Dental Public Health Activity Descriptive Report

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SECTION I: PRACTICE OVERVIEW

Name of the Dental Public Health Activity: Maryland Pilot for Older Adult Basic Screening Survey

Public Health Functions:
Assessment – Use of Data
Policy Development – Collaboration and Partnership for Planning and Integration
Policy Development – Oral Health Program Policies
Policy Development – Use of State Oral Health Plan
Assurance – Building Linkages and Partnerships for Interventions

Healthy People 2020 Objectives:
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

State: MD	**Federal Region:**	**Key Words for Searches:** Older Adults, Older Adult BSS, Long-term care, data collection

Abstract:

The Maryland Office of Oral Health (OOH), in collaboration with the Maryland Department of Aging, conducted the Basic Screening Survey (BSS) of Older Adults in 2013/2014. The objective of this survey was to provide baseline data for surveillance of the oral health of the older adult population and to identify areas throughout the state where dental programs and treatment policies are needed. This activity addresses the Healthy People (HP) 2020 objectives of increasing oral health care access and improving frameworks to measure progress for health issues in specific populations by assessing the oral health status of older adults in Maryland, which will better enable the OOH to address the specific oral health needs of older adults and develop related programmatic and policy priorities.

Overall, a total of 994 older adults participated in the survey. While a representative sample was selected from long-term care facilities around the state, lack of participation from several sites made it difficult to provide statistically valid population estimates and variances. The breakdown of participants based on the type of long-term facilities is highlighted below.

Type of Facility	Number of Sites Visited	Number of Participants Surveyed
Senior Centers	24	302
Nutrition Sites	15	204
Assisted Living Sites	18	183
Nursing Homes	22	305
TOTAL	*79*	*994*

Methods
Four public health dental hygienists were hired and calibrated in September 2013 and the data collection process began in October 2013. A representative sample of older adults 50 years and older were selected from approximately 160 long-term care facilities (congregate meal sites, senior centers, nursing homes and assisted living facilities) around the state. A dental screening and health questionnaire was administered to adults in congregate meal sites and senior centers. Only the dental screening was administered to adults in nursing homes and assisted living facilities because of

the lack of cognitive ability within that population. An information packet was sent to each facility with introductory information, older adults' pamphlet, and a frequently asked questions flyer. Participants were given a summary of findings form and if necessary, information for additional treatment from public health dental clinics in the area
In this project, early care is defined as an individual who needs to seek treatment within the next several weeks; and urgent care is when an individual has pain or infection and needs to seek treatment within the next week.

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SECTION II: PRACTICE DESCRIPTION

History of the Practice:

The Office of Oral Health (OOH) has long realized the need to assess the status of older adults' oral health. For instance, the Maryland Oral Health Plan, a five-year (2011-2015) oral health roadmap for the state developed in collaboration with the Maryland Dental Action Coalition (MDAC) and other oral health stakeholders, identifies surveying the status of older adults' oral health as a key objective (Policy Development #5 above). The use of the BSS is also supported by the Centers for Disease Control and Prevention (CDC) who collaborated with the Association of State and Territorial Dental Directors (ASTDD) to develop the BSS. The primary purpose of the BSS is to provide state and local health jurisdictions with a consistent model for monitoring oral disease in a timely manner, at the lowest possible cost, with minimum burden on survey participants, and that will support comparisons within and between states.

It is essential that the OOH assess the status of oral health in older adults in Maryland in order to better address their specific oral health needs and develop related programmatic and policy priorities. The OOH, since 1995, successfully surveyed the status of children's oral health every 5 years. However, it is only recently that OOH developed the capacity and partnerships necessary (funding through the Maryland Department of Aging) to survey older adult through funding made possible by the National Association of Chronic Disease Directors (NACDD).

The Office of Oral Health (OOH) received grant funding from the National Association of Chronic Disease Directors to pilot a BSS for older adults. This project enabled the Office of Oral Health, for the first time, to assess the oral health needs of older adults and expand its oral health surveillance system in the process.

Justification of the Practice:

There are numerous barriers and challenges in this population's capability to access oral health care, including physical and cognitive disabilities, being homebound and/or chairbound, lack of accessible transportation, low income, and institutionalization. These same factors also increase the risk of poor oral health.[1,2] As individuals age, they may experience difficulties in performing routine oral hygiene activities, such as toothbrushing.[3] In addition, over 400 medications commonly used by older Americans can cause dry mouth, which increases the risk of oral disease. Saliva contains antimicrobial components as well as minerals that help rebuild tooth enamel attacked by decay-causing bacteria.[1]

It is imperative to quantify the specific oral health needs of this population in order to develop data driven programmatic and policy initiatives in Maryland. As the mouth is the entry way to the body,

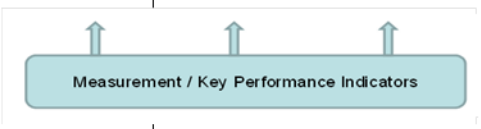
poor oral health can affect all facets of overall health. Missing teeth and even dentures can prompt individuals to choose softer foods which are easier to chew, but often are low in nutritional value.[1] Adults with poor oral health often report lower quality of life which may be attributed to oral pain, self-consciousness or embarrassment because of the condition of their mouth, teeth or dentures.[3]

Older adults are considered high-risk, partially because adult dental care is not covered by entitlement programs such as Medicare and Medicaid (in Maryland). Any costs incurred for oral health procedures are likely to come out of pocket or be paid by private health insurance. In Maryland, oral disease remains a problem for older adults; 58% of adults 55-64 and 72.4% 65+ reported having had any permanent teeth extracted and 13.6% of adults 65+ reported having all their natural teeth extracted.[4] Older adults who are economically disadvantaged, lack insurance, and are members of racial and ethnic minorities are disproportionately affected with the poorest oral health.[1] Nationally, among dentate adults aged 65 years and older, minorities were about half as likely to report a past-year dental visit and about twice as likely to have at least one tooth with a cavity in need of a restoration than were their nonminority counterparts—37% and 41%, respectively, for non-Hispanic Blacks and Mexican Americans versus 16% for non- Hispanic Whites.[3]

Until the completion of the older adult BSS, the focus in Maryland has primarily been on prevention and increasing access to care for children; he Older Adults BSS pilot project provided information that will enable OOH to tailor its education, and prevention programs to better address this population's oral health needs. The pilot process also informed the OOH's adoption of a streamlined approach to surveying adults and ultimately implementing a statewide BSS. This provided the necessary information to create and implement a strategic plan to improve access to clinical preventive and treatment services among older adults.

Inputs, Activities, Outputs and Outcomes of the Practice:

RESOURCES	ACTIVITIES	OUTPUTS	OUTCOMES	IMPACT
MOU with ASTDD ASTDD/CDC consultant (Mike Manz) ASTDD BSS planning and implementation packet (Manual, DVD, Survey, Questionnaire) Department of Aging List of nursing homes and congregate meal sites Staff Oral health high priority for Department Secretary Liaison with sites Leverage own funding Office of Oral Health Leverage own funding Staff • Epidemiologist • Evaluator • Survey staff - Dental Hygienists (2) Cancer and Chronic Disease Bureau Established consultation with states who have previously administered older adults BSS State Oral Health Coalition – MDAC Local health departments Federally Qualified Health Centers Dental professional associations	Develop BSS Work plan using ASTDD implementation packet Develop health care questionnaire Develop education materials/resource sheet for survey participants on oral health for older adults Create consent form Gain DHMH IRB approval Recruit and hire two dental hygienists Create training program for hygienists Purchase screening and survey equipment for hygienists Train and calibrate dental hygienists on survey procedures Select representative survey sample Coordinate logistics with survey sites (Schedule screenings, Informed consent) Conduct screenings /Administer questionnaire Collect and enter data in tracking system Analyze data Create older adult BSS final report Disseminate report to internal and external partners • Incorporate data into Maryland Office of Oral Health Burden Document of Oral Diseases • Submit data as part of the ASTDD State Oral Health Synopsis • Develop press release Participate in NACDD conference calls Host potential one-day in person site visit with NACDD Tentatively attend workshop (January 2014 in Atlanta) Incorporate Older Adult BSS a part of routine Office of Oral Health surveillance system Secure funding for subsequent Older Adult BSS	Receipt of oral screening and possible referral by surveyed older adults Dental Hygienist survey training Screening form/Questionnaire/ Consent form Information packet for older adults at survey sites Screening results sheet (provided to each site) Progress report Final Report (including lessons learned) Press release of findings Statewide presentations of findings	Greater knowledge of the current oral health care status of older adults in long term care facilities Greater awareness by external and internal partners and local media of the oral health needs of older adults Understanding of the feasibility of administering a statewide BSS based on pilot results Development of programmatic priorities and initiatives Expansion of the Maryland oral health surveillance system Satisfying an important objective of the state oral health plan	Ability to speak to programs and other initiatives related to older adults oral health Data available for grant writing/pursuing funding opportunities Streamlined approach to surveying older adults Implementation of education, prevention and treatment programs that adequately address older adults oral health needs



Budget Estimates and Formulas of the Practice:

Budget

The Older Adult Oral Health Survey was conducted as a pilot program in 2013-2014, jointly funded by the OOH and the Maryland Department of Aging. Categories A-C of the budget narrative were in-kind and completed by the OOH's epidemiologist. Therefore, personnel, fringe benefits, and consultant costs were not accrued. Long-term sustainability of funding for this activity may be difficult to demonstrate at this time due to a lack of supportive legislation.

Budget Narrative – Older Adult Oral Health Survey of Maryland, 2013 – 2014

A. PERSONNEL	
TOTAL PERSONNEL REQUESTED	$0
B. FRINGE BENEFITS	
TOTAL FRINGE BENEFITS REQUESTED	$0
C. CONSULTANT COSTS	
TOTAL CONSULTANT COSTS REQUESTED	$0
D. TRAVEL	
(Approx. 8,000 miles x .555 per mile)	
TOTAL TRAVEL REQUESTED	$4,400

In-State: Travel to long-term facilities, by registered dental hygienists (RDHs) performing the oral health screenings and health questionnaires of the Maryland older adult population participating in the project

E. EQUIPMENT

Gloves, masks, disposable mirrors, headlamps, wheeling carts, and dental equipment needed for conducting the oral health screenings. These items are related to all the project activities and responsibilities.	
TOTAL EQUIPMENT REQUESTED	$2,000

F. SUPPLIES

Materials, stationary, stamps, envelopes, toothbrushes, toothpaste and dental supplies are needed for conducting the oral health screenings. These supplies are related to all the project activities and responsibilities.	
TOTAL SUPPLIES REQUESTED	$500

G. CONTRACTUAL COSTS

Name of Organization:	University of Maryland Baltimore County / Maryland Institute for Policy Analysis and Research
Method of Selection:	Memorandum of Understanding
Period of Performance:	6-9 months
Amount of Award:	$49,248
Number of Awards:	4
Description of Activities:	Dental Hygienist I
During this project, the temporary contractual dental hygienists were properly trained by OOH to administer the Older Adult Oral Health Survey of Maryland, 2013 – 2014 at the designated sites. Afterwards, the dental hygienists provided assistance with data entry, collection, analysis, and preparation of the final report based on their experience in the field.	
Personnel:	

Four Dental Hygienist I (10-15 hours per week)	
Annual Salary	$10,000 x 4 =$ 40,000
Fringe on Dental Hygienists I (8% of salary)	$ 3,200
Indirect Costs @ 14%	$ 6,048
Subtotal of Four Dental Hygienist I	$ 49,248
TOTAL CONTRACTUAL COSTS REQUESTED	$ 49,248

H. OTHER CATEGORIES

Printing costs of oral health screening forms, health questionnaires, consent forms, and other related materials

TOTAL OTHER CATERGORIES REQUESTED	$ 2,500
I. INDIRECT COSTS	
TOTAL INDIRECT COSTS REQUESTED	$0
TOTAL DIRECT AND INDIRECT COSTS	$ 58,648

Note: Indirect costs are not available as OOH staff time was not tracked.

Lessons Learned and/or Plans for Improvement:

Staffing Issues

Three registered dental hygienists (RDHs) were initially contracted to perform the screening duties at the selected sites. A calibration was held prior to the initiation of the project to standardize treatment urgency indicators and screening procedure. The ASTDD Older Adults BSS video and PowerPoint presentation was used as part of the calibration process. Due to a variety of unforeseen circumstances both personal and professional, there was a high rate of RDH turnover (a total of 8 RDHs participated in the screening process over the course of the project), and the process of hiring and calibrating new RDHs in the midst of the project caused the timeline to be delayed. Two strategies can be implemented to avoid these staffing issues in the future: first, to assemble a larger team at the start of the project; and second, to hire RDHs with expressed interest in and experience working with the target population, to ensure a clear understanding of the unique challenges and requirements of working with older adults.

Site Non-Participation

While a representative sample was selected from long-term care facilities around the state, lack of participation from several sites made it difficult to provide statistically valid population estimates and variances. Therefore, the results presented provide information on the oral health status of the survey participants rather than a statewide estimate. Some non-participant sites were unresponsive to attempts to make contact, but the majority of non-participant sites were contacted but declined to participate. This issue may have been partially due to a gap in timing between initial contact (a letter sent out to all selected sites informing them of the project and indicating that a representative would be contacting them) and follow-up contact by the individual screeners to confirm participation and schedule a screening. Ensuring a shorter interval between initial and follow-up contact with potential participants could potentially increase the number of participant sites.

An additional issue involved the organization of the site sample. An initial sample, designed to be representative of the state overall, was selected, and individual sites were assigned to the RDH screeners based on regional divisions. The documentation of site assignments for each RDH was done using Microsoft Excel files, which each RDH would update with their progress in contacting sites and

scheduling screenings. The use of these Excel spreadsheets became a concern due to the high potential for error in manual entering of site information, and the need for constant updates between RDHs and OOH staff, which resulted in some disorganization of records. Future survey implementation should use a more efficient organizational tool, such as a Microsoft Access+ database, to track site sample information and progress.

Treatment Referrals

A third issue that arose over the course of this project was how to handle referrals for subjects who need early or urgent dental care. The terms of the survey prohibit the RDH screeners from administering any treatment to survey subjects due to Maryland's scope of practice definition. Following each individual screening, subjects were informed of their treatment urgency, and when appropriate (as in the case of a cognitively impaired subject) an administrator at the site facility was informed as well. Subjects and site administrators were provided with the Maryland Oral Health Resource Guide, which lists public health dental service providers across the state. However, there was no system in place for direct referrals to care or for follow-up contact with those subjects with early or urgent treatment needs. This raised an ethical dilemma for the dental professionals involved with the project, who feel a professional obligation to ensure that care is received by subjects who require it. A standard procedure for giving direct referrals and making follow-up contact with sites and subjects would be a valuable addition to the survey.

Available Information Resources:

Attached are the following resources:

- FAQ Brochure
- Health Questionnaire
- Screening Survey
- Oral Health for Seniors Brochure

SECTION III: PRACTICE EVALUATION INFORMATION

Impact/Effectiveness

How has the practice demonstrated impact, applicability, and benefits to the oral health care and well-being of certain populations or communities (i.e., reference scientific evidence, outcomes of the practice and/or evaluation results)?

The project has demonstrated the following impact:

- Ability to speak to other programs and other initiatives about older adults oral health in Maryland
- Data available for grant writing/pursuing funding opportunities
- Streamlined approach to surveying older adults
- Implementation of education, prevention and treatment programs that adequately address older adults oral health needs

Efficiency

How has the practice demonstrated cost and resource efficiency where expenses are appropriate to benefits? How has the practice demonstrated realistic and reasonable staffing and time requirements? Provide unit cost analysis or cost-benefit analysis if appropriate.

See Budget Section

Demonstrated Sustainability

How has the practice showed sustainable benefits and/or how has the practice been sustainable within populations/communities and between states/territories? What mechanisms have been built into the practice to assure sustainability?

One of the secondary purposes of the pilot program was to assess if the activity could be sustainable. However, more resources are needed for this to be repeated every 3-5 years (See Lessons Learned)

Collaboration/Integration

How has the practice built effective partnerships/collaborations among various organizations and integrated oral health with other health projects and issues? What are the traditional, non-traditional, public and private partnerships/collaborations established by the practice for integration, effectiveness, efficiency and sustainability?

In the past, the OOH has successfully secured several grants ranging in scope, length and amount. Recently, the OOH was awarded grant funding from the American Public Health Association (APHA) for one year to conduct an evaluation of the impact of the 2008 Maryland Public Health Dental Hygiene Act. Similar to the older adults BSS, the APHA evaluation required a temporary contractual hire. In addition, the OOH has conducted the "Survey of the Oral Health Status of Maryland Public School Children" three times within the last 10 years. As such, the OOH had the infrastructure (staff, interdepartmental partnerships) in place and relevant experience to complete the older adults' oral health pilot survey.

The OOH has engaged several partners to complete this survey. The partner's roles range from reviewing survey documents and protocols, to acting as liaisons to local survey sites. The partners and their project roles are outlined as follows:

The Maryland Department of Aging (MDoA) was a key partner in conducting the Maryland older adult BSS. It has long been a priority for the OOH and the MDoA to collaborate in learning more about older adults' oral health in order to better serve this population. The MDoA pledged $25,000 to the project and served as a liaison to Maryland's local Area Agencies on Aging (AAA). This was an integral step in ensuring the OOH can reach the target sample, in order to conduct a valid and reliable survey. In addition, the MDoA provide case management and health education resources to surveyed individuals who require additional oral health care.

The Department of Health of Mental Hygiene (DHMH), Office of Chronic Disease Prevention (OCDP) brings valuable experience in survey creation and implementation which will ensure the oral health survey is well planned and addresses specific needs of older adults. The Medical Director sits on the NACDD Board for the State of Maryland. She served on the advisory board to review and approve all survey related materials. Through her commitment to this project, OOH will gain extensive knowledge on both chronic disease surveillance and NACDD standards.

The Maryland State Dental Association (MSDA), the Maryland Dental Hygienists' Association (MDHA), and the Maryland Dental Action Coalition (MDAC) have long realized the need for older adults' oral health data, since oral health data drives the work of these professionals. All of these organizations brought their expertise in working with older adults to inform data collection methods.

Objectives/Rationale

How has the practice addressed HP 2020 objectives, met the National Call to Action to Promote Oral Health, and/or built basic infrastructure and capacity for state/territorial/community oral health programs?

The activity has addressed the following HP 2020 Objectives:

- Reduce the proportion of adults with untreated dental decay
- Reduce the proportion of adults who have ever had a permanent tooth extracted because of dental caries or periodontal disease
- Reduce the proportion of adults aged 45 to 74 years with moderate or severe periodontitis
- Increase the proportion of oral and pharyngeal cancers detected at the earliest stage

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