



Dental Public Health Project/Activity Descriptive Report Form

Please provide a detailed description of your **successful dental public health project/activity** by fully completing this form. Expand the submission form as needed but within any limitations noted.

NOTE: Please use Verdana 9 font.

CONTACT PERSON PREPARING THE SUBMISSION AND TO ANSWER QUESTIONS

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PROVIDE CONTACT INFORMATION FOR ONE ADDITIONAL PERSON WHO COULD ANSWER QUESTIONS REGARDING THIS PROGRAM

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SECTION I: ACTIVITY OVERVIEW

Title of the dental public health activity:

Infant Dental Visit Quality Improvement Projects

Public Health Functions*: Check one or more categories related to the activity.

"X"	Assessment
	1. Assess oral health status and implement an oral health surveillance system.
	2. Analyze determinants of oral health and respond to health hazards in the community
	3. Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health
Policy Development	
	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
	5. Develop and implement policies and systematic plans that support state and community oral health efforts
Assurance	
	6. Review, educate about and enforce laws and regulations that promote oral health and ensure safe oral health practices
x	7. Reduce barriers to care and assure utilization of personal and population-based oral health services
	8. Assure an adequate and competent public and private oral health workforce
	9. Evaluate effectiveness, accessibility and quality of personal and population-based oral health promotion activities and oral health services
x	10. Conduct and review research for new insights and innovative solutions to oral health problems

[*ASTDD Guidelines for State and Territorial Oral Health Programs that includes 10 Essential Public Health Services to Promote Oral Health](#)

Healthy People 2020 Objectives: Check one or more key objectives related to the activity. If appropriate, add other national or state HP 2020 Objectives, such as tobacco use or injury.

"X"	Healthy People 2020 Oral Health Objectives
x	OH-1 Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
x	OH-2 Reduce the proportion of children and adolescents with untreated dental decay
	OH-3 Reduce the proportion of adults with untreated dental decay
	OH-4 Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
	OH-5 Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
	OH-6 Increase the proportion of oral and pharyngeal cancers detected at the earliest stage
x	OH-7 Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
x	OH-8 Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year
	OH-9 Increase the proportion of school-based health centers with an oral health component
	OH-10 Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component
x	OH-11 Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers each year

OH-12	Increase the proportion of children and adolescents who have received dental sealants on their molar teeth
OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water
OH-14	Increase the proportion of adults who receive preventive interventions in dental offices
OH-15	Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams
OH-16	Increase the number of States and the District of Columbia that have an oral and craniofacial health surveillance system
OH-17	Increase health agencies that have a dental public health program directed by a dental professional with public health training

Provide 3-5 Key Words (e.g. fluoride, sealants, access to care, coalitions, policy, Medicaid, etc.) These will assist those looking for information on this topic:

Infant oral health, access to care, children services, quality improvement, medical dental integration, prevention, age one dental visit

Executive Summary: Complete after Section II: Detailed Activity Description. Please limit to 300 words in one or two paragraphs.

Provide a brief description of the dental public health activity. Include information on: (1) what is being done; (2) who is doing it and why; (3) associated costs; (4) outcomes achieved (5) lessons learned, both positive and negative.

- (1) This project was the result of several quality improvement projects at a Federally Qualified Health Center (FQHC) with the goal of increasing the dental visit rate of infants. These projects included:
 - Providing dental training to the medical team teams on child oral health, importance of the dental home by one, risk assessments, fluoride varnish, dental trauma using the Smiles for Life Curriculum.
 - Facilitating dental referrals
 - Incentivizing medical assistants for making dental appointments for infants and young children.
- (2) This project took place at Petaluma Health Center (PHC) in Sonoma County, California. PHC was doing this as a partner in two grants aimed at increasing dental care accessibility for low income and priority populations. A HRSA grant for increasing perinatal and infant oral health access, and a National Network for Oral Health Access (NNOHA) grant with a medical dental integration focus.
- (3) For the implementation of these changes, \$10,000 was budgeted for six months. Thereafter, they budgeted \$1,000 per month.
- (4) The main short-term outcome of interest for this program as a whole was the number of children with a well-child visit who visit the dentist by age 12 months. This rate increased from a baseline of 10.7% to 45.5% by September of 2018. Over the 21-month period where the data were gathered, there was an average increase of 5.4% per month.
- (5) Embedding the caries risk assessment in the electronic medical record (EMR) was very important to this process. They would have done this right at the beginning of the process instead of in the middle of all of these changes, if they could do it again.

SECTION II: DETAILED ACTIVITY DESCRIPTION

Provide detailed narrative about the dental public health activity using the headings provided and answering the questions. Include specifics to help readers understand what you are doing and how it's being done. References and links to information may be included.

****Complete using Verdana 9 font.**

Rationale and History of the Activity:

1. What were the key issues that led to the initiation of this activity?

Recommendations from ADA (2000), AAP (2003, 2009) and AAPD (2009) emphasize the importance of a child's first dental visit within six months of eruption of the first tooth and no later than 12 months of age.¹² Yet, in 2016 in Sonoma County, only 38 percent of Medi-Cal patients between ages one and two years old received a dental visit within the last year. Waiting to see the dentist until a child is two or three years old can be too late to prevent cavities, which can set a child up for a lifetime of fear of going to the dentist. Tooth decay, if left untreated even in the earliest stages of life, can have serious implications for a child's long-term health and well-being.³

The California Office of Oral Health (COOH) received the Perinatal and Infant Oral Health Quality Improvement (PIOHQI) grant from the Health Resources and Services Administration (HRSA) in 2015. One of the goals of the grant was to increase the percentage of infants who receive oral health care by age one. To accomplish this goal, COOH collaborated with local Federally Qualified Health Centers (FQHC) to act as pilot sites using quality improvement methodology for increasing the percentage of infants who see a dentist by their first birthday. One of these FQHCs, Petaluma Health Center (PHC), focused their quality improvement processes on getting infants on Medi-Cal seen on the medical side of their system into their dental clinics. Approximately 45% of patients at PHC have Medi-Cal.

2. What rationale/evidence (may be anecdotal) did you use to support the implementation of this activity?

While the ADA, AAP and AAPD all recommend that a child have a dental visit by 12 months of age, there are many barriers to care, especially for children with Medi-Cal dental insurance. Understanding these barriers and figuring out innovative ways of overcoming them was needed to increase the rate of dental care for infants to better ensure that children are set on the path to healthy teeth. To do this, PHC engaged their clinical quality improvement team with the dental team to implement Plan Do Study Act (PDSA) cycles with the goal of improving the rate of dental care among infants at the clinic.

3. What month and year did the activity begin and what milestones have occurred along the way? (May include a timeline.)

- The program began in June 2016 with the partnership between OOH and PHC.
- In January 2017, measures had been created and data collection began.
- In April, 2017 PHC created a format by which Medical Assistants within their facilities could book dental appointments.
- In November 2017, PHC created a protocol for creating a list of patients between six and 12 months old who had not yet seen the dentist. This list was utilized by their MAs and their other scheduling staff to contact patients and book appointments.
- In May 2018, PHC began an incentive program for MAs who booked dental appointments for their young patients (details below).

The sections below follow a logic model format. For more information on logic models go to: [W.K. Kellogg Foundation: Logic Model Development Guide](#)

¹ <http://www.mychildrensteeth.org/assets/2/7/GetItDoneInYearOne.pdf>

² http://www.aapd.org/media/Policies_Guidelines/G_PerinatalOralHealthCare3.pdf

³ https://www.cda.org/portals/0/pdfs/untreated_disease.pdf

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES
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1. What resources were needed to carry out the activity? (e.g., staffing, volunteers, funding, partnerships, collaborations with various organizations, etc.)

Funding was required to implement the quality improvement activities at PHC. Staff time was required for some of the PDSA cycles. The dental director of PHC and a data analyst staff provided in kind support of their time to get this project started. COOH provided quality improvement training and technical assistance through the PIOHQI grant. This was mainly the staff time of the program manager and data manager.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES
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2. Please provide a detailed description the key aspects of the activity, including the following aspects: administration, operations, and services.

PHC undertook four quality improvement steps to increase the dental visit rate among infants at their clinics.

1. To engage the medical side of PHC with the dental side, the medical teams were given 13 trainings modeled after the Smiles for Life curriculum. This taught the medical teams about the importance of oral health, the utility of the dental home, caries risk assessments, fluoride varnish, and dental trauma. This training was incorporated into the onboarding process for new employees working in their medical teams.
2. To better facilitate dental appointment scheduling, a new schedule was built in PHC's electronic medical record system (EMR). Matching scheduling blocks were created in both the EMR and the electronic dental record (EDR) system. The EMR 9-month well-child visit template was updated and MAs received training on scheduling dental visits. A flow chart was created for the medical assistants (MAs) to use when scheduling. Dental staff was trained on retrieving these appointments from the EMR and transferring them in the EDR. A transfer routine was established to align with PHC's appointment confirmation protocol. In addition, a caries risk assessment module was added to their EMR to streamline the process of moving children from medical to dental. This created a link facilitating communication between the medical and dental staff.
3. To attempt to increase the number of dental appointments for children under 12 months, a list of children aged six to 12 months old without a dental visit was created once a month. Available MAs and scheduling staff were assigned to call and offer dental appointments to those on the list. This list also included closing the loop on patients who missed appointments or who were otherwise not seen by the dental team. Staff making dental appointments for infants were given a script to follow when making these appointments.
4. An MA incentive program was undertaken to increase dental appointments for children under six years old. MAs were grouped into teams, and after six months each member of the team who reached a specific threshold received a \$25 gift card. The staff with the most appointments scheduled also received \$25 each month. Additionally, teams who reached above a certain threshold of appointments were recognized in morning huddles and on the PHC intranet.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES
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3. What outputs or direct products resulted from program activities? (e.g., number of clients served, number of services units delivered, products developed, accomplishments, etc.)

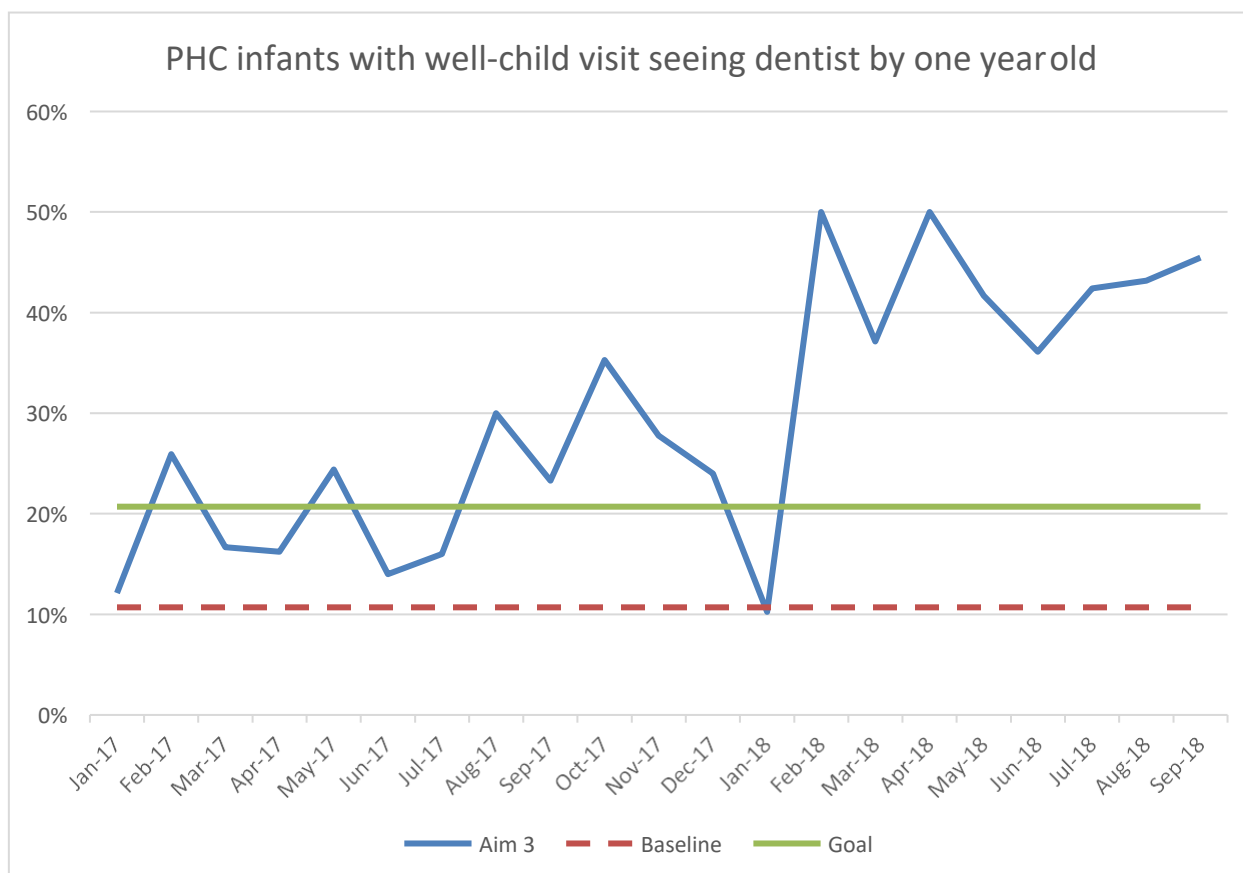
The main output was a change in the structure around scheduling responsibilities within PHC. MA's were trained to take a more active role in this scheduling. Additionally, the automatically generated list of potential dental patients increased the opportunity for staff to schedule dental appointments for infants. The first list resulted in 36 additional appointments scheduled for children under 12 months. Finally, the MA incentive program led to large increases in dental appointments scheduled for 0 to 5 year old patients. Before the incentive program began, MA's scheduled an average of 68 appointments

per month. In May, 2018, they scheduled 122 appointments, and in June they scheduled 191 appointments.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES
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4. What outcomes did the program achieve? (e.g., health statuses, knowledge, behavior, care delivery system, impact on target population, etc.) Please include the following aspects:

The main short-term outcome of interest for this program as a whole was the number of children with a well-child visit who visit the dentist by age 12 months. This rate increased from a baseline of 10.7% to 45.5% in September of 2018. Over the 21-month period where the data were gathered, there was an average increase of 5.4% per month.



a. How outcomes are measured

The numerator for the measure was the number of patients who visited the dentist (defined as any CDT code) in the 365 days prior to the measurement month. The denominator was the number of individuals who turn 1-year-old within the month reported on, who have completed at least one well-child visit (defined as CPT 99381 or CPT 99391).

b. How often they are/were measured: Monthly

c. Data sources used: Data were gathered from the clinic EDR and EMR.

d. Whether intended to be short-term (attainable within 1-3 years), intermediate (achievable within 4-6 years), or long-term (impact achieved in 7-10 years)

This is the short-term outcome. An intermediate outcome is a reduction in surgery center referrals for dental procedures (annual percent of patients referred to the dental surgery center). An intermediate and the long-term outcome for this project is a decrease in the rate of tooth decay for children who receive care at PHC (numerator: returning patients aged 1-21 years with ICD 10 code: K02; denominator: all returning patients aged 1-21 years).

Budgetary Information:

NOTE: Charts and tables may be used to provide clarity.

1. What is the annual budget for this activity?

For the implementation of these changes, \$10,000 was budgeted for six months, which included \$5,000 for the incentive program. Thereafter, they budgeted \$1,000 per month.

2. What are the costs associated with the activity? (Including staffing, materials, equipment, etc.)
 - Training materials
 - Incentive payments
 - Staff time calling to make appointments
 - IT costs changing the EMR/EDR
3. How is the activity funded?

This project was grant funded through the COOH PIOHQI grant and a grant from the National Network for Oral Health Access.

4. What is the plan for sustainability?

To ensure sustainability, all levels of PHC were engaged in this program. MA's and call center staff were engaged through education of the importance of dental care. QI was engaged by having scheduled monthly meetings with the dental director. Leadership was engaged through a presentation of the success of the program. These trainings have been built into the on-boarding process for new staff at all levels of PHC to ensure sustainability even after funding decreases or ends.

Another way to ensure sustainability in these interventions was to incorporate the quality measure of children with a well-child visit receiving dental treatment by age one into PHC's overall strategic goals.

To try to maintain the efficacy of the incentive program, PHC built a rotation schedule where the incentives were dedicated to different quality metrics in different parts of the year. This way, there is natural re-engagement in getting infants into dental annually when the incentive program rotates back to that quality measure.

Lessons Learned and/or Plans for Addressing Challenges:

1. What important lessons were learned that would be useful for others looking to implement a similar activity? Was there anything you would do differently?

Embedding the caries risk assessment in the EMR was very important to this process. They would have done this right at the beginning of the process instead of in the middle of all these changes, if they could do it again.

2. What challenges did the activity encounter and how were those addressed?

One major challenge was identifying patients when there were differences in the information in the EMR and EDR (slightly different name spelling, date of birth, etc.). PHC had to put significant effort into cleaning their data, and they put in a protocol for quality assurance of the lists of patients in the EDR and EMR to minimize these errors.

Another challenge was MA managers that said that they do not see that many kids and will not be able to schedule that many. After seeing how the process worked for other teams, the team with the MA late adopter ended up scheduling the highest number of children one month.

Available Information Resources:

Share any models, tools, and/or guidelines developed by the program specifically for this activity that may be useful to others seeking additional information. Hyperlink resources if possible.

[Petaluma Health Center call scripts](#)

TO BE COMPLETED BY ASTDD

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