DENTAL PILOT PROJECT #200

SUMMARY REPORT

TRAINING EXPANDED PRACTICE DENTAL HYGIENISTS

TO PLACE

INTERIM THERAPEUTIC RESTORATIONS

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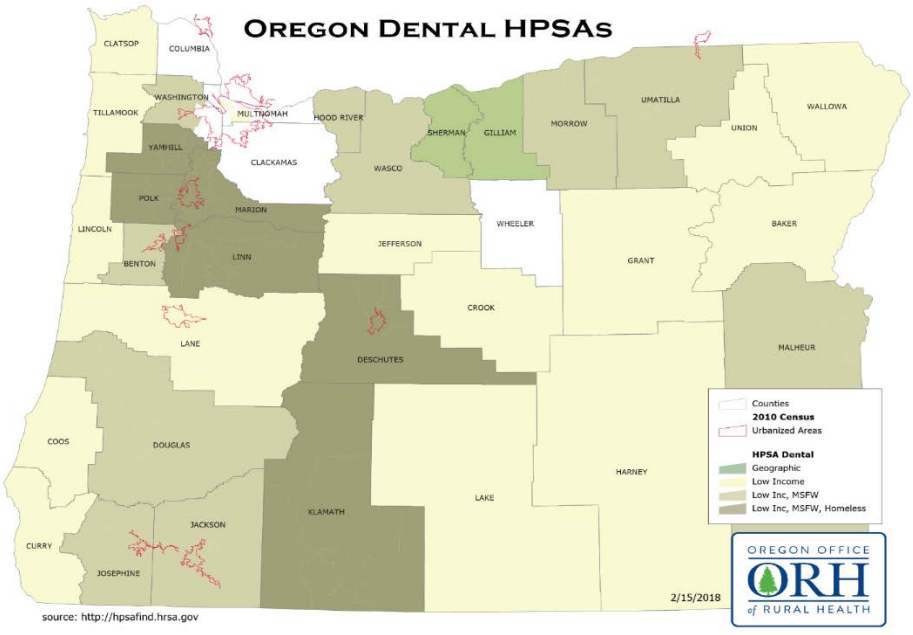
BACKGROUND

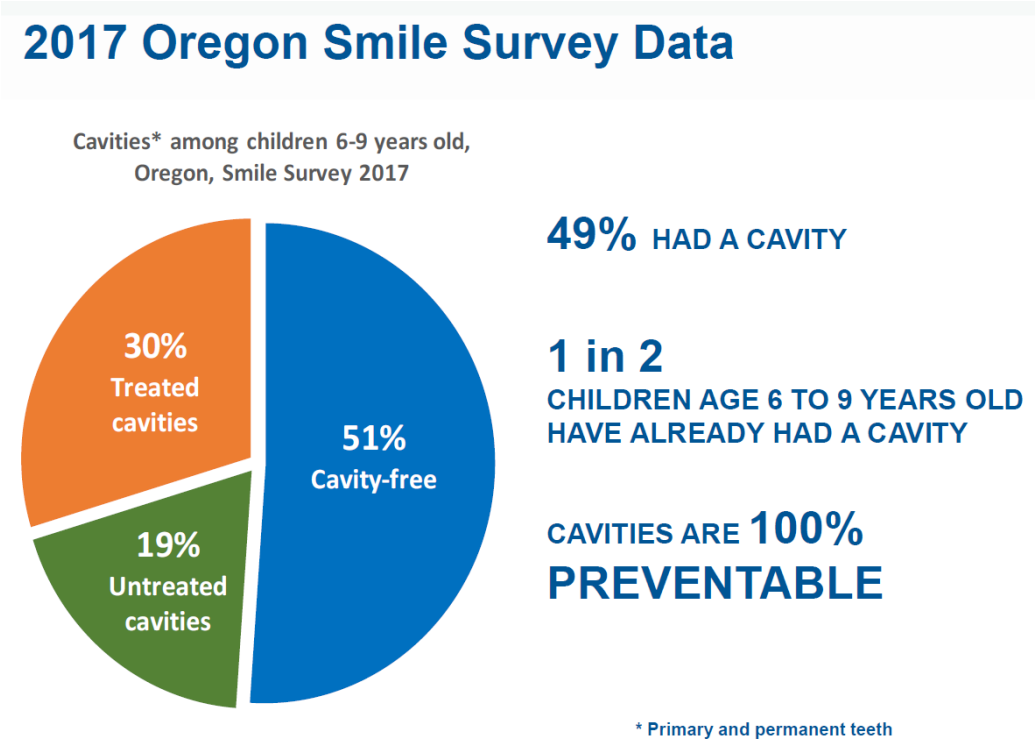
Although oral health in the US has improved over time, there is a disproportionate burden of oral diseases in vulnerable and underserved communities. There is a desperate need for innovative techniques to improve dental access at the national and state levels. Oregon has been at the forefront of healthcare transformation efforts in the nation, but it has been slower to transform the provision of oral health care.

Evidence-based studies have shown that the majority of underserved individuals with the majority of dental disease cannot take advantage of the traditional oral health delivery system. In Oregon, that is largely due to severely limited access to dental providers; these access issues affect low income, rural and underserved populations and are especially critical for children. Oregon's Medicaid children, on average, have fewer annual dental visits than the national average. Oregon also has one of the largest gaps between high and low income children's utilization of dental care in the nation. (SOURCE: Vujicic M, Nasseh K. Gap in dental care utilization between Medicaid and privately insured children. American Dental Association Health Policy Institute, 2015)

Due to Oregon's dearth of dental providers, thirty-three of thirty-six Oregon counties are designated by the federal government as dental "Health Professional Shortage Areas (HPSAs), meaning that large segments of the state's population cannot adequately access oral health services.



More specific information on the status of children's oral health in Oregon is seen in the 2017 Oregon Smile Survey Data report, compiled by the Oregon Health Authority. The survey showed that among Oregon children aged 6 to 9 years old, 49% had already had a cavity. Because cavities are a preventable health condition, access to oral health services can make an impact in reducing the incidence of decay.



OREGON'S RESPONSE

In an attempt to resolve the problem of dental access, the Oregon Legislature passed Senate Bill 738 in the 2011 session. It established the Dental Healthcare Workforce Pilot Project Program within the Oregon Health Authority[i]. SB 738 gave OHA the authority to "approve pilot projects to encourage the development of innovative practices in oral health care delivery systems with a focus on providing care to populations that evidence-based studies have shown have the highest disease rates and the least access to dental care. The authority may approve a pilot project that is designed to:

- (a) Operate for three to five years or a sufficient amount of time to evaluate the validity of the pilot project;
- (b) Evaluate quality of care, access, cost, workforce and efficacy; and
- (c) Achieve at least one of the following:
    - **(A) Teach new skills to existing categories of dental personnel;**
    - (B) Develop new categories of dental personnel;
    - (C) Accelerate the training of existing categories of dental personnel; or
    - (D) Teach new oral health care roles to previously untrained persons.

(Note: While the Dental Pilot Project Program was passed in 2011, funding for the administration of the program in the Oregon Health Authority did not pass until 2015.)

PILOT PROJECT #200

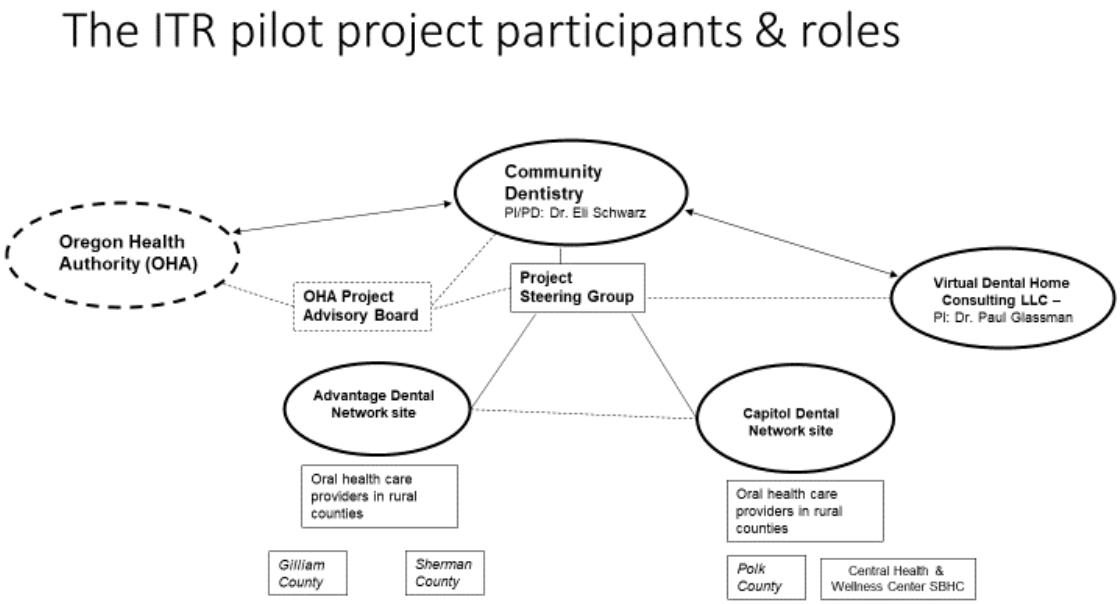
Pilot Project #200, entitled "Training Expanded Practice Dental Hygienists to Place Interim Therapeutic Restorations" was developed to achieve objective (A) as highlighted above. It received its approval to begin on March 8, 2016.

Currently, according to the Oregon Revised Statutes Chapter 680, EPDHs may only perform placement and finishing with direct alloy and direct composite only after a dentist has prepared the tooth for restoration.[ii] Adding the procedure for caries excavation (with hand instrumentation) into the scope of EPDHs allows them to place Interim Therapeutic Restorations (ITR) and provide that care.

There are many benefits of adding Interim Therapeutic Restorations to the services an Expanded Practice Dental Hygienist can provide including:

- Provides access to dental care where there is none now
- Keeps almost half the children healthy in their community
- Demonstrates high potential value
- Indirect economic/social benefits for students and parents
- Cost reduction & avoidance

PROJECT PARTICIPANTS, DESCRIPTION AND OBJECTIVES



OHSU leads the project, overseen by the OHA with input from the Pilot Project Advisory Committee. Capitol Dental Car and Advantage Dental are network sites where oral health services are provided in rural counties. The interrelation of participants and their roles in the Pilot are shown in the graph above. The Pilot began with OHSU and Capitol Dental Care in 2016 when it was approved. Advantage Dental joined the pilot on February 1, 2019.

This project targets rural populations in Oregon with serious barriers to access to dental care, which are currently served by the state's two largest Medicaid dental providers, Capitol Dental Care and Advantage Dental. This project seeks to improve the oral health of rural and underserved children by providing access to telehealth-supported dental care in a community setting.

The project has the following specific objectives:

a) Provide community-based dental diagnostic, prevention and early intervention care designed to keep children from developing advanced dental disease by training expanded practice dental hygienists to place Interim Therapeutic Restorations (ITRs) and thereby

preventing further progression of dental disease and demonstrating reduced need for most children to be seen by dentists in stationary dental clinics;

b) Provide children and parents a better experience of dental care and better oral health at a lower cost.

The project's activities simulate the regular outreach and school-based dental sealant program activities but with the important difference that the EPDH conducts a more extensive assessment, systematically documenting relevant oral health information, images, and radiographs, which are subsequently reviewed remotely by a dentist. The dentist communicates the treatment plan back to the EPDH, who can intervene according to the dentist's diagnosis and treatment plan.

RESULTS TO-DATE

Between September 2015 and December 2019, the project has provided 2050 assessments to over 1700 patients at nine community sites located in Polk and Marion Counties (Table 1). Patients ranged in age from 7 months to 18 years with the predominant age range of 5 to 11 years.

SITES:

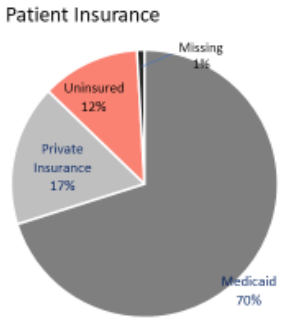
Table 1. Sites served in Polk and Marion Counties, Sept. 2015 - December 2019.

Site of Services	Site Address	County
Ash Creek Elementary School	Monmouth, Oregon 97361	Polk
Childhood Health Associates of Salem	Salem, OR 97301	Marion
Community Action Head Start - Independence	Independence, OR 97351	Polk
Falls City Elementary School	Falls City, OR 97344	Polk
Independence Elementary School	Independence, OR 97351	Polk
Monmouth Elementary School	Monmouth, Oregon 97361	Polk
Oregon Child Development Coalition	Independence, OR 97351	Polk
Oregon Child Development Coalition	Woodburn, OR 97071	Marion
Oregon Child Development Coalition	Salem, OR 97305	Marion

POPULATION CHARACTERISTICS:

Pilot Project Population Characteristics (Polk Co.)

Ethnicity	
White/non-Hispanic	40.9%
Hispanic/Latino	49.5%
Native Am/Eskimo	1.2%
Black	0.6%
Native Hawaiian/Pacific Isl.	1.2%
Asian	1.2%
Multiracial	2.8%
Age at first visit to the program	
3-5 years	21.4%
6-8 years	73.2%
9-11 years	11.9%



PROJECT ACHIEVEMENTS TOWARD TARGET OBJECTIVES

Table 2. *Illustrates project achievements toward the targets outlined in the grant agreement.*

Table 2. *Expected achievements and outcomes achieved on selected evaluation metrics*

Target	Actual	Explanation
80% or above of returned consent forms	78%	See Table 3
50% of consent forms returned with affirmative response	68%	See Table 3

60% of children seen kept healthy in the community	44%	Figures through June 2019 indicate that 896 patients (44%) were kept healthy in the community. There were 1151 assessments (56%) that required referral to a dentist for further treatment.
80% of the parents express a high degree of satisfaction with the dental program	74%	156 (74%) respondents reported they were “very satisfied” with services; a further 38 (18%) said they were “somewhat satisfied”. See Figure 2. Source: Satisfaction surveys returned through Q2 2018 (n=211).
80% of the parents want their child to continue to receive this type of care	86%	184 (86%) respondents said ‘yes’ when asked: "*Someday, your child may need dental care again. If that dental care can be done at the school, would you like that?*" Source: Satisfaction surveys returned through Q2 2018 (n=213).

Table 3. *Consent Form Returns*

# Eligible	# consents returned	% consents returned	# Returned 'yes'	% Returned 'yes'	Total patients
3120	2439	78%	1670	68%	1612*

PATIENTS KEPT HEALTHY IN COMMUNITY

44% of patients were kept healthy in the community and were managed by EPDH and teledentist team with 56% needing a referral for an in-person dental visit for higher level procedures.

The high percentage of children with dental decay is also illustrated in Table 4 below. Seventy-four percent of children seen in the program had a cavity, either previously treated or untreated. The incidence of decay in this community is significantly higher than the 49% decay incidence noted statewide by the 2017 Smile Survey. The figure below highlights that, among those children who presented without dental decay, eight out of ten didn't have any need to be sent to the dentist. Conversely, eight out of ten children who presented with dental decay at the assessment had such serious needs that a dentist referral was necessary.

Table 4. Kept Healthy in the Community vs. Referred to Dentist

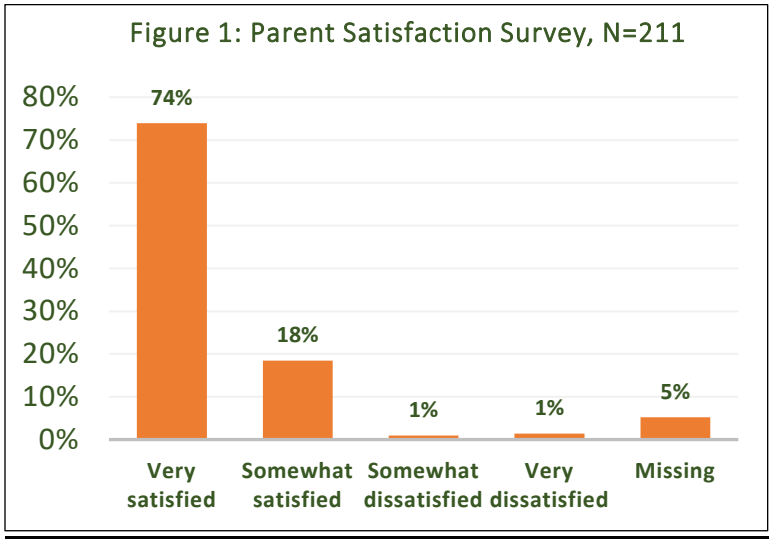
	Totals	
No untreated decay and no fillings	541	26%
No untreated decay but have fillings	309	15%
Untreated decay, no fillings	608	30%
Untreated decay, have fillings	592	29%
Assessments	2050	100%
All treatment can be performed by dental hygienists in the community	896	44%
Need to be referred to a dentist for at least some treatment	1151	56%
ITRs planned	162	
ITRs placed	71	

PILOT PROJECT PROPOSED NUMBER OF TRAINEES:

Since March, 2016, eleven EPDHs and two dentists have received in-person training at Capitol Dental Care. For Advantage Dental, since February, 2019, two EPDHs and two dentists have received the in-person training thus far.

PARENT SATISFACTION

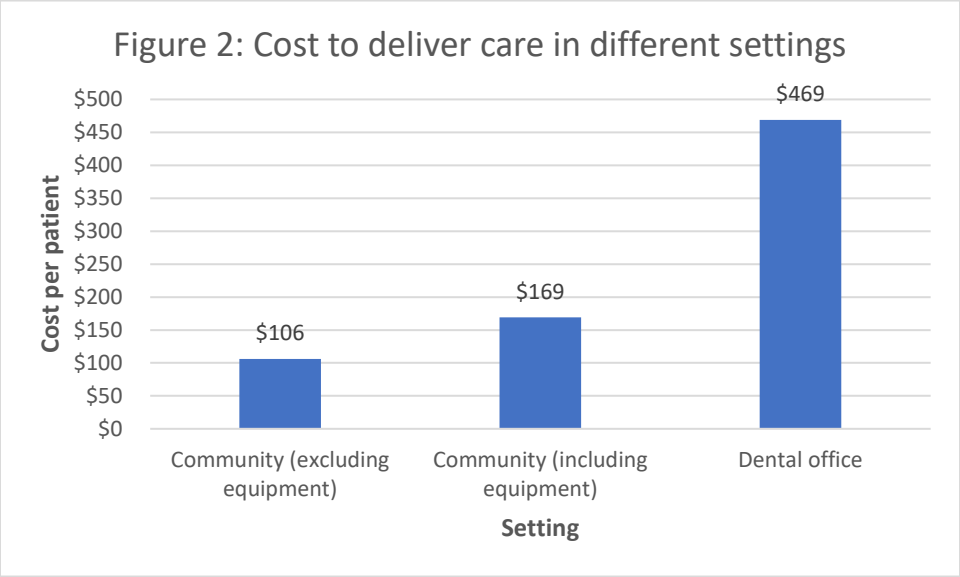
Analysis of satisfaction surveys completed and turned in by parents between April 2016 and June 2018 indicates very high levels of acceptance and satisfaction with treatment, as shown in Figure 1.



COST

In order to compare the cost of care per child seen by the program to cost per child for comparable care performed in a dental office, the project conducted a preliminary analysis of the cost benefit of the project with Capitol Dental in 2016. The analysis determined that the direct operating cost of delivering preventative care in the community was $106 per patient per year (this figure was $169/patient when equipment costs were incorporated). The same analysis estimated the cost of restorative care for patients who needed treatment at the dentist

at $469. Therefore, by providing preventative treatment in the community for patients with limited access to services, the project is helping avoid an estimated $300 per patient.

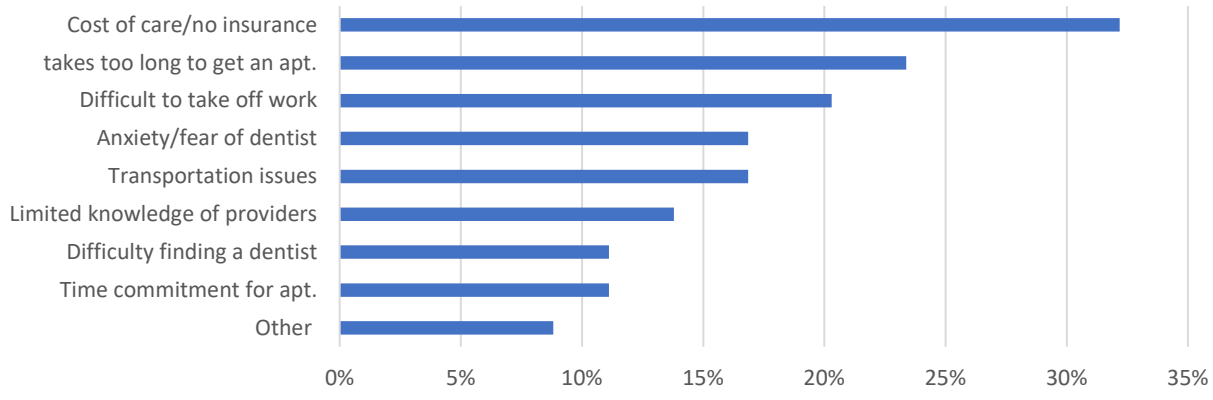


ACCESS

The main way in which the project increases access to dental care in the population is by providing on-site care that reduces various barriers to access. Data collected on patient consent forms shows the following barriers to care faced by the population. Of the 493 parents who provided this information on the consent forms, 261 (53%) said they experienced at least one barrier to care. The most common barriers cited by those 261 respondents are shown in Figure 3.

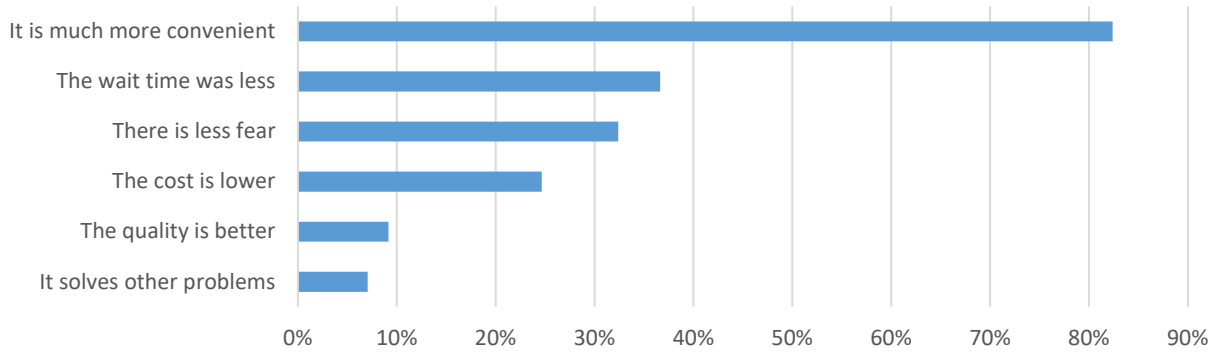
Figure 3. Barriers to Care

Percent of respondents who said the faced that specific barrier Source: Consent forms (N = 261)



For comparison, Figure 4 shows information from Parent Satisfaction Survey respondents showing that the perceived benefits of their child receiving care through the project address many of the barriers to care.

Figure 4. Perceived Benefits of Dental Care through the Project
Source: Parent Satisfaction Survey (N= 134)



ACKNOWLEDGMENTS

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NOTES & RESOURCES

Note: Data included in this report generally reflects data from Capitol Dental Care due to the later start for Advantage Dental in February of 2019. Between then and the December, 2019 date for data compilation, Advantage Dental had had time for in-person training only, with two EPDHs and 2 dentists being trained.

Definitions

Patient assessment: Full assessment of new and returning patients. The Dentist reviews patient charts, pictures, and x-rays completed on site by the EPDH and provides a treatment recommendation. This definition corresponds to the CDT procedure code D0191 – Assessment of a patient.

Untreated Decay: Includes patients without signs of untreated decay (both with and without existing fillings)

Treated Decay: Includes patients with untreated decay (both with and without existing fillings)

Community: The clinical team has determined that the patient can receive treatment in the community.

Dentist: The clinical team has determined that the patient must be treated at a dental office.

Kept healthy in the community: When the EPDH and supervising teledentist concur that the patient's oral health needs can be met on-site through the telehealth and ITR services provided by the program. "Healthy" has been defined as not needing to be referred to a "bricks and mortar" dental clinic for any reason. As a result, traditional dental clinics were better able to focus resources on those with urgent or restorative needs.

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[i] Senate Bill 738. Dental Pilot Projects. Oregon State Legislature. https://olis.leg.state.or.us/liz/2011R1/Downloads/MeasureDocument/SB0738/Enrolled (last accessed May 4, 2017)

[ii] Chapter 680 – Dental Hygienist; Denturist 2015 Edition. Oregon State Legislature https://www.oregonlegislature.gov/bills_laws/ors/ors680.html (last accessed May 8, 2017)

[ii] American Academy on Pediatric Dentistry Council on Clinical Affairs. Policy on interim therapeutic restorations (ITR). Pediatr Dent. 2008-2009;30(7 Suppl):38-9.

[ii] Glassman P[1], Subar P, Budenz AW. Managing caries in virtual dental homes using interim therapeutic restorations. J Calif Dent Assoc. 2013 Oct;41(10):744-7, 750-2.

Dental Pilot Project Application #200. Oregon Health Authority. https://www.oregon.gov/oha/ph/PreventionWellness/oralhealth/DentalPilotProjects/Pages/Project200.aspx