



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
A Multifaceted Approach to Improving the Oral Health of Infants and Young Children in Ohio
Executive Summary (250-word limit)
<p>Nearly one-quarter (23%) of preschool-aged children in Ohio have experienced tooth decay and 14% have untreated decay by age 5. To improve the oral health of young children in Ohio, caregivers, parents, early childhood educators and health professionals must understand the causes of tooth decay in this population and be knowledgeable about good oral health practices.</p> <p>The Oral Health Program (OHP), Ohio Department of Health (ODH) developed three different, yet complementary initiatives aimed at increasing knowledge about prevention of tooth decay in this population and encouraging behaviors that support oral health. This work was directed at pregnant women, early childhood education and health professionals, parents, caregivers and the public. The first project funded prenatal programs to train obstetrics (OB) care providers to conduct oral assessments, provide oral health education, make referrals for dental care and provide case management services to ensure that pregnant women are able to receive dental care. The second project was the development of an online curriculum to train early childhood education and health professionals about the prevention of tooth decay and other oral health topics. The third project was a public awareness campaign that included the development and posting of a 30-second video and purchasing social media ads that reinforced five key messages on the prevention of tooth decay in infants.</p> <p>The impact of this work on the oral health status of young children will be measured, in part, by conducting a basic screening survey of preschool aged children in 2026.</p>

Name of Program or Organization Submitting Project

Oral Health Program (OHP), Ohio Department of Health (ODH)

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.

Reduce the proportion of children and adolescents with active and untreated tooth decay — OH-02

Reduce the proportion of adults with active or untreated tooth decay — OH-03

Increase use of the oral health care system — OH-08

Increase the proportion of low-income youth who have a preventive dental visit — OH-09

Reduce consumption of added sugars by people aged 2 years and over — NWS-10

Reduce the proportion of people who can't get the dental care they need when they need it — AHS-05

Increase the proportion of adults who get recommended evidence-based preventive health care — AHS-08

Increase the proportion of pregnant women who receive early and adequate prenatal care — MICH-08

Increase the ability of primary care and behavioral health professionals to provide more high-quality care to patients who need it — AHS-R01

Increase the proportion of adults who get recommended evidence-based preventive health care — AHS-08

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 oral health, oral health and prenatal care, oral health public awareness campaign, oral health integration

Detailed Project Description

Project Overview

(750-word limit)

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

This project was developed to address a high prevalence of tooth decay among Ohio's preschool-aged children. The problem was identified by conducting a Basic Screening Survey (BSS) of children ages 3-5 years in 2016-17.

2. Who is the target population?

The primary target population is children 0-5 years of age. However, since the oral health of infants and young children is so dependent on the oral health status and behaviors of their caregivers, this work was targeted to pregnant women, mothers, caregivers, early childhood and health professionals, and the public.

3. Provide relevant background information.

Oral health should be a routine part of prenatal care, as poor oral health can lead to poor health outcomes for the mother and her baby. Gingivitis is a fairly common condition during pregnancy, affecting 25%-75% of women, likely due to hormonal changes and immunosuppression that occur during pregnancy.¹ Left unchecked, gingivitis can progress to periodontal disease (PD) which affects up to 40% of all pregnant women.² Women with PD may be at risk for poor pregnancy outcomes such as preterm birth, although this association is not well-understood, and research continues to better explain the association. Pregnant women may also be at risk for tooth decay due to changes in eating habits and other behaviors.

The oral health of mothers directly impacts the oral health of their children. Babies are not born with the bacteria that cause tooth decay in their mouths. Those bacteria are transmitted, usually by the mother, through kissing, the use of shared eating utensils, or other common behaviors. Mothers who have a high number of untreated cavities have a high level of decay-causing bacteria and transmit high levels of the bacteria to their children, which then puts them at higher risk for cavities themselves.³

Results of the 2016-17 BSS indicated that nearly one-quarter (23%) of preschool-aged children in Ohio had experienced tooth decay and 14% had untreated decay by age

¹ *Pregnancy and Women's Oral Health*. Smiles for Life: A National Oral Health Curriculum. 3rd Edition, November, 2020. <https://www.smilesforlifeoralhealth.org/>

² *Oral Health Care During Pregnancy and Through the Lifespan*. American College of Obstetricians and Gynecologists. 2013. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2013/08/oral-health-care-during-pregnancy-and-through-the-lifespan>

³ *Oral Healthcare during Pregnancy: Its Importance and Challenges in Lower-Middle-Income Countries (LMICs)*. International Journal of Environmental Research and Public Health. Published online 2022. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9518121/>

years.⁴By third grade, Ohio's 2017-18 BSS data indicated that the percentage of children who have experienced tooth decay had increased to 48% and 19% had untreated caries.⁵

To impact the number of young children who develop tooth decay, efforts must be directed to ensure that pregnant women/caregivers have good oral health and know how to positively impact their children's oral health from birth. Results from the 2018 Ohio Pregnancy Assessment Survey showed that significant disparities in accessing dental care exist among pregnant women in Ohio.⁶ While 63% of women reported visiting the dentist before becoming pregnant, only 44% of pregnant women had visited the dentist to have their teeth cleaned during pregnancy. The lack of regular dental care means that it's imperative that primary health care providers play a more active role in ensuring the oral health of their pregnant patients.

To this end, the OHP initiated three distinct but complementary programs to address the following goals:

- Integrate oral health assessments, education and referrals for dental care by OB providers.
- Increase the knowledge of pregnant women, caregivers, early childhood and health professionals about importance of oral health for infants and young children.
- Increase early childhood oral health knowledge and practices among the general public.

1. **Integration of Oral Health into Prenatal Care**

The goal of this program is to integrate oral health assessment, education, referrals, and case management for dental care into prenatal health care services. Three subgrantee agencies are funded to provide prenatal services to a substantial number of low-income women who are uninsured or covered by Medicaid.

The oral health assessment component is intended to identify women who have oral health needs by asking brief and easy-to-understand screening questions about their oral health and by conducting an assessment of the mouth. The OHP provides examples of screening questions from existing resources such as the *Bright Futures Oral Health Pocket Guide*⁷ and *Oral Health Care During Pregnancy and Early Childhood Practice Guidelines*⁸. Each subgrantee decides which questions they wish to use or creates their own. OB providers are trained in how to conduct an assessment of the mouth by taking the [Smiles For Life](#) modules on Pregnancy and Women's Oral Health, Child Oral Health, and The Oral Examination and through hands-on training provided by dental colleagues. Ongoing technical assistance is provided by OHP staff.

⁴ Oral Health Screening Survey of Preschool-Age Children in Ohio, 2016-17. Ohio Department of Health. 2018. <https://odh.ohio.gov/know-our-programs/oral-health-program/media/oral-health-screening-survey-of-preschool-age-children-in-ohio>

⁵ Oral Health Status of Third Grade Schoolchildren in Ohio, 2017-18. Ohio Department of Health. 2019. <https://odh.ohio.gov/know-our-programs/oral-health-program/media/oral+health+status+of+third+grade+schoolchildren+in+ohio,+2017-18?This%20data%20brief%20describes%20finding%20from%20a%20survey%20of%20Ohio%20schoolchildren%20conducted%20in%202017-18>

⁶ Ohio Pregnancy Assessment Survey 2018 Databook. Ohio Department of Health. <https://odh.ohio.gov/know-our-programs/ohio-pregnancy-assessment-survey-opas/resources/2018-opas-databook>

⁷ Bright Futures Oral Health Pocket Guide. National Maternal and Child Oral Health Resource Center. <https://www.mchoralhealth.org/pocket/>.

⁸ Oral Health Care during Pregnancy and Early Childhood Practice Guidelines. New York State Department of Health. August 2006. https://www.health.ny.gov/prevention/dental/oral_health_care_pregnancy_early_childhood.htm.

The oral health education component equips pregnant woman with information needed to maintain good oral health during the prenatal period. Topics include how a woman's oral health may affect the health of her baby; common oral health issues during pregnancy; oral hygiene practices; dietary guidelines for good oral health during pregnancy; and the safety of dental care during pregnancy.

As pregnancy is an opportune time to educate pregnant women about the oral health needs of infants and young children, topics such as oral hygiene, teething, eruption patterns of the primary teeth and a dental visit by baby's first birthday are also discussed.

The referral and case management component ensures that a woman with additional oral health needs is referred to, and seen, by a dentist during her pregnancy. This helps pregnant women attain good oral health while pregnant and establish a place to obtain routine dental care for herself after pregnancy and for her new baby. Providing or arranging for supportive services needed for the prenatal patient to complete the referral (such as appointment reminders, transportation) are also addressed.

2. Early Childhood Oral Health Education

This program helps ensure that early childhood education and health care professionals and parents/caregivers are knowledgeable about oral disease prevention for young children. The OHP developed a two-hour online oral health curriculum, [Help Me Smile—Ensuring the Oral Health of Young Children](#) to equip providers with knowledge and tools needed to educate young children and parents about oral health and help them establish good oral health practices.

The curriculum contains seven modules: (1) The Basics About Teeth; (2) All about Tooth Decay in Primary and Permanent Teeth; (3) Signs, Symptoms and Prevention of Tooth Decay; (4) Identifying Child Abuse and Neglect in the Mouth; (5) Handling Dental Emergencies; (6) Helping Families Get Dental Care; and (7) Oral Health for the Pregnant Mom and Her Newborn). Interactive learning to test knowledge and skills via scenarios with virtual children and parents are included. Downloadable offline resources (e.g., fact sheets, activity sheets) are available for use with other providers, children, and parents. Draft content was reviewed by four early childhood education professionals. The curriculum is available through the Ohio Child Care Resource and Referral Association (OCCRRA), which oversees mandatory professional development credits for early childhood educators in Ohio. It is also available for Ohio nursing continuing education credits and Commission on Dietetic Registration dietician credits via OhioTRAIN and via the [National Maternal and Child Oral Health Resource Center library](#).

3. Public Awareness Campaign on Infant Oral Health

The public awareness campaign was designed to provide customized oral health messages to Ohio's parents/caregivers of children ages 5 and younger. A needs assessment was first conducted with parents served by ODH Maternal and Child Health (MCH) Programs (e.g., Home Visiting, WIC, ODH parent consultants) to assess their current knowledge about infant feeding practices related to oral health, infant oral hygiene, and timing of baby's first dental visit, and their perceptions of how tooth decay rated in seriousness compared to a number of other childhood conditions. Results of the needs assessment were used to craft five key messages for the campaign. The campaign was developed by an outside vendor using extensive research on the media habits of parents, including those with lower incomes and those in the Appalachian region of the state. Because these target populations spend considerable time online, listening to music and on social networking platforms, social media

and audio streaming were chosen as the quickest and most effective means to distribute messaging.

The creative component included the development of a 30-second video, [Building Blocks for Healthy Teeth](#) (in nine languages), a one-page companion [fact sheet](#), and five unique static ads (Facebook, X (at the time, Twitter), Instagram, Pandora and Spotify) were purchased.

The five messages were:

- If you're pregnant, take care of your mouth. Your child's future oral health begins with you.
- From birth, clean your baby's gums with a soft cloth after each feeding, or at least twice a day.
- As soon as the first baby tooth comes in, use a soft toothbrush with just a dab of fluoride toothpaste twice a day.
- Take your baby to the dentist by their first birthday.
- Avoid foods and drinks with added sugar until your baby is 24 months old.

The campaign ran for six weeks during Spring 2022.

Resources, Data, Impact, and Outcomes

1. Resources Needed

Integration of Oral Health into Prenatal Care

Staffing: OHP Oral Health Integration Program Specialist (20% time) to oversee the administration of three subgrants.

Funding: \$150,000 in MCH Block Grant funds.

Partnerships: Two local FQHCs, one hospital-based teen pregnancy program.

Early Childhood Oral Health Education

Staffing:

- Content development: State Oral Health Program Administrator (20%), OHP Oral Health Consultant (20% time), OHP School-based Oral Health Program Coordinator (10%).
Narration, recording, and creative design: ODH in-house staff.
- On-going support/awarding of professional education/continuing education credits: OHP Oral Health Integration Specialist (5%).

Funding: \$19,257 in MCH Block Grant funds for contract with outside vendor to develop content outline and initial draft.

Partnerships:

- ODH WIC, Home Visiting Program, ODH parent consultants, ODH Continuing Nursing Education staff

Collaborations: OCCRRA

Public Awareness Campaign on Infant Oral Health

Staffing:

- Content development: OHP State Oral Health Program Administrator (10%), OHP Oral Health Consultant (10% time), OHP School-based Oral Health Program Coordinator (10%).
- Coordination with vendor: ODH Office of Communications (OoC) staff.
- Posting of video, fact sheet and social media messages on ODH website: ODH OoC staff.

Funding: \$150,000 in MCH Block Grant funds for contract with vendor for development of video, static ads and translations of video into eight additional languages.

Partnerships: ODH WIC, Home Visiting Program, ODH parent consultants.

2. Process Data

Integration of Oral Health into Prenatal Care

Process measures: Subgrantees report program-level data monthly and patient-level data quarterly. OHP staff maintain an Excel workbook for each subrecipient and compile the data into an annual report.

Monthly program-level data include:

- Number of prenatal patient visits.
- Number of oral health assessments conducted.
- Number of prenatal visits with oral health education conducted.
- Number of referrals made (and whether referrals are for routine, early or urgent dental needs).

Quarterly patient-level data include:

- Total number of unduplicated prenatal patients.
- Number of prenatal patients by age.
- Number of prenatal patients by race.
- Number of prenatal patients by ethnicity.
- Number of prenatal patients by educational level.
- Number of prenatal patients by insurance type (e.g., private, Medicaid, uninsured, etc.).
- Number of prenatal patients by primary language (language spoken at home).
- Number of unduplicated prenatal patients receiving dental care in response to a referral.
- Number of unduplicated prenatal patients who have completed dental care in response to a referral.
- Number of prenatal patients who received oral assessment for the first time.
- Number of prenatal patients who received oral health education for the first time.

Early Childhood Oral Health Education

Process measures: OHP staff compile monthly and yearly data from information available on the OCCRRA/OhioTrain platforms where the training is accessed.

Qualitative measures based on feedback about the training include responses to the following questions (using a Lickert Scale for statements 1-5, multiple choice for questions 6-7 and short answer response for question 8):

1. The training met my expectations.
2. The information presented in the training was of high quality.
3. By taking the training, I have gained knowledge that can be applied to my work.
4. I intend to implement or share something I learned today in my work setting.
5. I would attend similar trainings on oral health and safety related topics.
6. Was the information relevant to your work?
7. Would you recommend this training to other co-workers?
8. What is the most important thing you learned during the training that you intend to use in your work?

Quantitative measures include the number of early education and health professionals who completed the online training and received professional/continuing education credits.

Public Awareness Campaign on Infant Oral Health

Process measures: Obtained during and immediately following the end of the campaign.

Facebook, Twitter and Instagram:

- Total number of impressions.
- Number of reactions, post shares, and post comments.
- Number of clicks sent to the Building Blocks for Health Teeth landing page on the OHP website.

Pandora/Spotify:

- Number of impressions to parents using Pandora video podcast.

- Using audio streaming with Spotify, number of clicks delivered to the landing page. In addition, the OHP is currently examining analytics for the landing page to measure the extent to which the public continues to access the videos and fact sheet.

3. Outcome Data

The impact on the oral health of children 0-5 years of age will be measured by conducting the next BSS of preschool-aged children in 2026-2027 to determine if oral health status has improved. Specifically, the OHP will examine the percentage of children with caries experience and untreated decay.

4. How are results shared?

Integration of Oral Health into Prenatal Care

Data from the three subgrantees are compiled and maintained internally in a spreadsheet that is used to monitor and evaluate progress and impact. Data are also included in the department's annual MCH Block Grant report and the ASTDD state synopsis. In 2024, a roundtable presentation was made at the National Oral Health Conference to share details about this program and its impact.

Early Childhood Oral Health Education

The number of people who take the online training, the number who receive OCCRRA professional development or nursing/dietitian CE credits, and the results of participant feedback are compiled to monitor interest, reach and the extent to which participants intend to incorporate the information into their daily work. These data are shared internally with other MCH programs via a weekly report and will be used by the OHP to make modifications in the content.

Public Awareness Campaign on Infant Oral Health:

Results of the campaign have been shared internally with MCH program and ODH leadership staff.

Budget and Sustainability

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

Integration of Oral Health into Prenatal Care: \$150,000/yr.

Early Childhood Oral Health Education: Initial budget for a contractor: \$46,780 (\$19,257 was spent).

Public Awareness Campaign: \$150,000

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

All funding was federal MCH Block Grant funding.

3. What is the sustainability plan for the project?

- There is strong support within MCH and the department for the Integration of Oral Health into Prenatal Care subgrant program and continued funding is included in the FY25 budget.
- Since the online training went live in August 2022, 4,752 early education and health professionals have received OCCRRA credit or nursing/dietitian CE. Supporting the online training and making periodic revisions is a function of OHP staff and will continue.
- The public awareness campaign on infant oral health was intended to be a first step in making early childhood oral health more prominent in the department's messaging to the public. An additional \$150,000 in MCH Block Grant funding has been set aside for a second

public awareness campaign that will be implemented in 2024, focused on oral health and pregnancy. At least one message will be centered on the importance of infant oral health.

Lessons Learned

(750-word limit)

Integration of Oral Health into Primary Care:

- Recruit a project champion to oversee the work, keep it moving forward, and manage referrals of patients to dental care.
- Institutionalize the process so it becomes a routine part of all OB providers' work. This ensures that it continues in spite of staff turnover.
- Modifying the electronic health record is essential to ensure that providers are providing the required services at the right time during pregnancy, entering data needed to track patients, and making sure referrals for dental care are completed.
- Embed a straightforward, simple clinic workflow into clinic processes, and make sure all staff are trained in its use. Modify it as necessary.
- Get dental providers involved. Have a dentist available to answer questions during training and program implementation.
- Evaluate patients' acceptance of receiving oral health messages from their OB provider and the dental referral process.

Early Childhood Oral Health Education:

The biggest lesson learned is how critical the expertise of dental professionals is to having content that is written accurately and clearly. The oral health program should assess if its own staff have the right mix of expertise and writing skills to write the content. If so, then it is more efficient for oral health staff to do this work and utilize a vendor for creative ideas on how to share the content. The OHP spent a lot of time educating the outside vendor about oral health and significantly editing early drafts that the vendor produced. In hindsight, time would have been better spent from the beginning by having program staff write all content and only seek advice on how to creatively deliver the messages. There is no substitute for dental professionals retaining the role of subject matter experts.

Public Awareness Campaign on Infant Oral Health:

For a public awareness campaign, a \$150,000 budget is relatively low if it includes the development of a video, so expectations might need to be adjusted on purchasing social media ads. However, the video received the highest number of engagements, so was worth the cost.

Unanticipated outcomes

As a result of having initiated the Integration of Oral Health into Prenatal Care subgrant program, the OHP was in a good position to successfully apply for a Consortium for Oral Health Systems Integration and Improvement (COHSII) project, *Integrating Oral Health Care and Primary Care Learning Collaborative: A State and Local Partnership*, which focused on integrating oral health care and primary care for pregnant women at the community health center level. The work that the OHP had been doing was directly relevant to this learning collaborative and participating enabled the OHP to learn from the other eight states and the national team of experts and apply this new knowledge to its subgrant program.

Resources

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

Integration of Oral Health into Primary Care:

The OHP developed:

Subgrantee monthly and quarterly data reporting forms.

Data dashboard form that combines data from all subgrantees.

An internal tracking spreadsheet to ensure all reports have been received from subgrantees.

Expenditure spreadsheet to track disbursements to subgrantees.

[Patient fact sheet on oral health and pregnancy](#)

[Provider fact sheet on oral health and pregnancy](#)

Early Childhood Oral Health Education

[Help Me Smile—Ensuring the Oral Health of Young Children](#)

List of general resources.

List of parent and provider resources.

Public Awareness Campaign on Infant Oral Health

30-second video, [Building Blocks for Healthy Teeth](#) (in nine languages)

One-page companion [fact sheet](#)

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To Be Completed By ASTDD	
Descriptive report number:	38010
Associated BPAR:	Early Childhood Caries: Prevention and Management
Submitted by:	Ohio Department of Health/Oral Health Program
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