



Dental Public Health Activity Descriptive Report Submission Form

The Best Practices Committee requests that you complete the Descriptive Report Submission Form as follow-up to acceptance of your State Activity Submission as an example of a best practice.

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

ASTDD Best Practices: [Strength of Evidence Supporting Best Practice Approaches](#)
Systematic vs. Narrative Reviews: <http://libguides.mssm.edu/c.php?g=168543&p=1107631>

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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Agency/Organization: North Carolina Division of Public Health-Oral Health Section

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SECTION I: ACTIVITY OVERVIEW

Title of the dental public health activity:

Frail Elderly Surveillance in Assisted Living Facilities

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

"X"	Assessment
x	1. Assess oral health status and implement an oral health surveillance system.
	2. Analyze determinants of oral health and respond to health hazards in the community
	3. Assess public perceptions about oral health issues and educate/empower them to achieve and maintain optimal oral health
Policy Development	
	4. Mobilize community partners to leverage resources and advocate for/act on oral health issues
x	5. Develop and implement policies and systematic plans that support state and community oral health efforts
Assurance	
x	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"	<u>Healthy People 2020 Oral Health Objectives</u>
	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
x	OH-3 Reduce the proportion of adults with untreated dental decay
x	OH-4 Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
x	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
	OH-10 Increase the proportion of local health departments and Federally Qualified Health Centers (FQHCs) that have an oral health component

	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:

Surveillance, older adult oral health, basic screening survey, oral health survey, frail elderly, older adult BSS, acquiring oral health data

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.

Americans are living longer, which increases their likelihood of experiencing dental disease. The elderly population presents very unique challenges to dental disease prevention and control. However, lack of data relevant to this particular population presents a challenge for public health and health care practitioners to accurately determine oral health needs and devise effective strategies to address them.

Between August 2015 and February 2016, the North Carolina Oral Health Section (OHS) conducted its first statewide oral health assessment of adults residing in licensed assisted living facilities using the Association of State and Territorial Dental Directors' (ASTDD) Basic Screening Survey (BSS) methodology. The sample was comprised of 40 randomly selected facilities with a convenience sample of 854 residents. The study successfully established a baseline oral health status for this population and determined whether oral health varied by age, gender, race and ethnicity, date of admission, Medicaid enrollment status, and size and location of facility. This study served as a critical part of the state's new *Special Care in Dentistry* Program to develop an oral health promotion and disease prevention initiative for North Carolina's institutionalized adults. Associations between oral health and geographic location, size and quality rating of facilities may help direct efforts as we target those with the most need.

Soliciting facilities for participation in the survey required time and persistence due to high facility staff turnover and the perception that our visits were of a regulatory nature. Due to varying cognitive function, consent forms and coordination with the facilities were critical in obtaining the residents' demographic information. Screeners and recorders were trained, but not calibrated, on the oral health indicators of the survey. Lastly, not all facility residents are "older adults";

inclusion/exclusion criteria will be necessary if seniors are truly the focus of any future surveillance activities.

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?

In 2010, the state legislature charged a Special Care Dentistry Advisory Group to examine the current dental care options for populations requiring special care dentistry and provide suggestions for ways to improve the availability of services to those needing such dental services. The group developed a comprehensive report with sixteen recommendations, one of which called for a health services research agenda for persons with disabilities. A lack of information about the oral health status of residents in nursing and assisted living facilities was specifically identified within this recommendation. In response to the recommendation, the OHS conducted the Older Adult Basic Screening Survey.

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

In the 2000 *Oral Health in America: A Report of the Surgeon's General*, 1.65 million people age 65 and older were reported as living in a long-term care facilities where dental care was problematic. According to the North Carolina State Center for Health Statistics, by 2018, citizens age 60 and older will outnumber those ages 0-17. Additionally, there will be an increase among the frail elderly age 85 and older, which will surpass 400,000 by 2033. As people live longer, remain healthier longer, and are retaining natural teeth longer, the demand for dental services will continue to increase for this population.

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

This cross sectional descriptive epidemiologic survey was conducted between August 2015 and February 2016.

July 2015

- Screeners trained using the ASTDD BSS for Older Adult video and PowerPoint presentation
- Letter requesting survey participation sent to randomly selected facilities

August 2015

- Screenings began; screeners participated in a pilot screening at one of the sample facilities
- Ongoing scheduling of sample facilities

February 2016

- Screenings completed

June 2016

- Data analysis completed

- Summary findings submitted to ASTDD using customized version of the National Oral Health Surveillance System (NOHSS) data submission form.
- Final report written, but not publicized

Next Steps

- Submit final report for journal publication
- Post summary of findings and full report to OHS website

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

- Collaboration with 40 North Carolina licensed Assisted Living Facilities
- NC Oral Health Section staff:
 - 6 screeners – 2 dentists, 4 public health hygienists
 - 21 recorders – 18 public health hygienists, 2 Dental Public Health residents
 - 1 coordinator - dentist
- 854 Assisted Living Facility residents
- Technical assistance from ASTDD (sample selection and data analysis)

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

Data was collected via two survey questionnaires: screeners conducted a visual-only oral exam on each participant and completed a BSS form. An administrator from each facility completed a facility survey on facility demographics and oral health practices. Screenings were conducted onsite at each facility by licensed and trained OHS dentists and public health hygienists. Screener training consisted of a 30-minute video and PowerPoint presentation on BSS for Older Adults developed by ASTDD and a pilot screening of 35 residents at one of the randomly selected assisted living facilities. Each screener received a training manual complete with images and guidance for each oral health indicator. Participants were not formally recruited in advance, but rather facility staff announced screenings to residents and escorted those interested to the examination area. Written consent was required from each participant, or his/her legal guardian; verbal consent was noted for participants with poor dexterity. Each participant received written results of his/her screening, and the facilities were provided a list of residents requiring further dental evaluation and treatment. The survey was approved under expedited review (minimal risk to human subjects) by the North Carolina Division of Public Health Institutional Review Board.

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

This survey was North Carolina’s first statewide assessment of the oral health status of institutionalized adults and oral health care offered by the facilities in which they reside. The data highlighted the level of unmet dental needs in residential facilities, disparities *among* residents, as well as disparities between institutionalized and community-dwelling adults. The OHS will use this baseline data to inform a new statewide *Special Care Dentistry Program* for frail adults.

Key Findings

A final report was developed and will be submitted for journal publication. The report and a summary of findings will be posted to the OHS website by the end of 2017.

Objective 1 -Oral Health Status of Residents

- 49% untreated tooth decay
- 29% completely edentulous
- 50% lack functional posterior occlusion (dentate and edentulous residents; *functional* defined as premolar and/or molar occlusion on both sides)
- 11% dry mouth
- 6% soft tissue lesion
- 6% tooth mobility
- 8% pain
- **42% required dental care**

Objective 2 - Facility Survey Response

- None of the facilities require a dental "clearance" or dental check-up before a resident enters the facility
- 38% of facility survey respondents were pleased with the dental care services offered by the facility for residents

Objective 3 – Possible associations

- Geographically, oral health status seemed to decline from west (Mountains) to east (Coastal Plains).
- Facilities with lower star ratings* had residents with poorer oral health

*N.C. has a Star Rated Certificate program which is administered by the N.C. Division of Health Service Regulation. The program became effective in January 2009 issuing licenses, conducting annual inspections, and responding to complaints within the assisted living facility (known as adult care homes in N.C.) participating within this survey.

INPUTS	PROGRAM ACTIVITIES	OUTPUTS	OUTCOMES
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4. What outcomes did the program achieve? (e.g., health statuses, knowledge, behavior, care delivery system, impact on target population, etc.) Please include the following aspects:
- 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)
- a) The primary outcome of this activity was the successful completion of the survey as originally designed. Data was maintained and analyzed using Epi Info™ 7.1.5 (CDC). Summary descriptive statistics of oral health conditions among the sample population were produced, including an assessment for any significant differences within select demographic variables.
 - b) This was the first time conducting this survey, but it is intended to be conducted once every 5 years.
 - c) This activity entailed primary data collection. No other data sources were used. However, the ASTDD Older Adult BSS Toolkit was used for planning and implementation of the activity.
 - d) Outcomes
 - a. **Short-term outcomes:** This survey itself is a short-term outcome of the OHS surveillance plan; it can be planned and completed within 1 year. Through this survey, positive relationships with facilities have been established, as well as increased interest in the oral health of residents.

- b. **Intermediate-term outcomes:** The data collected from the survey is being used to guide the development of a new *Special Care Dentistry Program* over the next three years. Currently, the program seeks to train residential facility staff to provide appropriate mouth care to residents.
- c. **Long-term outcomes:** The long-term impact of the *Special Care Dentistry Program* would be the improved oral health status of residents, which would be evaluated every 5 years when the survey is administered. Ultimately by working collaboratively with facilities, other stakeholders, and policymakers, the OHS hopes to achieve policy change that will

Budgetary Information:

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

1. What is the annual budget for this activity?

No budget was established for this inaugural surveillance activity.

2. What are the costs associated with the activity? (Including staffing, materials, equipment, etc.)

Total estimated cost: \$75,000

- Salaries (based on time spent during 8-month period; benefits excluded)
 - Coordinator (dentist) - \$17,000
 - Screeners & Recorders (dentists, hygienists, dental public health (DPH) residents) - \$43,000
 - Data entry/analysis (DPH residents) - \$8,000
- Mileage reimbursement - \$6,000
- Screening supplies and incentives - \$1,000
 - 6 boxes of masks, 40 boxes of gloves, 6 hand sanitizers, 900 table drapes, 900 tongue blades, 6 pen lights, 20 rolls paper towel; 900 goodie bags, 600 toothbrushes & 500 denture brushes

3. How is the activity funded?

The project was funded from the OHS annual operating budget (approximately \$4.6 million). No grant funds or special appropriations from the legislature were sought/used for this activity. In 2015, OHS reorganized to achieve greater field staff efficiency and broader reach into new populations. This change meant staff no longer focused 100% of their time on the school-age population, but now split that time between frail adults and children. Hence, this surveillance activity was budget-neutral.

4. What is the plan for sustainability?

The survey will be conducted every 5 years and funded from the annual operating budget.

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?

- Utilize your “state authority” cautiously. Facilities are typically leery of any request from a government agency as they perceive it as being regulatory, and potentially punitive, in nature.
- Facility staff turnover can be high. Communicating effectively and establishing rapport with key employees of the facilities was critical to scheduling screenings. Being persistent and communicating the importance of the survey to public health is part of that process. Keep thorough records of all communications with the facilities.
- Calibrate screeners to ensure inter- and intra-examiner reliability and the quality of the data collected.

- Test-run any survey forms prior to use to ensure the flow of items is practical and that the questions actually solicit the level of information desired from respondents.
- List all resident demographic information to be collected on the consent form. Diminished cognitive function is an issue for many residents and facilities are unlikely to share demographic information without resident or guardian consent. Let the facilities know in advance that this information may be requested of them.

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

- To address examiner reliability and data quality issues, we occasionally sent email reminders to staff, concisely explaining the criteria for the oral health indicators and/or reminding them to be sure to answer all items on the survey.
- All other challenges encounter and solutions are as listed above, with the exception of pre-testing the survey forms; the forms could not be changed once screenings began.

Available Information Resources:

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

- SEE ATTACHMENTS A and B

TO BE COMPLETED BY ASTDD	
Descriptive Report Number:	36007
Associated BPAR:	State-based Oral Health Surveillance Systems
Submitted by:	North Carolina Division of Public Health-Oral Health Section
Submission filename:	DES36007NColderadultsurveillance-2017
Submission date:	May 2017
Last reviewed:	May 2017
Last updated:	May 2017

Adult Oral Health Screening Form
Recommended and Optional Indicators

SITE INFORMATION					
Site ID Code		Screen Date		Screener ID Code	
□□□		□□/□□/□□		□□	
DEMOGRAPHIC INFORMATION					
Age		Gender	Race		Ethnicity
□□□		<input type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> White <input type="checkbox"/> Black <input type="checkbox"/> Asian		<input type="checkbox"/> American Indian <input type="checkbox"/> Pacific Islander <input type="checkbox"/> Unknown <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic
Date of Admission				Medicaid enrolled?	
Year	□□□□		Month	□□	
				<input type="checkbox"/> No <input type="checkbox"/> Yes	
ORAL SCREENING INFORMATION					
Functional Posterior Occlusal Contacts			Ask participant to remove partial/full dentures.		
<input type="checkbox"/> None <input type="checkbox"/> 1 side only <input type="checkbox"/> Both sides			Assess with removable dentures in place. <input type="checkbox"/> Unable to remove		
Substantial Oral Debris		Amount of Debris		Severe Gingival Inflammation	
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous		<input type="checkbox"/> Gingival 1/3 <input type="checkbox"/> Gingival 2/3 <input type="checkbox"/> Full		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous	
Do you have a removable upper denture?	If Yes →	Do you usually wear your upper denture when you eat?	Do you take your upper dentures out at night?	Are the removable upper dentures clean?	Are the removable upper dentures labeled?
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
Do you have a removable lower denture?	If Yes →	Do you usually wear your lower denture when you eat?	Do you take your lower dentures out at night?	Are the removable lower dentures clean?	Are the removable lower dentures labeled?
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown	<input type="checkbox"/> No <input type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> Yes
Remove excess oral debris if necessary.					
# of Upper Natural Teeth			# of Lower Natural Teeth		
□□	Range: 0-16	Include root fragments	□□	Range: 0-16	Include root fragments
Untreated Decay		Number of teeth		Root Fragments	
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous		□□		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous	
Obvious Tooth Mobility		Need for Periodontal Care			
<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous		<input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Edentulous			
Severe Dry Mouth			Suspicious Soft Tissue Lesion		Painful Reaction Noted
<input type="checkbox"/> No <input type="checkbox"/> Yes			<input type="checkbox"/> No <input type="checkbox"/> Yes		<input type="checkbox"/> No <input type="checkbox"/> Yes
Treatment Urgency			Comments:		
<input type="checkbox"/> No obvious problem – next scheduled visit <input type="checkbox"/> Early care – within next several weeks <input type="checkbox"/> Urgent Care – within next week – pain or infection					

Attachment B

Facility Survey for Adult Oral Health Screening

Write the number in the square associated with the answer.

SITE INFORMATION		
Site ID Code <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Name of person completing the survey. Please print. Name: Title:	Number of licensed beds in your facility? Are you pleased with your dental care services? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Other, explain _____
SURVEY INFORMATION		
Does your facility require residents to have a dental "clearance" (a check-up by a dentist) before entering the facility? <input type="checkbox"/> No <input type="checkbox"/> Yes	On average how many residents are seen when the dentist comes to your facility? Record a number. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
In the last year, how many residents have the facility transported to the dentist? Record a number. <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	How many times has the dentist been to the facility the last year? <input type="checkbox"/> Never <input type="checkbox"/> Monthly <input type="checkbox"/> Weekly <input type="checkbox"/> As needed	
Is there a dentist "on call" for emergencies? <input type="checkbox"/> No <input type="checkbox"/> Yes	What does your dentist do for your patients at your facility? <input type="checkbox"/> Screenings <input type="checkbox"/> Fillings <input type="checkbox"/> Prescriptions <input type="checkbox"/> Extractions <input type="checkbox"/> Treatment <input type="checkbox"/> Repair Dentures/ Partials <input type="checkbox"/> Exams <input type="checkbox"/> Emergencies <input type="checkbox"/> Cleanings	
When a resident has a dental need after business hours, who do staff contact to get care? <input type="checkbox"/> Nursing staff <input type="checkbox"/> Dentist <input type="checkbox"/> Doctor <input type="checkbox"/> Emergency Room <input type="checkbox"/> Other, please describe _____		
Does your facility assist residents with oral hygiene care (brushing and flossing)? <input type="checkbox"/> No <input type="checkbox"/> Yes	Who verifies that daily oral hygiene is complete? <input type="checkbox"/> Nursing Aide/Direct Care staff <input type="checkbox"/> Charge Nurse/Supervisor <input type="checkbox"/> Director of Nurse <input type="checkbox"/> Other, Explain _____	
How often does your facility assist residents with oral hygiene care? <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> As needed	Does your facility assist in making dental appointments for residents? <input type="checkbox"/> No <input type="checkbox"/> Yes	
Does your facility assist with travel to and from appointments? <input type="checkbox"/> No <input type="checkbox"/> Yes	Do family members: <input type="checkbox"/> make appointments for residents? <input type="checkbox"/> transport residents to dental appointments?	