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
Healthy Aging Includes a Healthy Mouth: Minnesota's First Basic Screening Survey for Older Adults

Executive Summary (250-word limit))

The Older Adult Basic Screening Survey (OABSS) is a population level surveillance tool developed by the Association of State & Territorial Dental Directors (ASTDD) to describe the oral health status of the older adult population at a single point in time. In 2016, the Minnesota Department of Health (MDH) Oral Health Program carried out the state's first OABSS.

Minnesota's sampling frame was licensed Medicaid/Medicare eligible nursing homes. ASTDD implicit stratified sampling methodology was applied to a list of 373 skilled nursing facilities using Area Agency on Aging (AAA) and Rural Urban Commuting Areas (designated as rural or urban area based on RUCA-zip code) as stratifying variables. MDH received IRB Approval, voluntary participation of nursing facilities and patient and/or guardian consent.

Licensed dental hygienists trained and calibrated in the use of the BSS instrument screened 1,032 adults aged 65+ in 31 skilled nursing facilities with 30 or more beds resulting in 944 analyzable surveys. The screeners collected all ASTDD recommended and optional oral health indicators including the presence of upper and lower denture, upper and lower denture use, presence of posterior occlusal contacts, debris, inflammation, number of upper and lower teeth, presence of root fragments, untreated decay, mobility, periodontal problems, dry mouth, soft tissue lesions, and treatment needs.

Data shows older adults in Minnesota nursing homes are in great need of dental care. The findings from this study are instrumental in developing policies and guidelines to better serve older adult populations in long-term care facilities in the state, as policy development is a core function of public health.

Name of Program or Organization Submitting Project

MDH Oral Health Program

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
	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

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

- Reduce the proportion of older adults with untreated root surface decay — OH04
- Reduce the proportion of adults aged 45 years and over who have lost all their teeth — OH05
- Reduce the proportion of adults aged 45 years and over with moderate and severe periodontitis — OH06

Keywords for sorting the project by topic.

Acquiring Oral Health Data; Use of Oral Health Data; Access to Care: Adults and Older Adults Services; Prevention: Adults and Older Adults Oral Health; Older Adult BSS, Long-term Care Facilities,

Detailed Project Description

Project Overview
(750-word limit)

Minnesota's older adult population is expected to double between 2010 and 2030. By then, 20% of Minnesotans will be 65 and older. With better oral hygiene education and practices, current and future older adults will keep their dentition longer than the generations before them. This growing population represents a potential increase in demand for dental services. This is the first time that a Basic Screening Survey (BSS) has been conducted for the older adult population in Minnesota. The goal was to assess the oral health status of this population throughout the state in order to better prepare to meet their needs.

Older adults are often at risk of limited access to oral health care because of lack of transportation, economic challenges, complex medical conditions, social isolation, and other individual and social factors. The oral health status of adults is important in that it can affect nutritional intake, overall physical health, and quality of life. Retirement for older adults often means loss of employer-paid dental insurance.

Minnesota Health Care Programs (MHCP: Medicaid) covers a limited number of dental procedures. Currently, the non-pregnant adult Medicaid fee for service (straight Medical Assistance) dental benefit is the same for all adults ages 21+. The non-pregnant adult benefit set is a limited benefit set at this time. All MHCP covered services must be medically necessary, appropriate, and the most cost-effective for the medical needs of the MHCP member. They have defined service limits or may require prior authorization. Some of the managed care Medicaid plans (MCO's) have some add on benefits for seniors.

Many older Americans take both prescription and over-the-counter drugs; many of these medications can cause dry mouth. Reduced saliva flow increases the risk of cavities. Being disabled, homebound, or institutionalized (e.g., seniors who live in nursing homes) also increases the risk of poor oral health. Mobility issues can make even simple brushing the teeth for two minutes twice a day challenging. With an impeded ability to provide themselves effective oral health routine, further problems can quickly appear.

Poor oral health has been proven to have close links to diabetes, heart disease, strokes, and even cancer, which highlights the huge significance of good oral health. Maintaining good oral health is a particular challenge for people with Alzheimer's and other related dementia. They may forget how to practice oral health self-care or resist help. Oral disease in older adults can not only amplify chronic and systemic health conditions but also impact daily life, including the ability to communicate, chew, and swallow—which can result in poor nutrition, isolation, pain, and lack of sleep, among other issues.

Prioritizing geriatric oral health is essential to prevent dental disease and expand access to dental care for Minnesota's underserved populations. The first steps in addressing the issue are to confirm its existence and quantify its extent. The premise of this project is that using a standardized protocol for collecting, analyzing, and reporting geriatric oral health data will inform policy decisions to move upstream for geriatric oral health and improve access to "dental homes."

This project leveraged the capacity of the state dental office to describe prevalence of disease and oral health disparity, supported coordinated oral health initiatives, and addressed access issues among older adults in the state. The target population includes older adults ages 65 years old and above living in long-term care facilities.

The goals of the project aimed to:

- Establish statewide baseline evidence and estimates of the oral health status in both community-based and long-term care facility for older adult populations,
- Identify and engage with experts and partners, convening an advisory group to adapt survey methodology developed by ASTDD to our state's needs,
- Develop a manual for conducting the survey, train relevant staff persons and establish a system that enables continued surveillance of this population, and
- Develop and implement a communications plan to disseminate findings of the survey extensively, hence, establishing a sound platform to initiate the discussion of oral health care for older adults in Minnesota.

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

Resources: It is critical to have a strong and supportive staffing unit as each member plays a crucial role in the project's success. The OABSS project involved a diverse team, including:

- Project & Field Coordinator responsible for overall coordination and data analysis,
- Recruitment and Scheduling Specialist ensuring logistical support,
- Prevention Coordinator focused on education,

- Survey Staff conducting surveys and education,
- Epidemiologist/Evaluator overseeing data collection and analysis,
- Communications Coordinator handling project communication,
- Administrative Support managing logistics, and
- Student Workers providing field support.

Data Collection: This survey used the ASTDD's Older Adult Basic Screening Survey 2010 for the 12 indicators measured. The seven recommended indicators included:

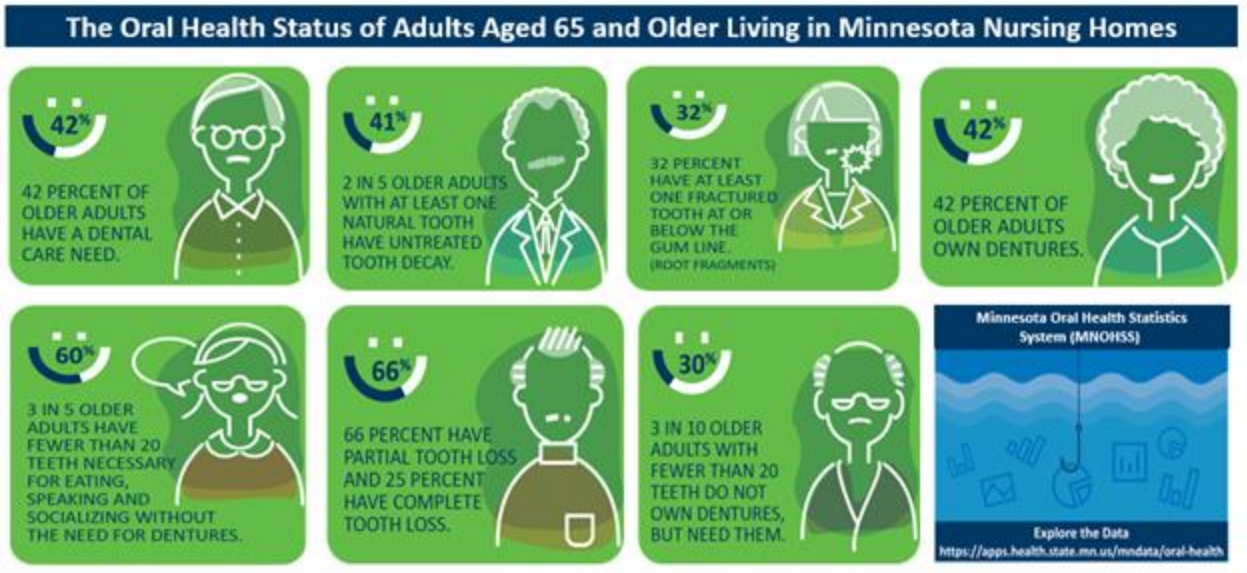
- Presence of upper and lower dentures and denture use,
- Number of natural teeth present in upper and lower arch,
- Presence of untreated decay,
- Presence of root fragments,
- Need for periodontal care,
- Suspicious soft issue lesions, and
- Urgency of need for dental care.

The five optional indicators measured:

- Functional posterior occlusal contacts,
- Oral debris,
- Severe gingival inflammation,
- Tooth mobility, and
- Severe dry mouth.

The OABSS describes the oral health status of the population versus individuals. It is used to find visible tooth lesions such as decay, does not utilize radiographs, is not a clinical examination and does not result in a diagnosis nor lead to a treatment plan. The unit of analysis is the facility, data is aggregated and can only be used to describe the status of the population of interest, such as older adults in long term care facilities. Before the study started, data collection staff participated in training and calibration exercises to assure inter-examiner reliability. Dental hygienists were trained to follow the same sequence and use the same criteria when collecting data on indicators.

Data: This survey used the ASTDD's Older Adult Basic Screening Survey 2010 for the 12 core and five optional indicators measures. Approximately 42% of older adults have a dental care need, and 60% have fewer than 20 teeth necessary to eat, speak, and socialize. About 30% of residents with fewer than 20 teeth do not own dentures but need them.



Impact: The data served many purposes. First, it described the disease burden among older adults in Minnesota's nursing homes. Second, it informed decision-makers about the disparities across gender and geographic designation. The data also educated the public about the importance of geriatric oral health and the value of prevention. Lastly, it persuaded the Minnesota public health leaders to consider moving upstream for geriatric oral health, promoting medical-dental integration, and brainstorming innovative policy levers to improve the availability, accessibility, and affordability of dental care.

Outcome: As a result of this survey, we have publicly available actionable data to guide dental public health policy. Summary data reports were shared via MDH communication channels. Data findings were presented at the National Oral Health Conference and statewide meetings of the Minnesota Dental Association, Minnesota Oral Health Coalition, Minnesota Board of Dentistry, Minnesota Dental and Association Minnesota Dental Services Advisory Committee (legislative committee), and Minnesota Department of Human Services.

Budget and Sustainability
(500-word limit)

Note: Charts and tables may be used.

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

The budget for the survey was $100,000. The breakdown includes personal, fringe benefits, travel, total direct costs, and indirect costs. MDH also utilizes additional in-kind funds.

Budget Breakdown	$100,000
A. Personnel	$ 55,861
B. Fringe Benefits	$ 17,764
C. Travel	$ 5,391
D. Equipment	$ -
E. Supplies	$ -
F. Contracts	$ -
G. Other	$ -
H. Total Direct	$ 81,900
I. Indirect	$ 18,100

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

The project was funded by Delta Dental of Minnesota Foundation and the Centers for Disease Control and Prevention Cooperative Agreement grant (DP13-1307).

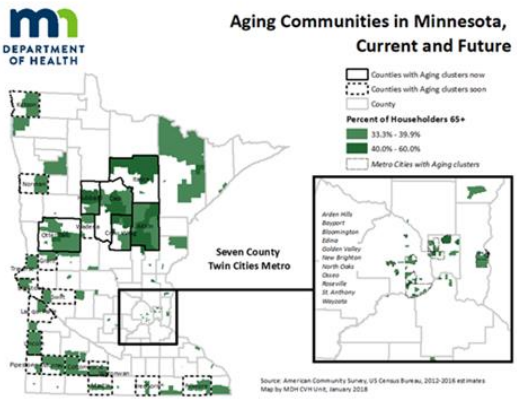
3. What is the sustainability plan for the project?

The MDH Oral Health Program has received a Health Resources and Services Administration (HRSA) grant to adapt and implement the Age-Friendly Health System 4M framework to improve geriatric oral health. We hope to leverage funds to continue the surveillance. Delta Dental of Minnesota Foundation has greatly supported BSS and is an integral partner in sustaining this effort. Additionally, we continue to collaborate with MDH's chronic disease programs, including the Building Our Largest Dementia (BOLD) program. There are ongoing conversations with MDH agency leaders about investing resources for oral health data collection. We have built momentum and have received support from MDH leadership, dental advisory groups, and our donors to continue the survey.

Lessons Learned
(750-word limit)

Our experience has reinforced the value of training/calibrating dental hygienists to assess the oral health status of older adults. Realizing that policymakers and stakeholders would benefit from this baseline data, we disseminated the information on the public-facing Minnesota Oral Health Statistics System (MNOHSS). We learned the BSS is a huge undertaking that requires substantial funding, technical expertise, and collaboration with the nursing homes.

A low proportion of Asian, African American, American Indian, Hispanic, Somali, Hmong, Karen, etc. residents in the sample did not allow for analysis of race and ethnicity. Furthermore, adults aging in place were excluded from the survey. This was an equity issue. Therefore, MDH Oral Health Program collaborated with a senior epidemiologist who had created a map of Naturally Occurring Retirement Communities (NORCs) using GIS and data from the Census and American Community Survey. We superimposed the NORCs on the Dental-Health Professional Areas (Dental-HPSA) map to identify older adults in these underserved non-institutionalized areas.



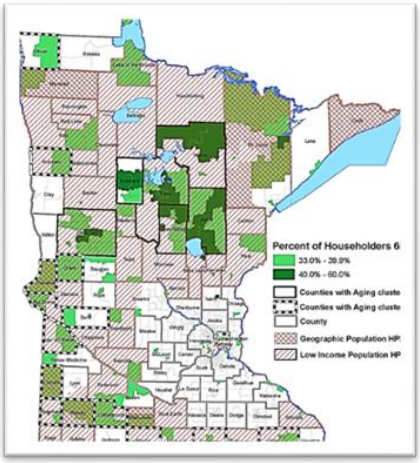


Figure 1: Naturally Occurring Retirement Community (NORC)
Figure 2: NORC superimposed on the Dental-Health Professional Shortage Areas (Dental-HPSA)

The NORCs and Dental-HPSAs can be used as a geographic framework to identify communities where 40% of householders are 65 and older. The map could be a proxy for oral health surveillance and resource dissemination. This data might help the MDH Oral Health Program conduct future surveys inclusive of older adults who choose to live in their communities, thus advancing equity in data collection and representation.

Resources

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

About the data BSS for older adults - MN Data (state.mn.us)
ASTDD Basic Screening Surveys

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