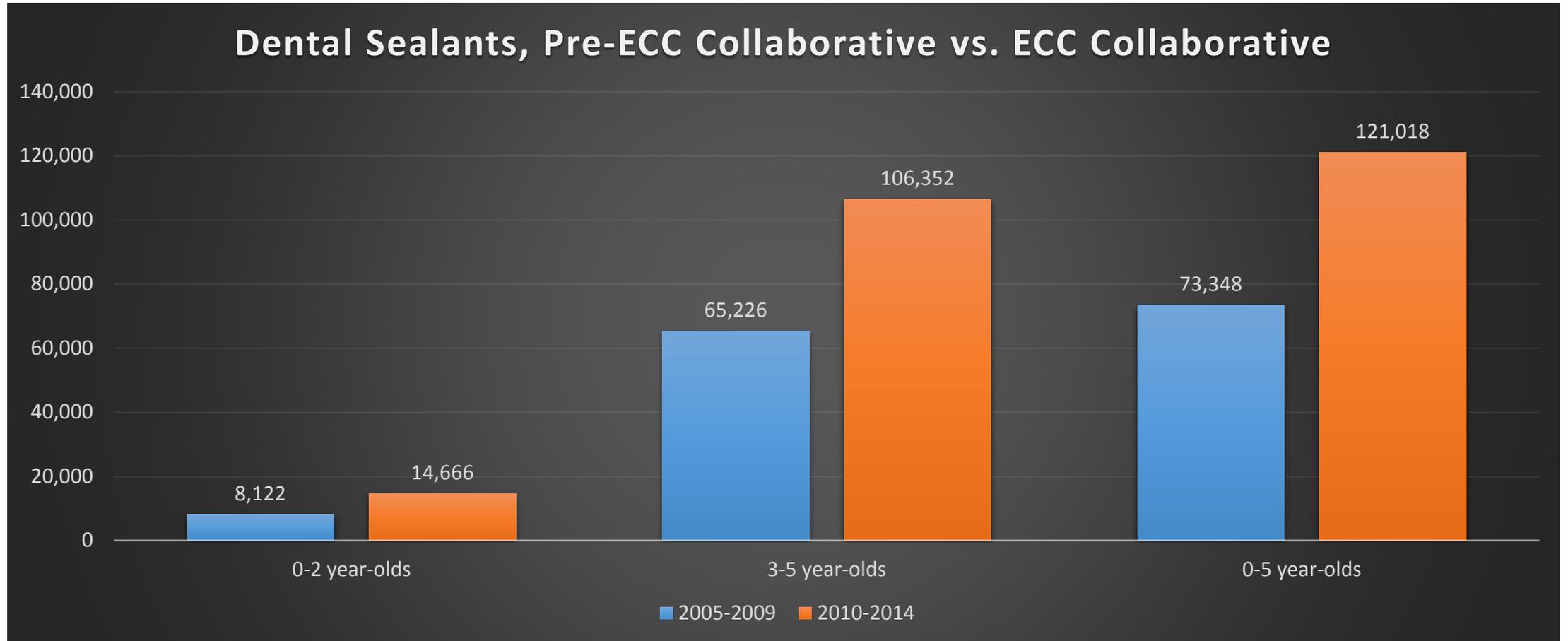


Figure 11: Change in fluoride patients, 2005-2009 vs. 2010-2014

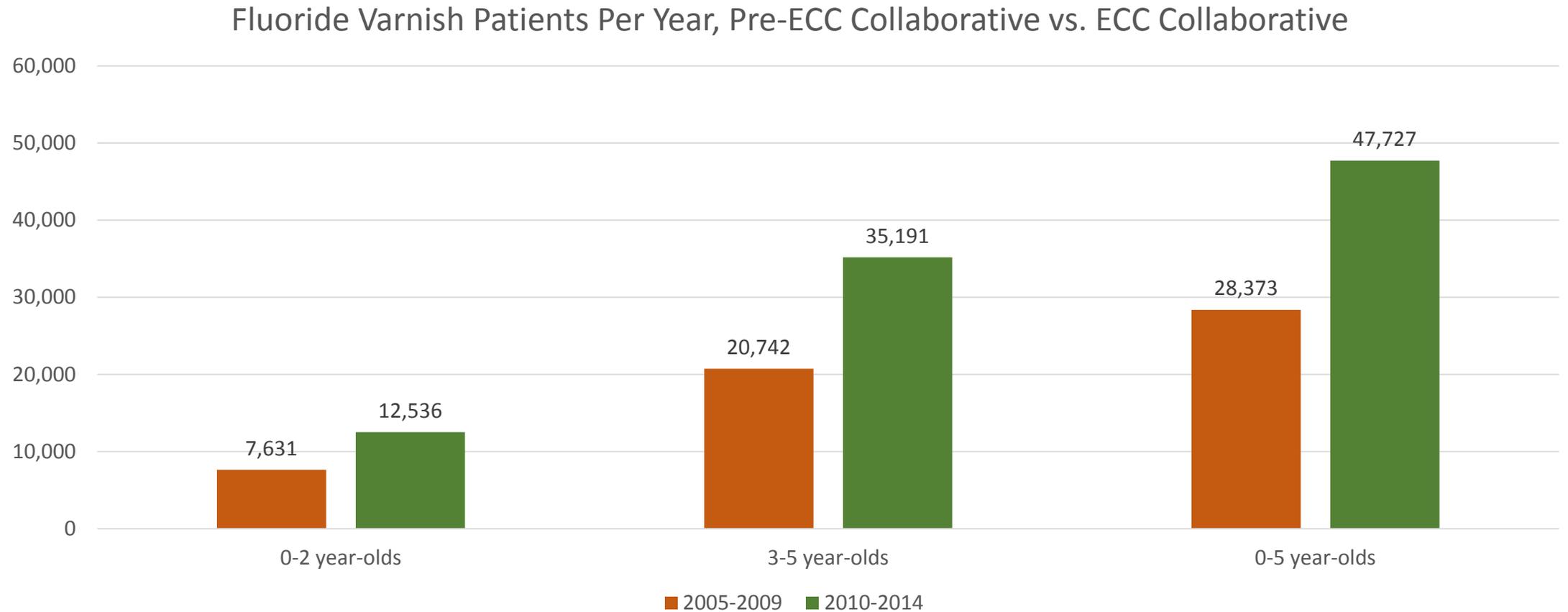
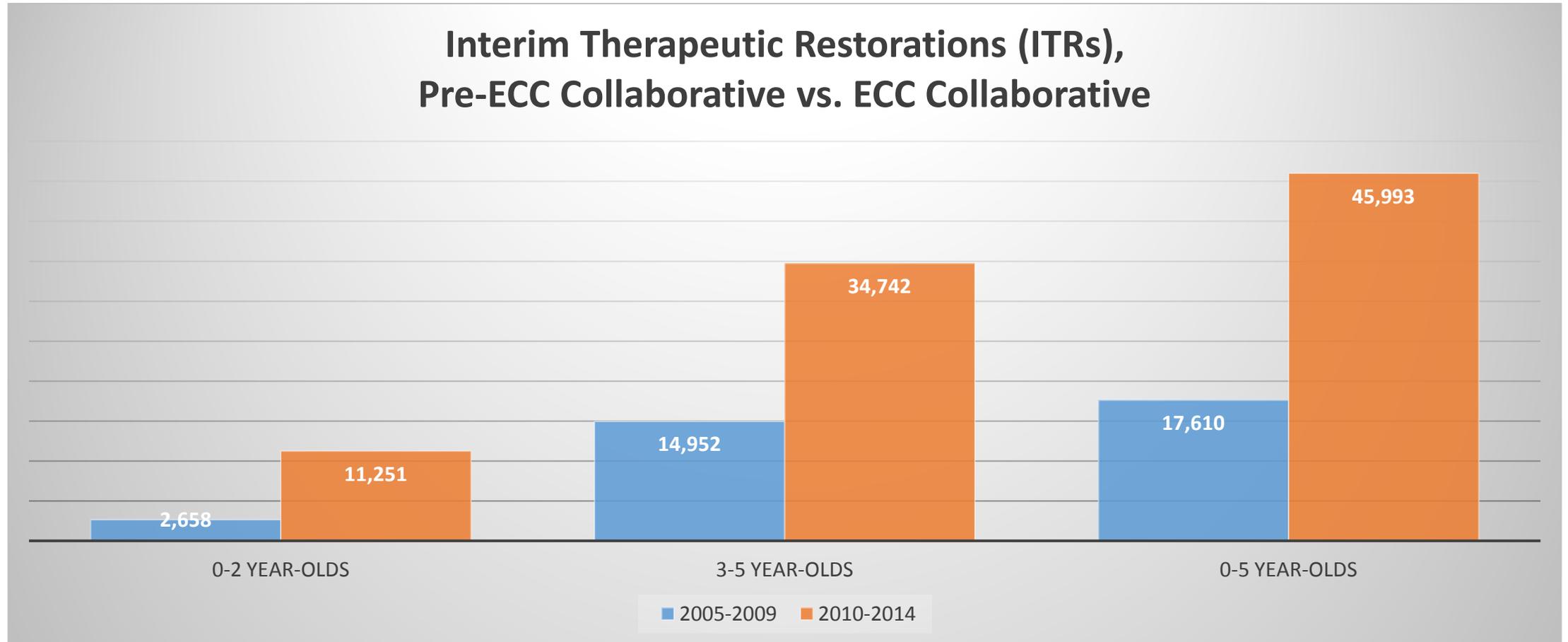


Figure 9: Change in interim therapeutic restorations, 2005-2009 vs. 2010-2014

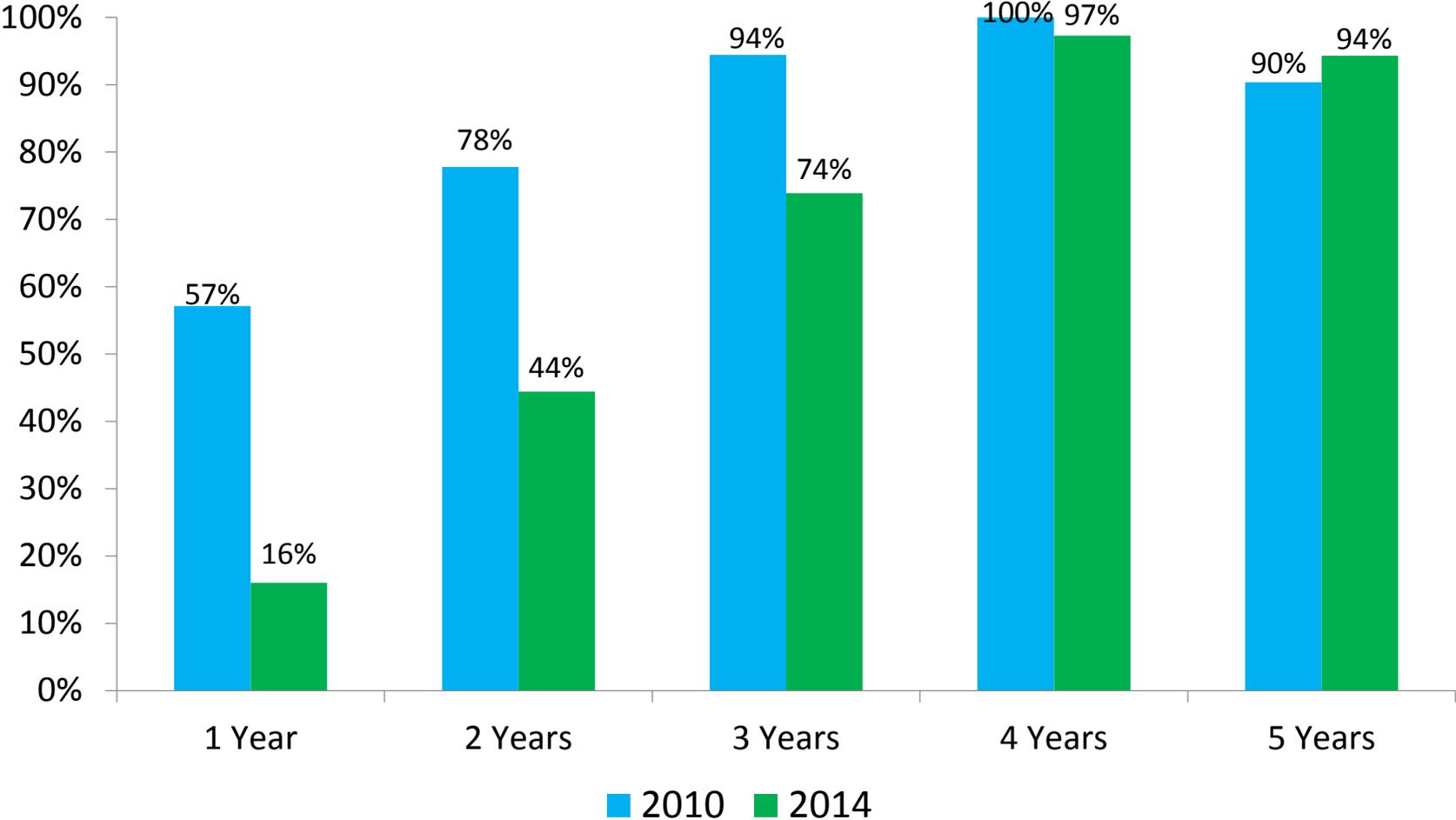


Issues with National Data

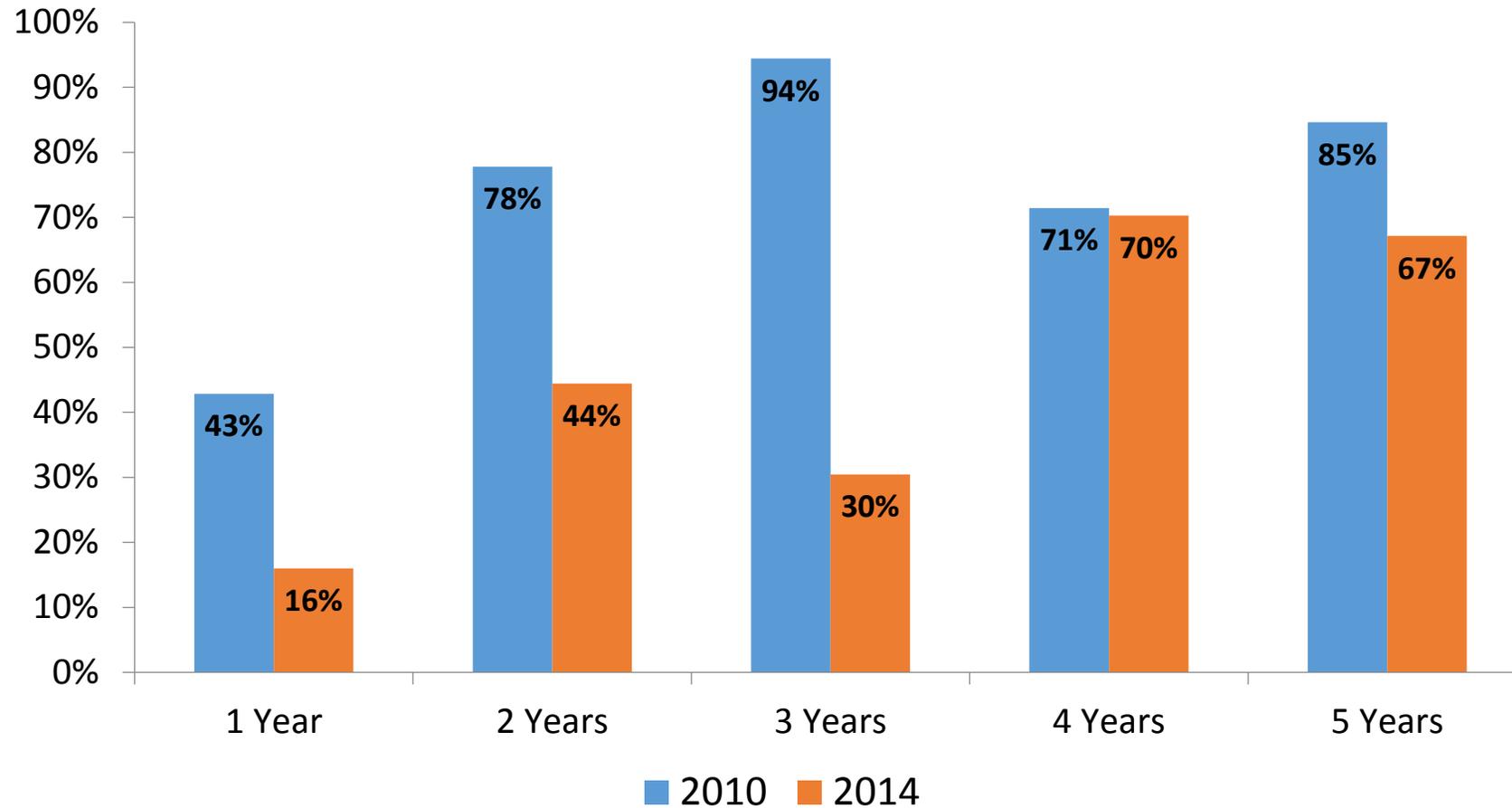
- Not all programs fully participated in the ECC Collaborative
- Not all programs participated throughout the five years
- Theory: programs that participated more will show significant improvements
- 1st test: Chinle, who participated most significantly from 2012-14



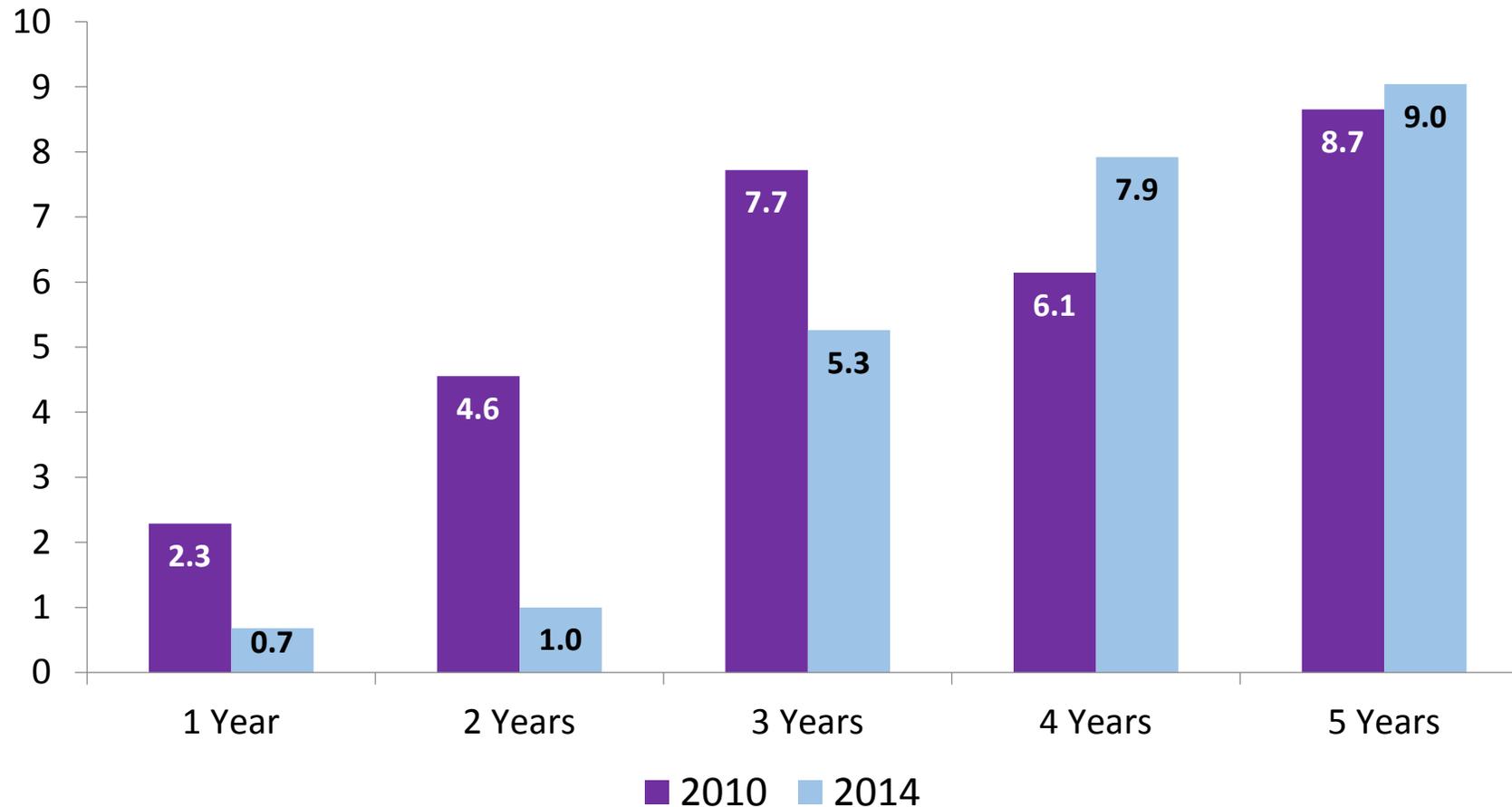
Percent of Children Screened in Chinle with *Decay Experience*, 2010 vs. 2014



Percent of Children Screened in Chinle with *Untreated Decay*, 2010 vs. 2014



Mean Number of Teeth with Decay Experience Among Children Screened in Chinle; 2010 vs. 2014



Conclusion



Summary



- Nationally, we increased access (7.9%), sealants (65.0%), patients receiving fluoride (68.2%), and interim therapeutic restorations (161%).
- However, ECC decreased only slightly from 54.9% to 52.6% and untreated decay rates decreased only slightly from 39.2% to 35.7%.
- As shown in Chinle's data, we believe that more dramatic results will be shown at the local level rather than nationally.