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:

Building a Statewide Network to Address Perinatal Infant Oral Health

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
X	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
	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
X	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**	
	OH-1	Reduce the proportion of children and adolescents who have dental caries experience in their primary or permanent teeth
	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
	OH-7	Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year
	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
X	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

"X"	**Other national or state Healthy People 2020 Objectives: (list objective number and topic)**	

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:

Network intervention design, acquiring oral health data, using oral health data, planning with partners, prevention: pregnant women (prenatal/perinatal) oral health, prevention: early childhood tooth decay, access to care: children services, access to care: individuals with special health care needs, access to care: pregnant women (prenatal/perinatal) services, access to care: workforce

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.

The broad purpose of South Carolina's Perinatal Infant Oral Health Quality Initiative (PIOHQI) was to adopt a statewide evidence-based framework for the integration of an oral health assessment and services into existing perinatal care systems. The integration project worked across SC's four Public Health Regions with a goal of identifying and expanding the oral health network. To mobilize and build capacity to address the identified needs of the target population, the Division of Oral Health (DOH) team partnered with the Community Systems Directors (CSDs) within the Public Health Regions to identify and expand the oral health network. They began by identifying partners who understood how to increase capacity within underserved areas through innovative partnerships. Two primary goals of the network approach are to:

- Expand the local/regional networks by identifying appropriate community organizations to collaborate with in order to improve access to preventive dental services for pregnant women and infants.

- Utilize the network to disseminate educational messages and resources on the safe and effective preventive care/services of pregnant women and infants to provider and community groups.

Social network analysis (SNA) was an essential component to the project. SNA examines the pattern of social relationships existing among a given set of actors, and the effect that network patterns may have on actor as well as network outcome. In our case, we used SNA to map the pattern of connections among Regional CSDs and local community agencies, and medical and dental providers. Regional representatives and CSDs were introduced to the network mapping aim of the program at multiple sessions. Discussions took place around the challenges and triumphs in CSD's efforts to build relationships with their local medical, dental, and community providers. As a result, the CSDs and their Regional Teams facilitated opportunities for dentists to learn about best practices for treating pregnant women and infants as well as having assisted primary care practices in acquiring the training and know-how to provide preventative oral health care for pregnant women and infants.

This included training in fluoride varnish application for providers serving infants 0-3. Survey results suggest that the PIOHQI initiative had important impacts on the networking capacity of Public Health Regions as illustrated by the increase in network size and their confidence in making connections and providing assistance to other organizations.

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?

South Carolina began to address Early Childhood Caries (ECC) in infants, young children and in children with special health care needs (CSHCN) in the early 2000s through support from the Robert Wood Johnson (RWJ) Foundation. The Division of Oral Health (DOH) in the Department of Health and Environmental Control (DHEC) led a team of community partners in six pilot counties in improving access to care for young children, parents and CSHCN. In 2010, the SC legislature recognized the importance of linking children to oral health care services and authorized the creation of a Community Oral Health Coordinator (COHC) position within DHEC. However, funds to support the position were not provided.

Despite the success of projects such as More Smiling Faces, the RWJ initiative, and key legislative activities, including support for the COHC, access to oral health care remains a significant problem in SC, particularly in rural areas and among pregnant women and young children. In 2009-2010, 46.2% of pregnant women in SC reported receiving no dental care while pregnant; less than 48% had received prenatal oral health counseling; and about 28% reported having dental problems during pregnancy. In 2014, out of the approximately 186,000 children aged 0 to 3 years old eligible for either Medicaid or SCHIP, only 27.5 % of these children received some type of dental service.

Access to oral health is a major determinant of oral health care utilization in low-income and rural areas of the state. To address the gaps of oral health care coverage across the state, SC has elected to support the provision of oral health care through private and non-profit providers, instead of providing oral health services directly to the public through health departments, the SC DHEC has elected to facilitate access to services through other providers. Nevertheless, little is known about the private and non-profit providers who are already providing or able to provide oral health care services to pregnant women, infants, and children across SC. In counties where oral health providers are few or none, there is the added need to leverage those medical providers present to assess the oral health status of pregnant women, infants, and children and refer them to oral health care professionals. Identifying whether channels of communication exist among medical and dental providers was seen as the first step to fostering greater communication and denser, more integrated referral networks.

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

Our implementation activities were guided by three sources of evidence:

(1) **Previous program successes**: First, our implementation of this activity was based on knowledge and experience that the DOH had acquired through multiple projects, which included the integration of oral health in the HRSA-funded Maternal, Infant and Early Childhood Home Visitation (MIECHV) program and the Centers for Medicare and Medicaid Services (CMS)-funded Quality through Technology and Innovation in Pediatrics (QTIP) project in South Carolina. These initiatives successfully integrated oral health into the home and medical setting using quality improvement strategies.

(2) **Utilization of Public Health Regions and Community System Directors:** The state of SC is divided into four Public Health Regions. As part of the project, two counties within each region were identified as being high need based on multiple criteria, which included overall birth rate, Medicaid-eligible birth rate, infant mortality, Health Professions Shortage Area (HPSA) designation priority scoring, statewide Emergency Department (ED) dental utilization, annual child visits to a dentist, access to Federally Qualified Health Centers (FQHCs), dental workforce accepting Medicaid reimbursement, availability and types of school clinics, and community water fluoridation. These criteria are contributing factors associated with unmet oral health needs and the barriers to access care for the MCH population. The Community System Directors (CSDs), who are located within the four Public Health Regions, were identified as key agents of change that might be incentivized to build and consolidate local networks of oral health care.

(3) **Network intervention design**: Recent research in SNA has highlighted the utility of network thinking and methodology in the design, implementation, and evaluation of interventions that promote inter-organizational relationships and collaboration. SNA provides a set of methods and tools for formally measuring the strength of social connections among organizations as well as the overall connectivity of a network. SNA does this by (i) defining the boundaries or criteria of membership in an inter-organizational network (i.e., who is in and who is out), (ii) identifying the salient relationships within a network (e.g., information sharing), (iii) surveying organizations about their relationship to each of the other network organizations, and (iv) compiling the survey responses into a data matrix in which the cell values in the matrix represent the presence or absence of a tie between any two organizations. Practitioners and stakeholders can use these data to understand the structure of a network (e.g., which organizations are more central or peripheral), identify those gaps in network connectivity that should be filled, surveil changes in the network over time, and examine whether changes in the network lead to changes in organizational outcomes.

Guided by these three sources of evidence, our program sought to: map the network of medical, dental and community stakeholders relevant to the provisioning of oral health care to pregnant women, infant and children; leverage CSDs within DHEC's four Health Regions to map and foster network connectivity; and evaluate whether program activities led to changes in network knowledge, connectivity, and regional capacity to develop local referral networks.

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

Capacity-building and other programmatic activities were initiated with the regional CSDs in the first months of the intervention with onsite orientation sessions in each of the four Public Health Regions, which were led by the DOH Director and the Network Liaison for the PIOHQI project. The objective of these sessions was to acquaint the CSDs and their staff with the goals and objectives of the project and to seek their buy in and input. These sessions took place in the fall of 2016.

Each CSD was asked to identify two or three individuals from the target counties to serve as PIOHQI Regional Team members. These individuals, along with the CSDs, were invited to participate in a day long learning collaborative held in February 2017. During this session, the team members were provided with information about perinatal and infant oral health, including preventive key messages, SC statistics and evidence-based interventions. The team members participated in the first network survey and in a brainstorming session to identify potential community partners, including medical and dental providers as well as community-based programs.

Subsequent support sessions for these PIOHQI Regional Teams were held via webinars and check-in conference calls. The original plan was to equip these regional teams to provide training to medical and dental providers as well as community program staff; however, as the DOH staff interacted with the regional teams, it was clear that the teams were not comfortable with addressing the clinical components of the provider trainings. With this revelation, a programmatic milestone occurred, and the regional teams were charged with recruiting providers to state level trainings that would be led by clinical staff members. These trainings included sessions held at the SC Dental Association conference in April 2017 and 2018 and at the SC Primary Healthcare Association Clinical Retreat held in June 2018. This adjustment allowed the regional teams to serve as liaisons and connectors to support the expansion of the Oral Health Networks within their communities. Despite this change of direction with providers, the PIOHQI teams took an active role in recruiting and training community-based program staff as well as instituting and integrating oral health internally within DHEC's infrastructure.

Network data have been collected with the SC Public Health Regions on three occasions over the current 30 months of the project:

1) October 2016
2) March 2017
3) June 2018
4) Forthcoming May 2019

Network data were collected with medical, dental, and community providers twice over the same period, with intervention process data on the effectiveness of training sessions collected on a continual basis.

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

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES

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

The success of the Oral Health Network (OHN) expansion activity depended upon how engaged the CSDs and their teams were in integrating and expanding oral health internally and externally. Leadership at the Agency level gave their support to the PIOHQI initiative by including an oral health objective that required the regional offices to include perinatal and infant oral health activities within their regional workplans. This helped communicate the importance of responding to oral health as part of their larger body of work at the regional level.

Additionally, the DOH team strengthened their existing partnerships with the SC Dental Association and the SC Primary Health Care Association to support the expansion of the OHN. Through these organizations, providers were trained in addressing the oral health needs of pregnant women and infants. The DOH team presented the PIOHQI information to the SC Birth Outcomes Initiative, a group of stakeholders seeking to improve birth outcomes, and the OB Task Force, an advisory group led by DHEC, that meets quarterly to improve the quality of care for mothers and babies. Leveraging these opportunities through existing partners expanded the reach of the project.

INPUTS	**PROGRAM ACTIVITIES**	OUTPUTS	OUTCOMES

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

Working through the CSDs was helpful as well in that turnover in these positions was minimal, whereas some of the identified regional team members did change over the time period of the project. Additionally, the PIOHQI regional teams were given some autonomy in regard to how they wanted to approach the project based on the needs and resources within their local communities. It was not a one size fits all approach. Each region could tailor its approach to maximize its strengths and respond to any weaknesses that existed in their team.

Regional trainings were undertaken with community system developers in three domains:

Oral health education and training: The CSDs and their regional team members were continually engaged in oral health message delivery and network engagement strategies. This took place through in-person meetings and through webinars led by the DOH staff. To facilitate provider recruitment into the Network, the DOH team developed and disseminated a Provider Recruitment Packet that included strategies to engage providers, address perinatal and infant oral health, deliver target messages, and promote available trainings. A brief interest survey was also included.

In an effort to clarify the community-based trainings that were offered to and through the regional teams, the DOH team created a system to designate trainings as Level 1, 2 or 3. The distinction was based largely on the audience. For example:

- In Level 1, team members were trained to provide brief and general oral health presentations to community-based coalitions and groups with a health focus or a connection to target populations including pregnant women and/or infants.

- In Level 2, the teams designated one or two staff members to serve as certified oral health trainers who participated in a more intense "train the trainer" session and were provided with the resources needed to conduct certified childcare trainings as outlined by state regulations. The audience for these trainings were childcare providers, Early Head Start and Head Start staff.

- The Level 3 trainings were for groups that had direct contact with clients including pregnant women and parents/caregivers of children 0-3. These groups included, but were not limited to, Palmetto Healthy Start, BabyNet, Nurse Family Partnership and all home visitation programs.

DHEC Regional Teams were responsible for making initial contact with the groups that existed within their local community; however, the DOH team was responsible for conducting the actual training. Rosters were used at all the Level 1-3 trainings to ensure that a link to a follow-up survey could be sent to all participants. This systematic approach to training and outreach helped to ensure effective message delivery and increase the successful expansion of the Oral Health Network.

Network mapping overview: Regional representatives and CSDs were introduced to the network mapping at multiple sessions. The aim of these presentations was to: increase the CSD understanding of why they were being asked to complete network surveys, thereby improving response rates and data quality; gain their buy-in as research interlocutors between the study team and local medical, dental, and community providers; and build enthusiasm for collecting network data from local providers.

Local networking activities: Time would be devoted at regional sessions for discussions on the challenges and triumphs in CSD efforts to build relationships with their local medical, dental, and community providers, and gain the buy-in of those providers in developing local referral systems and resources to address oral health in pregnant women, infants, and children.

INPUTS	PROGRAM ACTIVITIES	**OUTPUTS**	OUTCOMES

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.)

As a result of training and equipping the regions with supportive resources, the internal and external integration of oral health messages for pregnant women and infants targeted towards community-based groups, primary care provider practices and within public health settings took place within all four Public Health Regions. The PIOHQI regional teams facilitated opportunities for dentists to learn about best practices for treating pregnant women and infants, and they assisted primary care practices in acquiring the training and know-how to provide preventative oral health care for pregnant women and infants. Some specific outcomes included: training community agencies/organizations, Head Start programs, Newborn Home Visitation Staff, and dental and medical providers about oral health messages and best practices; successfully integrating Oral Health messages and education into Health Department clinical services; creating packets to distribute to mothers/caregivers in targeted counties through WIC programs; and delivering materials and resources to medical providers, dental providers, and community agencies/organizations to spread awareness and expand the Network.

Related specifically to the use of social network analysis and the network mapping of regional networks, we would highlight two main products or outputs:

1. **Network mapping tool/survey instrument**: Our network mapping tool was designed with three aims in mind: being respondent friendly, allowing the collection of valid and usable network data, and enabling assessment of changes in organizational perceptions of the Oral Health Network:

    a. First, to reduce respondent burden and improve response rates, we aimed to keep the time to complete the regional survey to 10-15 minutes; provider surveys were aimed at five minutes. While this limited the types of network data we could collect, it did ensure greater participation, particularly among the local providers.

b. Second, we designed the survey to be distributed online using Survey Monkey and to be completed by the respondents themselves. The network survey/ mapping tool thus consisted of questions and items falling into three main sections:
    i. The attributes of the agency or provider (such as location, number of staff)
    ii. Their network relationships and ties (quantity and quality of ties)
    iii. Their perceptions of oral health in SC, including the challenges that providers and clients face.

c. Third, since we have assessed the Networks of the SC Public Health Regions on multiple occasions over the course of the program, we have longitudinal data reflecting changes in regional Networks and their perceptions of the Network and oral health. This allows us to evaluate the degree to which the program may have altered local provider networks, helping to build referral networks and the capacity of the Health Regions to sustain program activities.

2. **Network profiles and maps**: The second product arising from our evaluation component of the PIOHQI grant were network maps indicating the structure of government and provider networks relevant to oral health care and the delivery of oral health to pregnant women, children and infants in SC. Network maps serve several purposes:
    a. First, the network maps graphically illustrate the patterns of ties existing among the provider community and relevant DHEC agencies. Knowing the pattern of ties reveals those providers and agencies that may play a more central role, those that tend to be more peripheral in the network, and the gaps in the referral networks.

    b. Second, the network maps provide a roadmap for the design and implementation of network interventions that can address the gaps in referral pathways, thereby improving women's and their children's access to oral health care.

    c. Third, because data were collected at multiple time points in the program, we were able to evaluate whether the PIOHQI-related Health Region activities altered the pattern of referral networks across SC.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	**OUTCOMES**

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:
    a. How outcomes are measured
    b. How often they are/were measured
    c. Data sources used
    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)

Final evaluations of program outcomes will be concluded at the program's end. For present purposes, we will discuss network-related changes resulting from the Public Health Region partnership and relationship building activities with local medical, dental, and community providers. Outcome data come from the baseline survey completed in October 2016 (Month 3) of the PIOHQI grant and June 2018 (beginning of Year 3). From the four Public Health regions, seven CSDs completed the network surveys on the two occasions. In these analyses, we used paired sample t-tests to examine whether there were changes from Year 1 to the beginning of Year 3 of the program.

Network building activities: Public Health Regions identified 5.5 potential partners on average in Year 1 and 18.8 potential partners at the beginning of Year 3. This represented an average increase of 13.3 partners over the period, which suggests an increase in the capacity of CSDs at Regional offices to scan and identify local dental, medical, and community providers in the field of oral health care. Of those identified as potential partners, CSDs reported having contacted an average of 11.5 partners. Of those contacted, CSDs reported having contacted an average of 4.5 partners specifically because of the PIOHQI grant. This last finding highlights two aspects of the Public Health Region-CSD partnership building process. First, CSDs leveraged previous relationships with providers to contact and spread information about oral health care for pregnant women, children, and infants. Second, it suggests that PIOHQI provided impetus for CSDs to contact certain providers that they may have not in the past.

Public Health Regions and CSD knowledge of oral health programs: We assessed the degree to which SC PIOHQI activities may have increased:

- CSD awareness and knowledge of oral health programs for pregnant women, infant, and children (5 items)
- Interest in programs related to oral health for pregnant women and children (5 items)
- Confidence in the ability of the PIOHQI system to change oral health care at the individual, organizational, and policy levels (6 items)
- Confidence in their own ability to develop and manage relationships with local community, dental, and medical providers (6 items)

The survey used a 5-point Likert scale to assess differences in responses, with the lowest scored item valued as a 0 and the "Don't Know" response category treated as the neutral response with score of 2. As a result, scores could range from 0-20 on the 5-item scales and 0-25 on the 6-item scales. Please see the *Network Mapping Survey* template in the Appendix.

Domain	No. Items	Likert Scale	Year 1 (average)	End Year 2 (average)	Significance level
Awareness and knowledge	5	5 pt. - Strongly Disagree to Strongly Agree, with Don't Know (range 0-20)	11.8	14.4	$p<0.05$
Interest in programs	5	5 pt. - Strongly Disagree to Strongly Agree, with Don't Know (range 0-20)	16.4	17.4	$p>0.05$
Confidence in PIOHQI	6	5 pt. - Not Confident to Very Confident, with Don't Know (range 0-25)	14.9	17.4	$p>0.05$
Confidence in own network building capacity	6	5 pt. - Not Confident to Very Confident, with Don't Know (range 0-25)	13.7	19.0	$p<0.05$

Paired samples t-tests showed significant improvements in two of the four areas. First, awareness and knowledge of PIOHQI programs and confidence increased from 11.8 to 14.4. Second, confidence in own organization also significantly increased from 13.7 to 19.0 from Year 1 to the beginning of Year 3. However, the program did not show significant increases in CSD interest in PIOHQI, with a change from 16.4 to 17.4. Although interest increased, this was not a significant increase, perhaps due to the already high levels of interest in place. Finally, there was an increase in CSD confidence in PIOHQI to affect multilevel change, but this was not a statistically significant increase: 14.9 to 17.4. However, CSDs did show themselves to have more confidence in PIOHQI's ability to increase oral health messaging to pregnant women and children but less or no confidence in making more systemic improvements.

In summary, our analyses suggest that PIOHQI had important impacts on the networking capacity of Public Health Regions as illustrated both by the increase in network size and their confidence in making connections and providing assistance to other organizations.

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

1. What is the annual budget for this activity?

   - $60,000

2. What are the costs associated with this activity?

   - $10,000 annually for regional activities and resources
   - $20,000 annually for network analysis activities
   - 30,000 annually for outreach, education and network expansion

3. How is the activity funded?

   - PIOHQI funds for the regions (non-salary) and PIOHQI funded Contracts for Network Analysis, Expansion and Education and Outreach

What is the plan for sustainability?

When the initiative was conceived, the decision was made to connect the budgetary support that would be provided to the regions towards resources rather than personnel. The reasoning behind this was long term sustainability in that the programmatic activities would not be tied to personnel, but to integrating and building up internal resources and knowledge to support the Oral Health Network even after the conclusion of the official funding. Steps have been taken to institutionalize oral health trainings within internal staff development, specifically within WIC and with the Postpartum Newborn Home Visitation program.

Network sustainability: The program included capacity-building activities in which Public Health Regions and CSDs would increase their knowledge, interest, and confidence in fostering the growth of local referral networks related to oral health care access for pregnant women, infants, and children. The two-year evaluation showed significant improvements in knowledge of oral health in pregnant women, infants and children and CSD confidence in their own capacity and ability to foster network growth. We will reassess these measures at the end of the three-year period. Moving forward, DOH will continue to monitor oral health referral networks at the Public Health Region level as part of other program activities, with built-in mechanisms in those programs for furthering the development of local referral networks with assistance through DHEC Regional Offices.

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?

Lessons learned in establishing Public Health Regionally-based Teams:

It was crucial to the long-term success of the project for the CSDs and their teams to be encouraged to be active participants in the design of the approach at the regional level. It was not a top-down initiative, but a team-based approach. The DOH team provided opportunities for dialogue and discussion regarding what was working and what needed to be altered or changed. For example, when the DOH team encountered the barrier of training providers through the regions, they responded with an alternative approach that enabled the Regional Team to act in the role of recruiter versus trainer. It was important to celebrate and acknowledge the successes achieved by the Regional Teams. A portion of the SC Oral Health Coalition's Annual Forum was set aside for the Regional Teams to showcase and present their successes and highlight the network expansion to oral health stakeholders from across the state who were in attendance. By engaging the Public Health Regionally-based Teams the oral health capacity at the Agency level increased significantly allowing for the programmatic spread of oral health education, resources and trainings.

Lessons learned in SNA:

Population parameters: Undertaking the mapping of the whole network required a census of members in that network. These listings can sometimes be incomplete, particularly at the local level where turnover, new openings and closings often create gaps in the listing. Snowball sampling, which involves asking one organization to name other organizations in the network and so on, is one approach to addressing the problem of an incomplete knowledge of potential network members. In hindsight, these methods could have been employed with CSDs sooner, so as to build a more complete listing of regional network members. Having a workable list from CSDs earlier in the grant period would have allowed network mapping to take place sooner and created additional opportunities to build the capacity of confidence of CSDs.

Network relationships: Given the novelty of network mapping among Public Health Regions, few were aware of network analysis methods and the utility that such maps might offer in practice. As a result, we had to limit the depth and breadth of the network relationships being mapped over the grant period. In more evolved networks, a range of network relationship types might be mapped, thereby giving a more comprehensive and in-depth picture of local and regional referral networks.

Localized mapping: Given the success seen in building CSD confidence in developing relationships with local dental, medical, and community providers, it may be fruitful to localize the network mapping so that CSDs could develop, maintain, and evaluate the evolution of their local referral networks independent of the main program team. This would involve more extensive training (and time) in network analysis methods as well as the creation of a local database for

maintaining this information. However, such localized network mapping resources would likely create additional CSD buy-in, contribute greatly to capacity building, and the further growth of local referral networks.

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

The main challenge that the network mapping faced was the survey response rates: As with survey methods in general, response rates, particularly from local providers, limited the overall comprehensiveness of the network maps. To improve response rates, we sought to maintain a brief, easy-to-access online network survey. Even though the provider survey was kept to five minutes, the challenge was to get respondents to open the survey, not to complete it once they had opened the survey.

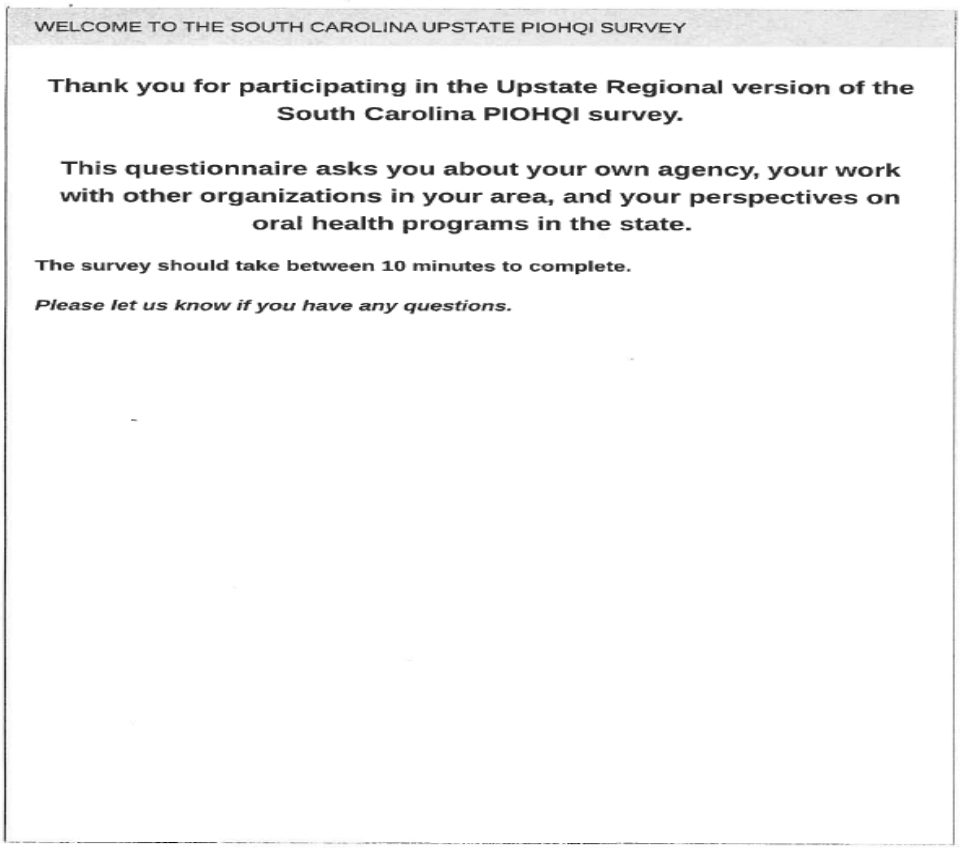
Once the referral network is evolved, future mapping and measurement activities might automate the network mapping through the recording of referral processes and the closure of referral loops. This would reduce the dependency on survey methods.

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. The following hyperlinked resources should be useful:

1) https://www.connectingsmilesc.org/dental-medical-providers/
2) https://www.connectingsmilesc.org/oral-health-and-pregnant-women/

Hyperlink resources if possible.

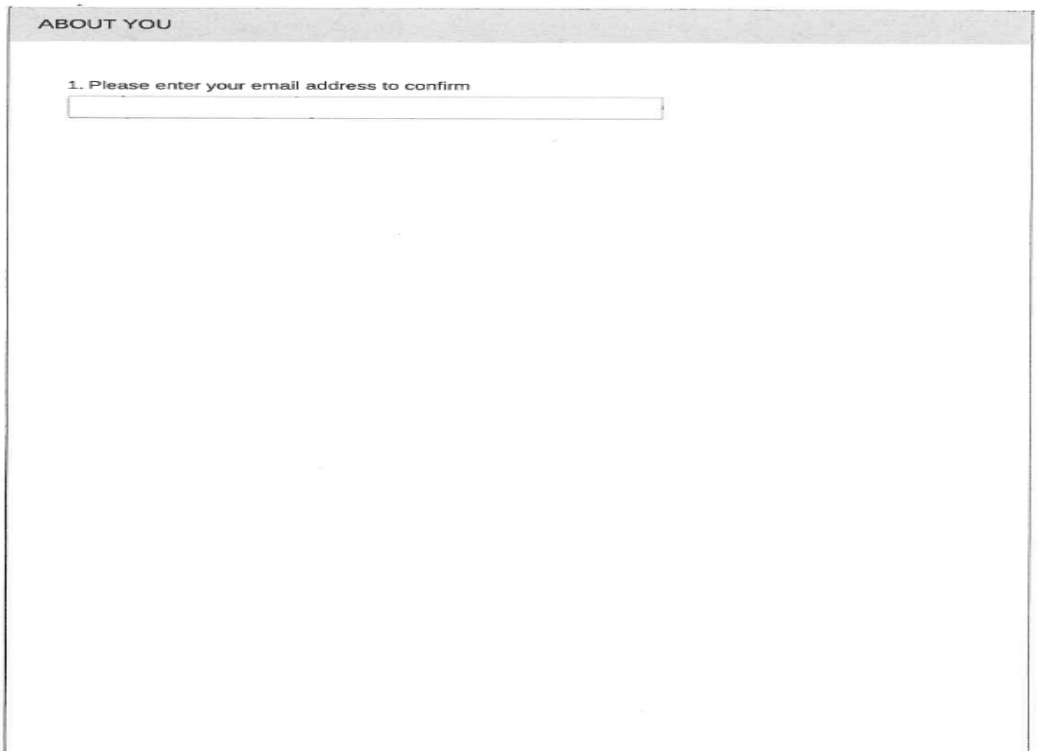

WELCOME TO THE SOUTH CAROLINA UPSTATE PIOHQI SURVEY

Thank you for participating in the Upstate Regional version of the South Carolina PIOHQI survey.

This questionnaire asks you about your own agency, your work with other organizations in your area, and your perspectives on oral health programs in the state.

The survey should take between 10 minutes to complete.

Please let us know if you have any questions.


ABOUT YOU
1. Please enter your email address to confirm

PROGRAM AWARENESS AND ADOPTION

For this section, please indicate how strongly you agree or disagree with statements about your awareness, interest and perceptions of perinatal and infant oral health care programs in South Carolina:

* 2. Awareness of programs

	Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know
a) I know what the perinatal and infant oral health needs are for our state.	○	○	○	○	○
b) I am aware of the oral health programs needed to address perinatal and infant oral health in SC.	○	○	○	○	○
c) I know the departments, centers, and providers in my area that offer perinatal and infant oral health programs and services.	○	○	○	○	○
d) I can distinguish between different preventative programs and services that address perinatal and infant oral health.	○	○	○	○	○
e) I am aware of the oral health messages delivered to pregnant women.	○	○	○	○	○

* 3. Interest in programs

	Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know
a) Providing perinatal and infant oral health programs and services would improve the oral health of pregnant mothers and their infants.	○	○	○	○	○
b) I am interested in learning more about perinatal and infant oral health promotion and disease prevention.	○	○	○	○	○
c) Offering perinatal and infant oral health programs and services would require complicated changes to our current offerings.	○	○	○	○	○
d) I am interested in more information on the time and energy commitments needed to promote perinatal and infant oral health.	○	○	○	○	○
e) Oral health messages to pregnant women and recent mothers will increase their use of perinatal and infant oral health services.	○	○	○	○	○

	When did you first contact or communicate with ...	Was this first contact made because of the PIOHQI Program?	Have you delivered a training session to this organization?
[redacted]			
[redacted]			
[redacted]			

Other (please specify)

5. When did you first contact or communication with each organization below?

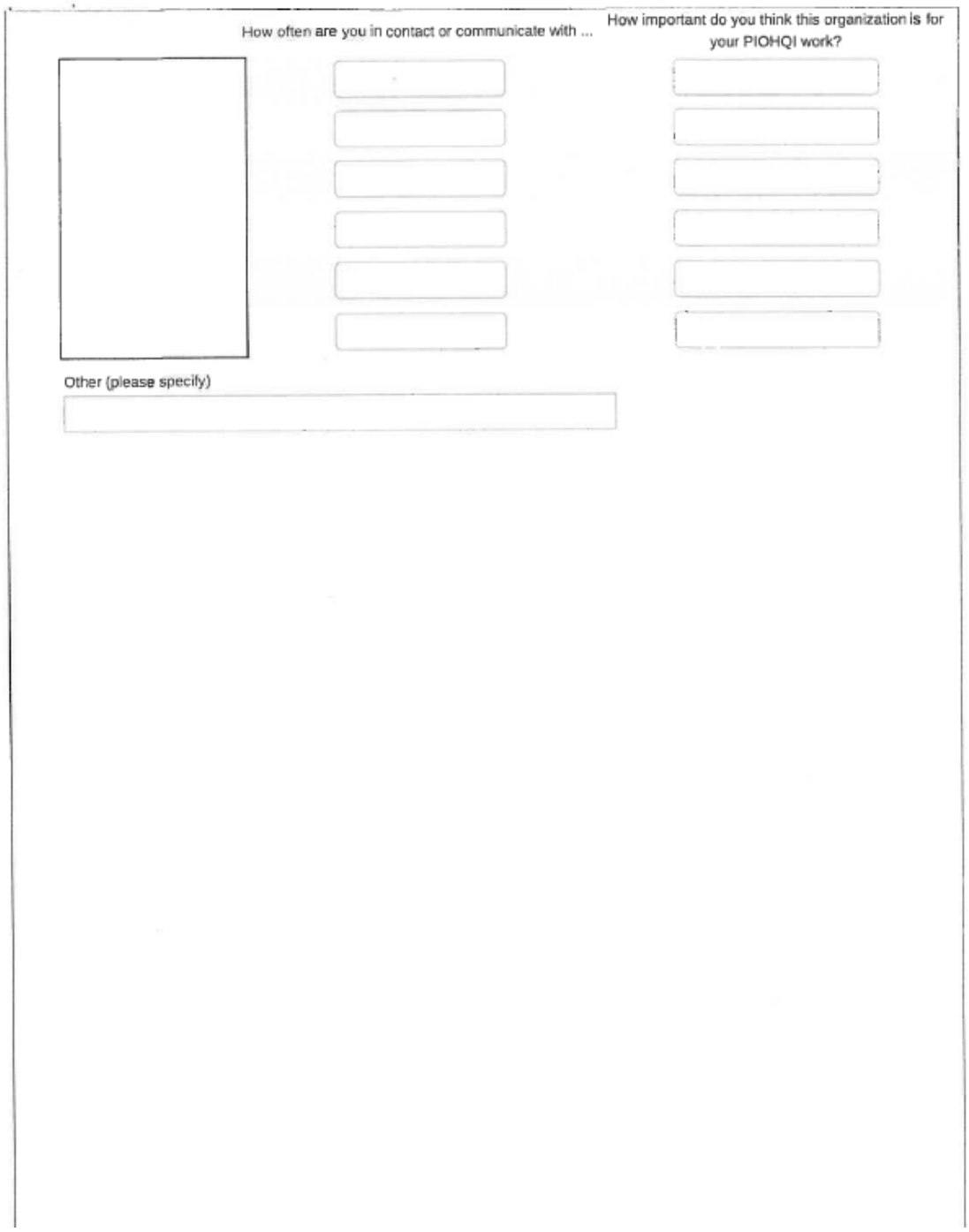
	How often are you in contact or communicate with ...	How important do you think this organization is for your PIOHQI work?

YOUR NETWORK

These next set of questions will ask you about the organizations and providers whom you have identified in your Regional Plan and other materials as important contacts for your PIOHQI work.

4. When did you first contact or communication with each organization below?

	When did you first contact or communicate with ...	Was this first contact made because of the PIOHQI Program?	Have you delivered a training session to this organization?


How often are you in contact or communicate with ...
How important do you think this organization is for your PIOHQI work?
Other (please specify)

YOUR NETWORK

These next set of questions will ask you about the organizations and providers whom you have identified as important contacts for your PIOHQI work.

6. Please list the names of any other organizations (specific names) that you have been in contact with about PIOHQI but were not on the list above.

1)
2)
3)
4)
5)

7. Please list the names of any other organizations (specific names) that you will be contacting about PIOHQI.

1)
2)
3)

PERCEPTIONS OF THE ORAL HEALTH CARE SYSTEM

For the following section of questions, please indicate the level of confidence that you have in the South Carolina Perinatal and Infant Oral Health Quality Improvement Program (PIOHQI) as a whole and then your own organization in particular to accomplish or meet the specific goals and objectives below:

* 8. How confident do you feel in PIOHQI's (i.e., the system as a whole) ability to...

	Not confident	Somewhat confident	Confident	Very confident	Don't know
a) increase the number of infants who receive preventive oral health care (eg., check ups, dental cleanings, fluoride varnish).	○	○	○	○	○
b) increase the number of women who receive oral health care during pregnancy.	○	○	○	○	○
c) increase the oral health messages delivered to pregnant women and infants.	○	○	○	○	○
d) develop, adopt, or improve operationalization of at least one pregnant woman-centered policy and/or practice.	○	○	○	○	○
e) revise the state's perinatal and early childhood health guidelines.	○	○	○	○	○
f) improve access to and utilization of preventive oral health care.	○	○	○	○	○

* 9. How confident do you feel in your particular organization's ability to…

	Not confident	Somewhat confident	Confident	Very confident	Don't know
a) perform the tasks that the organization is expected to accomplish as part of the PIOHQI program.	○	○	○	○	○
b) make connections to other organizations and agencies in the PIOHQI program.	○	○	○	○	○
c) provide assistance and information to other organizations and agencies in the area of PIOHQI.	○	○	○	○	○
d) acquire assistance and information from organizations and agencies in the area of PIOHQI.	○	○	○	○	○
e) perform networking and cooperative activities with other groups and other organizations.	○	○	○	○	○
f) manage any possible differences and disputes with other organizations that may arise in the PIOHQI program.	○	○	○	○	○

TO BE COMPLETED BY ASTDD	
Descriptive Report Number:	46003
Associated BPAR:	Perinatal BPAR
Submitted by:	South Carolina Division of Oral Health
Submission filename:	DES46002SCstatenetwrokperinatalinfantoh-2019
Submission date:	May 2019
Last reviewed:	May 2019
Last updated:	May 2019