Dental Public Health Project Descriptive Report Form

Please provide a description of your organization's successful dental public health project by completing this form. Add extra lines to the form as needed but stay within **word limits**.

Please return the completed form to Lori Cofano: lcofano@astdd.org

Name of Project
Infant Oral Health Program (IOCP)
Executive Summary (250-word limit))
Objectives: In 2010, UCLA launched an Infant Oral Care Program (IOCP) with the specific aim of increasing entry points of access and increase the number of trained dental providers (DDS, RDHs, RDAs) ***and primary care providers (MDs, nurses)*** to integrate perinatal and pediatric health care with oral health services to improve overall health outcomes. Methods: The program employed an individualized disease prevention and management model (CAMBRA) targeted at underserved, low-income, minority children ages 0-5 and their caregivers in a non-traditional setting. IOCP trains dental students/residents, family and pediatric medical residents, and family and pediatric nurse practitioner students in partnership community organizations and Community Oral Health Workers (COHWs). Results: IOCP provided care for 1206 unique patients across 3599 visits from 2010-2019. The in-person collaborative care model, delivered through interprofessional education (IPE) between dental residents, medical professionals, and COHWs, proved highly effective, resulting in a significant reduction in early childhood caries, from 78% to 23%. Following IOCP's success, we recognized the need to adapt our model during and after the COVID-19 pandemic. We transitioned to a telehealth format, enabling residents and COHWs to reach families in their homes virtually. Through secure telehealth platforms, residents and COHWs provided triage of patients, oral health screenings, risk assessments, anticipatory guidance, and caregiver education. This adaptation not only maintained continuity of care during a critical time but also expanded our capacity to reach underserved populations with flexible, accessible, and prevention-focused oral health services. Conclusion: This innovative IPE model sets a new standard of comprehensive, integrated and evidence-based dental care within a medical/dental integration setting.
Name of Program or Organization Submitting Project
UCLA School of Dentistry, Section of Pediatric Dentistry

Essential Public Health Services to Promote Health and Oral Health in the United States

Place an "X" in the box next to the Core Public Health Function(s) that apply to the project.

X	Assessment
X	Policy development
X	Assurance

http://www.astdd.org/state-guidelines/
Project submissions will be categorized by the Core Public Health Functions on the ASTDD website.

Healthy People 2030 Objectives

List Healthy People 2030 objectives related to the project.

- OH-01 Reduce the proportion of children and adolescents with lifetime tooth decay
- OH-02 Reduce the proportion of children and adolescents with active and untreated tooth decay.
- OH-08 Increase use of the oral health care system.
- OH-09 Increase the proportion of low-income youth who have a preventive dental visit.

This information will be used as a data resource for ASTDD purposes.

Keywords for sorting the project by topic.

Provide **three to five** keywords (e.g., access to care, children, coalitions, dental sealants, fluoride, policy, Medicaid, older adults, pregnant women, etc.) that describe the project. Keywords are used to categorize submissions.

Early Childhood Tooth Decay (ECC), Telehealth, Access to care, Caries Management by Risk Assessment (CAMBRA), Dental Public Health Community-Based Intervention, Oral Health Integration, Vulnerable/Underserved Communities, Community-Based Intervention, Planning with Partners

Detailed Project Description

Project Overview
(750-word limit)

1. What problem does the project address? How was the problem identified?

Early Childhood Caries (ECC) is a chronic infectious multifactorial disease in children 6 years of age or younger that affects 600 million children worldwide.[1-2] Yet ECC is entirely preventable. When left untreated, ECC can lead to pain and infection as well as to difficulty in eating, speaking, and learning. These difficulties can have detrimental and long ranging effects on cognitive development, school readiness, self-esteem and lead to a diminished quality of life.[2-3]

A systematic review of 72 studies worldwide showed the prevalence of ECC in children 4 years of age ranged from 12% to 98%.[3] In the United States, 23% of children between 2-5 years of age have ECC, and 80% percent of dental disease (including ECC) is concentrated in just 20–

25% of the country's children who are primarily from low socioeconomic and/or minority backgrounds.[4-6] In California specifically, 61% of third grade children have experienced tooth decay, and 22% have untreated dental caries.[7] Oral health inequalities are universal.[8] Children in lower-income groups and countries have been shown to have the highest dental caries rates, and children from disadvantaged backgrounds are disproportionately more likely to be admitted to the hospital to have teeth extracted.[9]

2. Who is the target population?

IOCP and our telehealth project seek to provide preventive and patient-centered oral healthcare to underserved, low-income, minority children ages 0- 5 and their caregivers in a non-traditional setting like Federally Qualified Health Centers *(*FQHC), Community Health Centers, Women, Infants and Children (WIC), and Early Head Start sites.

3. Provide relevant background information.

Child well-being is an interprofessional issue-area that has consequences at multiple dimensions. The American Academy of Pediatric Dentistry (AAPD) affirms that child oral care is an absolute "medical-necessary" in child health,[9] but low-income parents often lack the means to access oral care, such as transportation and/or the ability take time off from work to take their children to the dentist. IOCP integrates the dental visit within a FQHC primary care setting to alleviate some of the barriers that low-income parents and underserved populations may face when seeking quality oral health care for their children. Additionally, it is crucial that all child health providers work together to provide the best patient-centered service. The goal of IOCP is to unite child well-being in all aspects, specifically with primary care, which will give parents a more specific understanding of what is happening with their child's systemic health and oral health.

To help create a new cadre of primary care providers trained and willing to provide for the oral health of underserved children, University of California Los Angeles (UCLA) created the Community Access, Reach and Education in Pediatric Dentistry (CARE-PD) project in 2020 (formerly SPICE-PD, 2015-2020). The CARE-PD project aims to educate, train and mentor pediatric dental residents, pediatric medical residents, nurse practitioner students and Advanced Education in General Dentistry (AEGD)/General Practice Residency (GPR) residents in infant and toddler oral health through an interdisciplinary, interprofessional and multifaceted collaborative approach. Multidimensional integrative learning and teaching is an essential step to prepare our health workforce of tomorrow. By facilitating oral health education in medical residency programs nursing and public health programs, the intended outcome is to improve the overall health of children. We implemented oral health education in a multi-disciplinary approach in which our pediatric dental residents provided education and guidance to the medical residents, nurse practitioner students, and participating predoctoral dental students.

4. Describe the project goals.

The specific aim of the program is to simultaneously increase entry points of access to oral health and increase the number of trained dental providers and primary care providers (family and pediatric medical residents, family and pediatric nurse practitioner students) to integrate perinatal and pediatric health care with oral health services to improve overall health outcomes.

References

1. Pitts N, Diaz-Guallory C, et al. Early childhood caries: IAPD Bangkok Declaration. Int J Paediatr Dent. 2019;29:384-386.
2. FDI Policy Statement. Perinatal and infant oral health. 2014, New Delhi: India.
3. Tinanoff N, Baez RJ, Diaz-Guillory C, et al. Early childhood caries epidemiology, aetiology, risk assessment, societal burden, management, education, and policy: Global perspective. Int J Paediatr Dent. 2019;29:238-248. Doi: 10.1111/ipd.12484.

4. Fleming E, Afful J. Prevalence of total and untreated dental caries among youth: United States, 2015-2016. NCHS Data Brief no 307. 2018. Hyattsville, MD: National center for health Statistics.
5. Cooper D, Kim JS, Duderstadt K, et al. Interprofessional oral health education improves knowledge, confidence, and practice for pediatric healthcare providers. Front Public Health 2017;5(209). doi: 10.3389/fpubh.2017.00209.
6. Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental Caries and Sealant Prevalence in Children and Adolescents in the United States, 2011–2012. 2015. Hyattsville, MD: National Center for Health Statistics 2015.
7. Darsie B, Conroy SM, Kumar J (2021). Oral Health Status of Children: Results of the 2018- 2019 California Third Grade Smile Survey. Sacramento, California: Office of Oral Health, California Department of Public Health
8. Costa SM, Martins CC, Bonfim Mde L, et al. Int J Environ Res Public Health. 2012;9:3540-3574.
9. Jackson SL, Vann Jr WF, Kotch JB, Pahel BT, Lee JY. Impact of poor oral health on children's school attendance and performance. Am J Public Health. 2011;101:1900-1906.
10. American Academy of Pediatric Dentistry. Definition of medically-necessary care. Pediatr Dent 2015.

Resources, Data, Impact, and Outcomes
(750-word limit)

1. What resources were/are necessary to support the project (e.g., staffing, volunteers, funding, partnerships, collaborations with other agencies or organizations)?

Personnel:

- Full-time IOCP or Telehealth Coordinator responsible for scheduling appointments, paperwork (including patient electronic chart records), verification and pre-authorization of insurance benefits, and other administrative support. This person is budgeted at $42,000/year.
- The IOCP clinic only operated every Wednesday year-round: 4 Wednesdays a month for 8 hours (4 hours in the morning at one site, 4 hours in the afternoon at a second site). The telehealth project took place for 4 hours every Thursday afternoon year-round Our program utilizes already-available staff for scheduling and billing.

The Simms/Mann Health and Wellness Center, run by the FQHC Venic Family Clinic, provided space and other supplies as part of the collaborative agreement with the IOCP. Included below are figures related to how much it would cost to start a new IOCP at a different site.

- Supplies: $4300 including: $3900 for portable chairs/lamps, $400 for mirrors and gowns.
- Per Patient Costs: Approximately $18.15, which accounts for fluoride varnish, gloves, gauze, toothbrushes, toothpastes and prescription fluoride varnish including GC MI Varnish and Colgate PreviDent Varnish, both 22,600 ppm fluoride. This high concentration is used for professional applications to prevent caries, and was dispensed on site by the providers.

For the telehealth project, computers and necessary technology used by pediatric dental residents in collaboration with COHWs to conduct teledentistry appointments were telephones and free virtual meeting software (such as university-approved, HIPAA-compliant Facetime and Zoom). These were already provided by the university but should be considered in the development of project budgets.

2. **(a) What process measure data are being collected (e.g., sealants placed, people hired, etc.)? and (b) What outcome measure data are being collected (e.g., improvement in health)?**

For IOCP, we track patient outcomes via the electronic dental records (EDR) using the dental education and management software axiUm in the dental school and Dentrix Wisdom at the community health center, and analyze the following data points:

- Number of children seen for a preventative oral health visit including caries risk assessment, oral exam, fluoride varnish application, anticipatory guidance and self-management goals.

- Number of children with clinical findings for white spot lesions (active vs. inactive) or dental caries
- Caries risk code at initial visit (baseline) Caries risk code at subsequent visits for the child, defined as EDR CDT codes:
    - Low risk: D0601
    - Medium risk: D0602
    - High risk: D0603
- Number of kids who were referred out for restorative treatment.

We are also trying to incorporate ICD-10 diagnostic codes into the IOCP. This data is important for program sustainability and reimbursement. Please see the table below as an example:

Table 1: Common ICD-10 codes used in pediatric dentistry, along with example usage and related CDT procedure categories.

ICD-10 Code	Condition	Example in Pediatric Dentistry	Typical CDT Procedure(s)
K02.53	Dental caries on smooth surface of primary tooth	Cavities on primary molars	D1351 (sealant), D2140-D2161 (amalgam/composite fillings)
K02.62	Arrested dental caries on permanent tooth	Incipient caries managed preventively	D1206 (fluoride varnish), D1110 (prophy)
K02.9	Unspecified dental caries	General decay without detailed surface charted	D2140-D2161
K05.10	Chronic gingivitis, plaque-induced	Bleeding gums in a child due to poor oral hygiene	D4341, D4342 (scaling and root planing)
K00.1	Supernumerary teeth	Extra primary or permanent tooth on radiograph	D0140 (limited exam), D0330 (panoramic x-ray), D7280 (surgical removal)
K00.4	Disturbances in tooth formation	Enamel hypoplasia, delayed eruption	D0145 (preventive visit under age 3), D2391-D2394
K00.5	Hereditary disturbance of tooth structure	Amelogenesis or dentinogenesis imperfecta	D2391-D2394 (restorations), D2740 (crowns)
S02.5XXA	Fracture of tooth, initial encounter	Chipped or fractured incisor from trauma	D2140-D2161 (fillings), D2950 (core build-up), D2740 (crown)
S03.2XXA	Dislocation of tooth, initial encounter	Avulsed or luxated tooth from sports injury	D2950, D3330 (root canal if needed)
K12.0	Recurrent oral aphthae	Recurrent painful canker sores	D0120 (exam), palliative treatment
K13.29	Other oral mucositis	Non-specific oral mucosal irritation	D0120, palliative therapy
K07.0	Major anomalies of jaw size	Severe micrognathia or macrognathia	D8080 (comprehensive ortho), D8660 (pre-ortho records)
K07.4	Malocclusion, unspecified	Crowding, spacing, or overbite diagnosis	D8080
Z01.20	Dental exam without abnormal findings	Routine cleaning and check-up	D0120 (exam), D1120 (prophy child), D1206 (fluoride varnish)
Z01.21	Dental exam with abnormal findings	Caries or soft tissue lesions found at exam	D0140 (problem-focused exam), D0220 (x-ray single view)
Z00.121	Child health exam with abnormal findings	Routine pediatric visit with oral concerns	D0120, D0145 (infant oral evaluation)

For the telehealth project, an 18-item questionnaire was created and given to the 21 pediatric dental residents who participated in the telehealth project to assess teledentistry services. It included questions on types of telehealth/teledentistry services, efficiency compared to in-person visits, quality of care, provider comfort, technology satisfaction, technical issues, future use, patient receptivity, access to care, oral health needs, and technology/language barriers.

Two open-ended questions asked about strengths and limitations, and the pediatric dental residents summarized their teledentistry rotation experience. UCLA School of Dentistry is the originating site point of care, and Community Action Partnership of San Luis Obispo (CAPSLO) with locations in Bakersfield, Kern County, Monterrey, San Mateo, and Central Valley is the distant site point of care. We try to target areas where vulnerable communities with lack of access to dental care are located.

(c) How frequently are data collected?

We prepare monthly reports based on EDR data. Residents' survey responses were collected annually from each resident cohort, including pediatric dental residents, family and pediatric medical residents, and family and pediatric nurse practitioner students.

3. How are the results shared?

Results are disseminated through publications and presentations.
Presentations given since 2020 include the following:

- "Perinatal and Infant Oral Health and CAMBRA for ECC Prevention" Michigan Dental Association Annual Meeting, 2021
- "Infant Oral Care, Minimally Invasive Dentistry & Telehealth" Michigan Dental Association Annual Meeting, 2021
- "Minimally Invasive Pediatric Dentistry: Six-step Protocol of Infant Oral Care" American Association for Dental, Oral, and Craniofacial Research & Canadian Association for Dental Research Meeting, 2022
- "Minimally Invasive Pediatric Dentistry in the Telehealth Era" Japanese Society of Pediatric Dentistry, 2022
- "Age One Visit Update: Perinatal and Infant Oral Health Program" Pediatric Dentistry Association of Asia, 2022
- "Minimally Invasive Pediatric Dentistry: The Six Step Protocol of Infant Oral Care" International Association of Paediatric Dentistry Global Summit Poster Presentation, 2022
- "A Cavity-Free Future: The Six-Step Protocol of Infant Oral Care" Idaho 1st Hispanic/American Indian Healthcare Conference, 2023
- "Oral Health Literacy: Achieving Patient Behavior Change through Effective Communication" California Dental Associaiton, 2024
- "Minimally Invasive Pediatric Dentistry – Infant Oral Care" Egyptian Society for Pediatric Dentistry and Children with Special Needs and Arabian Academy of Pediatric Dentistry Congress, 2025
- "Effectiveness of Community Health Care Workers in reducing and preventing chronic diseases" National Medicaid, Medicare, CHIP Oral health Symposium, 2025

Publications on the IOCP and the CARE-PD (formerly SPICE-PD) programs include the following:

- Ramos-Gomez F, Kinsler JJ, Askaryar H, Verzemnieks I, Garell C. Evaluation of an interprofessional education program in pediatric dentistry, medicine, and nursing. J Dent Educ. 2021;85(7):1228-1237.
- Pike NP, Love-Bibbero L, Kinsler JJ, Verzemnieks I, Ramos-Gomez F. Five-Year Follow-up of an Interdisciplinary Oral Health Education Program: Clinical Practice Behaviors in Working Pediatric Nurse Practitioners. Submitted to J Am Assoc Nurse Pract. 2022 Dec 14. doi: 10.1097/JXX.0000000000000809. PMID: 36729598.
- Ramos-Gomez F, Kinsler JJ, Love-Bibbero L, Garell C, Wang Y, Pike NP. Mixed methods evaluation of an oral health education program for pediatric dental, medical and nursing providers. J Dent Educ. 2023 Jun;87(6):774-783. doi: 10.1002/jdd.13199.
- Love-Bibbero L, Ramos-Gomez F, Kinsler JJ, Cabrera-Mino C, Garell C, Pike N. Oral health knowledge, attitudes and learned clinical skills in pediatric medicine residents and nurse practitioner students: A pre-post design. Healthcare. 2024 12, 1807 http://doi.org/10.3390/Healthcare12181807

- Ramos-Gomez F, Kinsler JJ, Wang Y, Parkinson S, Pike N. Application of principles learned in a prevention-focused pediatric dental residency curriculum to professional practice. J Dent Educ. 2025;89(1):72-80. doi:10.1002/jdd.13670.

Budget and Sustainability
(500-word limit)

Note: Charts and tables may be used.

1. What is/was the budget for the project?

The budget for the first year of operations was approximately $112,627 (including startup equipment costs of $4,300). Please see below for the IOCP sample budget.

Table 1. IOCP sample budget for initial year of operation*

Personnel				
Role	*% effort x months/year*	*Salary requested**	*Fringe Benefits**	*Total*
Attending Doctor	2% effort x 12 mos.	$3,792	$1,441	$5,233
Project Coordinator	100% effort x 12 mos.	$42,000	$15,960	$57,960
			Subtotal	**$63,193**
Equipment/Supplies				
Equipment (Startup: portable chairs/lamps, mirrors, gowns)				$4,300
Project supplies (flip charts, fluoride varnish, etc.) ($200/month)				$2,400
Printing costs				$200
			Subtotal	**$7,900**
Other Expenses				
Technology Infrastructure Fee (TIF)** ($41.22 per FTE/month)				$592
General Liability Assessment (0.81/$100 of salary costs)				$512
			Subtotal	**$1,104**
Indirect Costs (56%*)				**$40,430**
Total Costs				**$112,627**
Monthly Revenue from insurance billing	Average $126/patient visit, 35 patients per month = $4,410/month			**$52,920**

**Salary rates, benefit rates, and indirect rates are institution specific.*

***TIF is a UCLA-specific line item that covers campus network, backbone and connection to the internet, email, messaging and calendaring services and underground inter-building wiring/cabling and maintenance.*
This budget does not reflect the additional cost of COHW for the Telehealth project.

2. How is the project funded (e.g., federal, national, state, local, private funding)?

Initial funding came come from the University and from support from the FQHC. Continued revenue support is achieved through patient insurance billing. Almost all patients at the IOCP clinic have Medi-Cal insurance, and some patients are able to pay at a reduced sliding scale fee.

3. What is the sustainability plan for the project?

Fiscal sustainability for IOCP is achieved through patient insurance billing within the medical/dental collaboration FQHC model. Through the Medi-Cal dental program's Dental Transformation Initiative (DTI) participating medical/dental providers in Los Angeles received an additional monetary incentive ($126) to perform preventative bundle services for children to include a Caries Risk Assessment, nutritional counseling, and self-management goals to patients. For many years, the UCLA CARE-PD and IOCP prevention IPE models have been on the forefront of supporting and advocating for a value-based (patient outcome-based) reimbursement system, where preventive care that begins early in the life course is reimbursed as a means of preventing the need for expensive, restorative care later on. Also, thanks to the telehealth project and the California Oral Health State and Medicaid Office, we were able to get the first CDT code, D9994, approved for Community Health Workers in a dental set up in California.

Lessons Learned

(750-word limit)

(a) What lessons were learned that would be useful for others seeking to implement a similar project?

While there are significant benefits to working with a co-located primary care community site—such as having merged medical and dental electronic records that give providers comprehensive access to a patient's social, medical, and dental history—the reality is that very few fully integrated medical-dental software systems exist. This makes achieving true interoperability extremely difficult and challenging. When integration is successful, it enhances communication between providers, streamlines the referral process, facilitates closing care gaps, and ultimately improves interprofessional collaboration and patient outcomes. However, the limited availability of such systems remains a major barrier to widespread adoption.

It is important to maintain one consistently employed IOCP coordinator who can make dental appointments for the patients, confirm patients for their appointments, maintain follow up schedules, and oversee the correct electronic dental records input. Our program benefitted from the use of already-available staff for scheduling and billing. However, these positions are critical to operations and should be considered in the development of IOCP budgets. This position could be combined into one position with proper training and some of its cost defrayed by reimbursable services.

We learned that a co-located medical/dental site was the ideal setting for starting an IOCP. Having both services at one location makes it easy for patients to receive comprehensive wrap-around services during one visit to the clinic and it improves follow-up and reduces no show rates. Patients appreciate the warm hand-offs between medical and dental providers.

Dental residents really enjoy working in a community clinic interprofessional setting and being able to observe and learn from medical providers, as well as from dental providers.

Residents reported the following services could be done more efficiently during a teledentistry visit than in the office: triaging patients to prioritize care (67%) and prescribing antibiotics or medication for pain (62%). Almost all residents (95%) reported feeling comfortable conducting a teledentistry appointment; however, 43% of residents thought the overall quality of care delivered by a teledentistry appointment was “not as good” when compared to the quality of a traditional in-person appointment. Most residents (80%) reported being very or somewhat satisfied with the technology they used to see patients via teledentistry.

All 21 residents reported being very likely or likely to continue using teledentistry for dental appointments in the future. Almost all residents (95%) strongly agreed or agreed that teledentistry services improved access to oral health care services for those who could not routinely access care, but most residents (95%) also strongly agreed or agreed that technology barriers, including poor internet access, could limit the ability of some patients to use teledentistry. Almost all residents (95%) said their patients were receptive to the teledentistry appointment.

(b) Any unanticipated outcomes?

Limitations of the teledentistry program included lack of in-person physical exams; does not allow adequate visualization of patient’s oral cavity; technical difficulties; lack of clarity of pictures or video for tentative diagnosis; language barriers; and lack of insurance reimbursement.

(c) Is there anything you would have done differently?

Nineteen percent of the pediatric dental residents reported experiencing technical issues that made it difficult to conduct a teledentistry appointment. Some residents thought improvements were needed with teledentistry technology to make it more effective. Perhaps with the assistance of AI and technology development, it will be easier to link these community health center sites to hubs with better internet and technology services.

Resources

List resources developed by this project that may be useful to others (e.g., guidelines, infographics, policies, educational materials). Include links if available.

For more information on IOCP, please visit https://www.uclaiocp.org/.
For more information on the CARE-PD program, please visit: https://www.uclachatpd.org/.

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