

Center *for* Rural Health



## Addressing Oral Health among Aging Rural Populations

National Rural Health Association, Annual Meeting  
May, 2018

Shawnda Schroeder, Ph.D.  
Research Assistant Professor

Nathan Fix, MPH  
Center for Rural Health



Center *for* Rural Health

- Established in 1980, at The University of North Dakota (UND) School of Medicine and Health Sciences in Grand Forks, ND
- One of the country's most experienced state rural health offices
- UND Center of Excellence in Research, Scholarship, and Creative Activity
- Home to seven national programs
- Recipient of the UND Award for Departmental Excellence in Research

#### **Focus on**

- Educating and Informing
- Policy
- Research and Evaluation
- Working with Communities
- American Indians
- Health Workforce
- Hospitals and Facilities

[ruralhealth.und.edu](http://ruralhealth.und.edu)

2

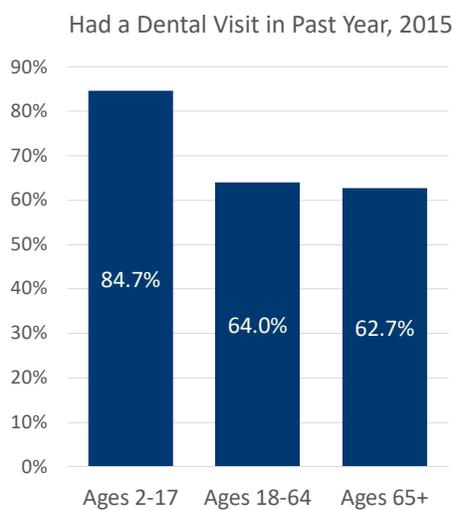
## Background

Center for Rural Health partnership and funding with the North Dakota Department of Health, Oral Health Program (2015)

- DentaQuest dollars
- Survey of long term care (LTC) facilities oral health policies and attitudes around dental care
- Pre/Post assessments for LTC facilities participating in mobile dental program

3

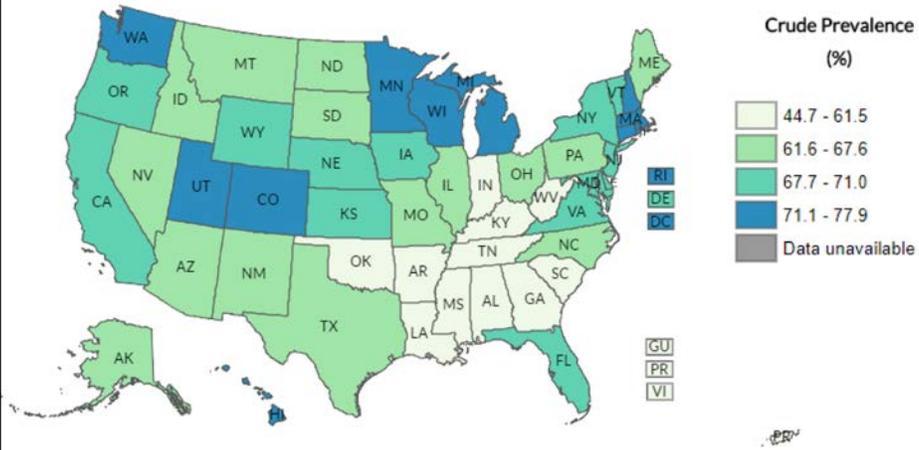
## Dental Visits for People 65 years of age and Older



- Roughly 1.4 million U.S. nursing home residents in 2014.
- People ages 65 or older make up 15% of the U.S. population (49.2 million people).

4

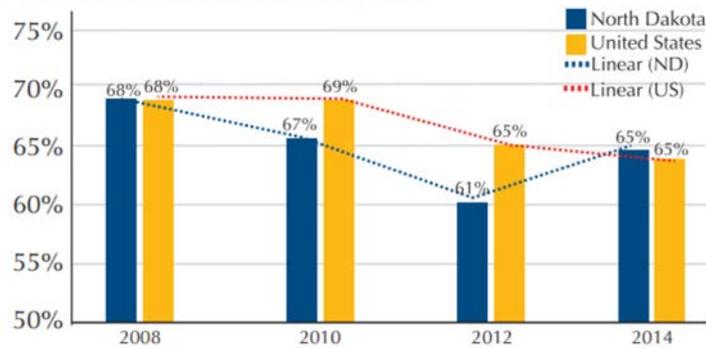
People ages 65+ with Dentist or Dental Clinic Visit in Past Year for any Reason, 2016



Data Source: Behavioral Risk Factor Surveillance System:  
[https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH\\_BRFSS.ExploreByTopic&irbLocationType=StatesAndMMSA&isClass=&isTopic=&isYear=&rdRnd=12272](https://nccd.cdc.gov/BRFSSPrevalence/rdPage.aspx?rdReport=DPH_BRFSS.ExploreByTopic&irbLocationType=StatesAndMMSA&isClass=&isTopic=&isYear=&rdRnd=12272)

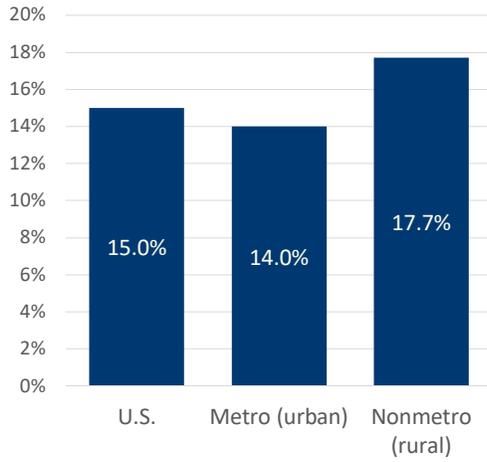
## North Dakota and the Nation

**Figure 1. Percentage of Elderly who Accessed Dental Care in the Past Year, 2008-2014**



## Rural Elderly

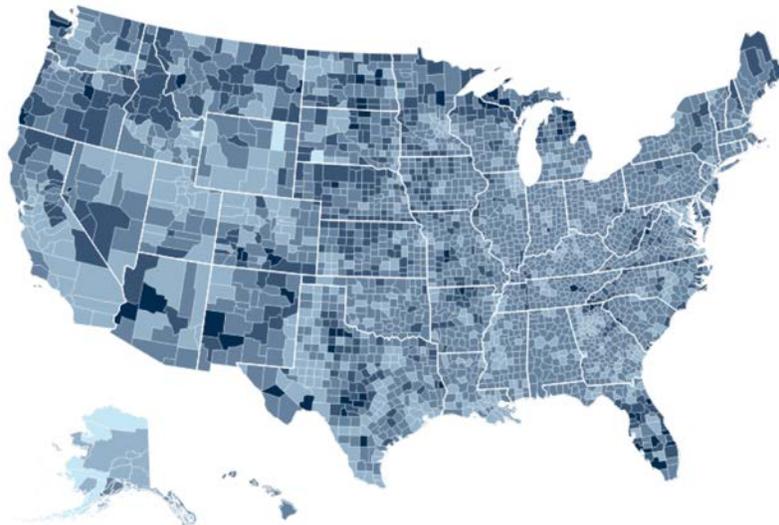
Percent of Population ages 65+ in 2016



In 2016, Nonmetro (rural) counties had a larger proportion of their overall population aged 65 and older.

7

Population 65 and Older - 2016



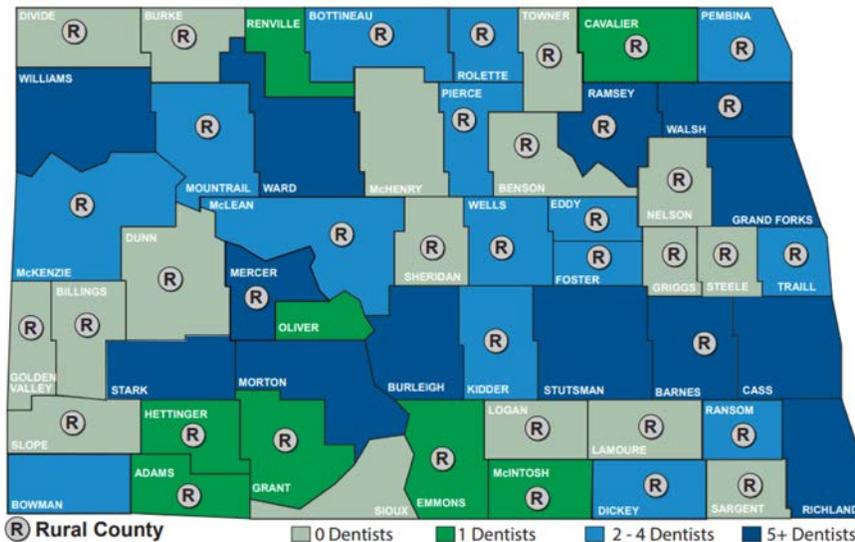
Source: US Census ACS, 2010 and 2016 5-year estimates

## Dental Care Access in Rural Communities

- As of December 2017, 62,916,553 people in the U.S. were living in Dental Health Provider Shortage Areas (HPSAs)
- In 2016 there were 60.9 dentists for every 100,000 people
- The dentist/100,000 pop. ratio ranged between 41.16 (Arkansas ) and 88.52 (District of Columbia)
- In North Dakota, each Dental HPSA was defined as a rural community by the U.S. Census Bureau

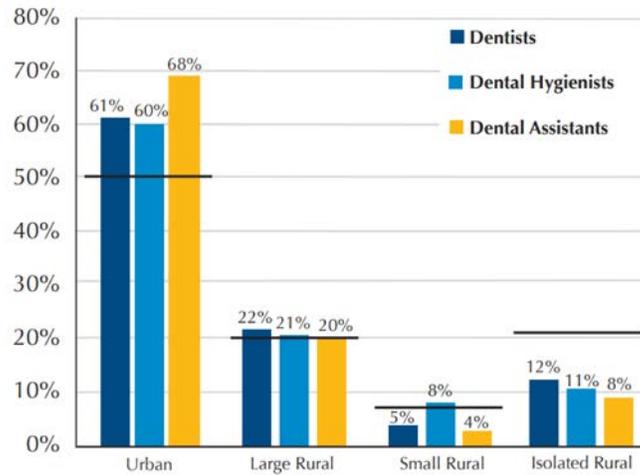
9

## North Dakota Dental Access, 2016



10

## North Dakota Dental Access, 2016



The black line ( - ) indicates the % of the state population within that geographic category

11

## Oral Health & Overall Health

Evidence suggests that poor oral health and gum disease are linked with increased hospitalizations, readmissions, respiratory infections, diabetes, dementia, poor nutrition, pneumonia, chronic obstructive pulmonary disease, and behavioral change in the elderly



## Oral Health & Overall Health

- Subjects with severe gum infection had a 4.3-times-higher risk of ischemic stroke (cerebral ischemia) than subjects with mild or without gum disease <sup>a</sup>
- People who had chronic gum inflammation for 10 or more years were 70% more likely than people without gum inflammation to develop Alzheimer's disease <sup>b</sup>
- The risk of pneumonia among LTC patients was significantly reduced among those receiving oral care. LTC residents receiving oral care had a rate of mortality due to pneumonia about half that of those residents not receiving oral care. <sup>c</sup>
- Among patients with chronic obstructive pulmonary disease (COPD), having fewer teeth, a high plaque index score, and low tooth-brushing times were all significantly associated with COPD exacerbations <sup>d</sup>

a. <http://stroke.ahajournals.org/content/35/2/4966>

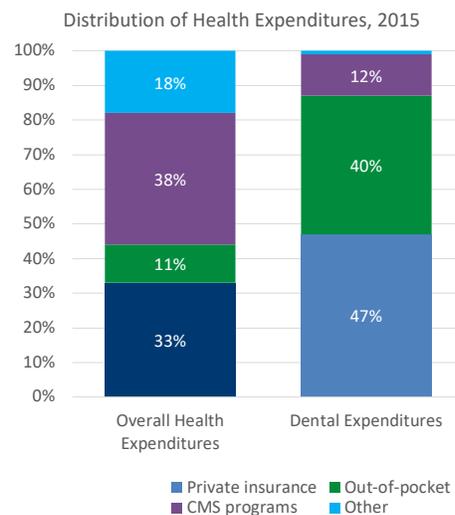
b. <https://alzres.biomedcentral.com/articles/10.1186/s13195-017-0282-6>

c. <http://onlinelibrary.wiley.com/doi/10.1046/j.1532-5415.2002.50106.x/full>

d. <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-051X.2011.01808.x/full>

## Dental Coverage for Nursing Home Residents

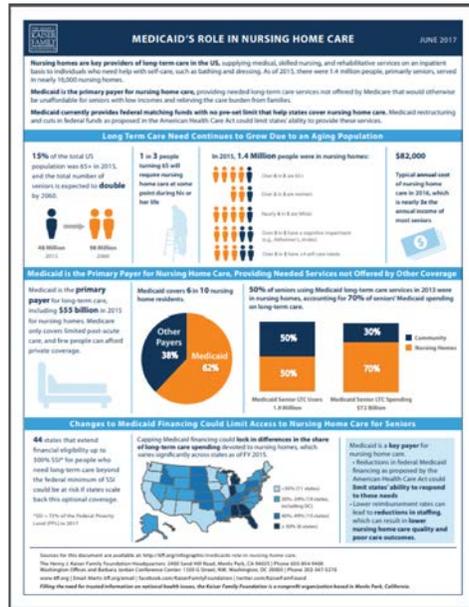
- Neither Medicare Part A nor Medicare Part B cover dental care, dental procedures, cleanings, fillings, tooth extractions, dentures, dental plates, or other dental devices.
- Services covered by Medicaid vary for each state.
- In 2015, CMS programs covered 38% of overall health expenditures and only 12% of dental expenditures.



## Medicaid and Long Term Care

- Roughly 64% of nursing home residents are covered by Medicaid
- Medicaid is the primary Payer for long term care
- [Dental Coverage for Nursing Home Residents](#)

<https://www.kff.org/infographic/medicaids-role-in-nursing-home-care/>

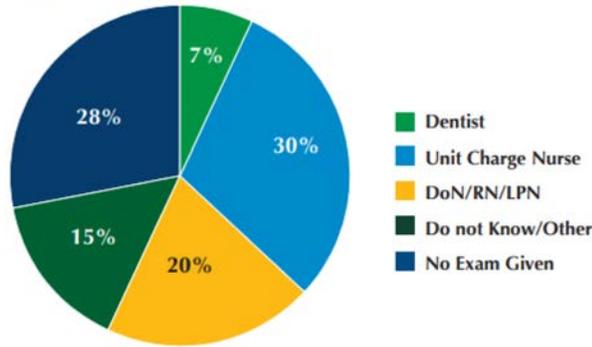


## Dental Care Provisions among North Dakota LTC Facilities

- Only 50% of facilities had a written plan of care for dental needs in place.
- Of the 23 with a written plan of care for dental needs in place, only 3 had had any dental professional assist or review said plan.
- Nursing facilities were more likely to have a plan of care for dental needs in place (57%) than basic care (25%).
- Nursing care facilities were more likely (87%) than basic care (50%) to offer oral health training to nursing and nurse aide staff.



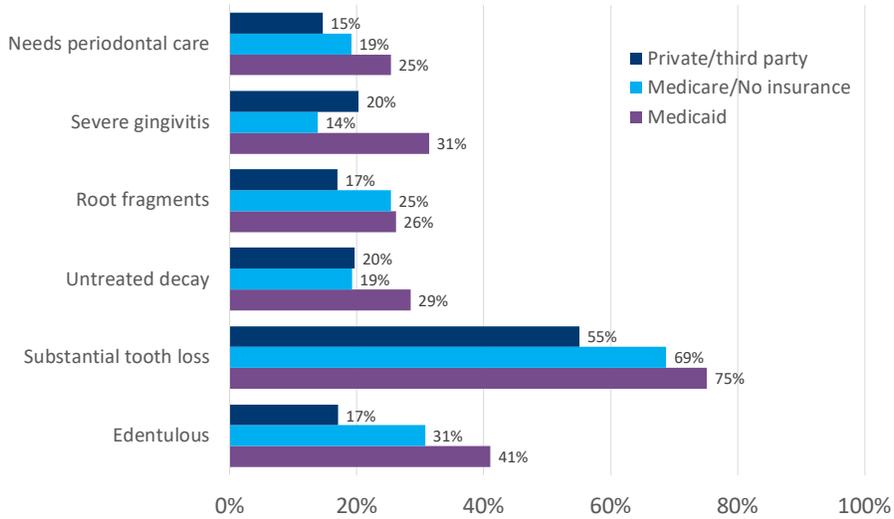
**Figure 1. Provider Responsible for Initial Oral Health Exam of New Residents**



More than a quarter of facilities indicate there was no initial dental exam, while only 7% indicated a dental provider was responsible.

Access this figure: <https://ruralhealth.und.edu/pdf/north-dakota-oral-health-long-term-care.pdf>  
 Access all reports here: <https://ruralhealth.und.edu/what-we-do/oral-health/publications>

**Oral Health among North Dakota Nursing Home Residents: Insurance Status, 2016**



Data provided by the North Dakota Department of Health Oral Health Program, Basic Screening Survey for Older Adults 2016

## Goal: Create a Standard Dental Screening Tool for Nursing Home Residents

- Funding: DentaQuest, North Dakota Department of Health, Oral Health Program
- Priority identified by the North Dakota Older Adult Oral Health Work Group
- Additional interest from:
  - North Dakota Long Term Care Association
  - North Dakota Dental Association
  - Bridging the Dental Gap

19

## Method and Approach

- Crosswalk of Items to Include in the Initial Dental Screen
  - Code of Federal Regulations (CFR) for nursing home care
  - CMS Minimum Data Set (MDS) Resident Assessment Instrument (RAI) 3.0
  - Basic Screening Survey for Older Adults recommended by the Association of State and Territorial Dental Directors
  - National and international templates/recommended best practices

20

Assessment Measures/Requirements	Resource/Citation
L. Any dental problems present in the 7-day look-back [see options below]	Section L: Oral Dental Status (CMS's RAI Version 3.0 Manual, page 406) <a href="https://downloads.cms.gov/files/MDS-30-RAI-Manual-V114-October-2016.pdf">https://downloads.cms.gov/files/MDS-30-RAI-Manual-V114-October-2016.pdf</a>
Broken or loosely fitting full or partial denture (chipped, cracked, uncleanable, or loose) [L0200A]	"
No natural teeth or tooth fragment(s) (edentulous) [L0200B]	"
Abnormal mouth tissues (ulcers, masses, oral lesions, including under denture or partial if one is worn) [L0200C]	"
Obvious or likely cavity or broken natural teeth [L0200D]	"
Inflamed or bleeding gums or loose natural teeth [L0200E]	"
Mouth or facial pain, discomfort or difficulty with chewing [L0200F]	"
Unable to examine [L0200G]	"
None of the above were present [L0200Z]	"
Is a Dental Care Area Assessment triggered? [L0200A-F]	L0200A-F triggers a dental CCADental Care Area Assessment CAA (Care area Triggers (CAT) Logic) - page 605
<b>COGNITIVE PROBLEMS-</b> Cognitive Problems that contribute to oral/dental problems	
Needs Reminders to clean Teeth	CMS's RAI Version 3.0 Manual: 15. Dental Care: Review of Indicators of Oral/Dental Condition/Problem [include all of the following in daily plan of care] - page 773
Cannot remember steps to complete oral hygiene	"
Decreased ability to understand others (B0800) or to perform tasks following demonstration	"
Cognitive deficit (C0500, C0700-C1000)	"
<b>FUNCTIONAL IMPAIRMENT</b> - Functional Impairment limiting ability to perform personal hygiene	

## Priority Items for the Screening Tool

Federal law (42 C.F.R. § 483.20) requires all nursing home facilities conduct an oral health assessment upon admission of a new resident, and periodically. Federal law also requires that long term care facilities:

- Obtain routine and emergency dental services from an outside resource to meet resident needs
- Assist residents with making appointments and arranging transportation, as requested
- Within 3 days, refer patients with lost or damaged dentures
- Assist residents in applying for dental service reimbursement

## Section L of the MDS 3.0 RAI

Effective October, 2017 nursing homes will record the following dental problems present in a 7-day look-back period:

- Broken or loosely fitting full or partial denture
- No natural teeth or tooth fragment(s)
- Abnormal mouth tissue (ulcers, masses, lesions)
- Obvious or likely cavity or broken natural teeth
- Inflamed or bleeding gums or loose natural teeth
- Mouth or facial pain or discomfort with chewing
- Unable to examine

For more information on MDS 3.0 RAI, access

<https://downloads.cms.gov/files/MDS-30-RAI-Manual-v115-October-2017.pdf>.

23

## Review of the Dental Screening Tool

- North Dakota Department of Health, Oral Health Program
- North Dakota Older Adult Oral Health Work Group
- North Dakota Dental Association, Board of Directors
- Focus Group Review

24

## Focus Group

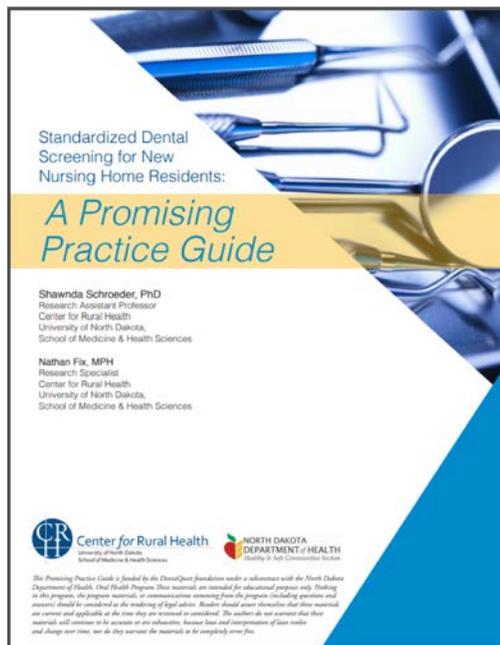
### Representation from:

- North Dakota Department of Health Oral Health Program
- Dental providers
- Director of Nursing from a rural nursing home
- Nursing home administrator
- North Dakota Department of Human Services (Medicaid)
- Bridging the Dental Gap (health center providing mobile dental care for nursing home facilities)

25

The *Standardized Dental Screening for New Nursing Home Residents: A Promising Practice Guide* may be found at:

<https://ruralhealth.und.edu/assets/1123-4538/standardized-dental-screening-for-new-nursing-home-residents.pdf>



## Promising Practice

A dental hygienist (DH) will complete the dental screen in the nursing home facility within 14 days of admission of a new resident (page one). The unit charge nurse will complete page two of the resident oral health screen and develop the daily dental care plan based off of the recommendations in the screening tool. The DH will provide the screening under general supervision of a dentist. The billing will occur under the supervising dentist. The DH will indicate that a dental exam is to be scheduled within 6 months of the screening with a practicing dentist (most likely the dentist supervising the care of the DH).

27

**Comprehensive Dental Screening Tool for New Nursing Home Residents**  
RESPONSIBILITY OF A DENTAL PROVIDER

Provider Name: \_\_\_\_\_ Date: \_\_\_\_\_

Dental visit type:  Admission  Annual  Other (reason): \_\_\_\_\_

**DENTAL STATUS**

Number of functional teeth: \_\_\_\_\_ Edematous (LO200B)  Yes  No

Mandibular denture present  Yes  No Root fragments  Yes  No

Mandibular denture present  Yes  No Severe gingival inflammation  Yes  No

Substantial oral debris, food impaction  Yes  No Calculus buildup  Yes  No

MARK ALL THAT APPLY (CMS's Resident Assessment Instrument (RAI) 3.0) CMS Code

Unable to examine LO200G

Broken or loosely fitting full or partial denture (chipped, cracked, uncleanable, loose) LO200A

Abnormal mouth tissues (ulcers, masses, oral lesions, including under denture or partial) LO200C

Obvious or likely cavity or broken natural teeth (unrestored decay) LO200D

Inflamed or bleeding gums or loose natural teeth LO200E

Mouth or facial pain, discomfort, or difficulty with chewing LO200F

None of the above were present LO200Z

Dental Care Area Assessment triggered (presence of LO200A-F)

**TREATMENT NEEDED**

No obvious problem (see next regular check within 6 months)

Dental care needed (buildup or decay without swelling or pain)

Urgent care (pain, infection, large decay, abscess or drainage)

Other treatment notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**DAILY ORAL CARE PLAN RECOMMENDATIONS**

Proxident

Chlorhexidine Mouthwash

**Denture cleaning, assistance level:**

Independent  Some assistance  Fully dependent

**Teeth cleaning, assistance level:**

Independent  Some assistance  Fully dependent

Other daily care notes: \_\_\_\_\_

\_\_\_\_\_

Dental provider signature: \_\_\_\_\_ Date: \_\_\_\_\_

A dental hygienist (DH) will complete the dental screen in the nursing home facility within 14 days of admission of a new resident (page one). The DH will provide the screening under general supervision of a dentist. The billing will occur under the supervising dentist.

  
Center for Rural Health  
University of North Dakota  
School of Medicine & Health Sciences

RESPONSIBILITY OF A UNIT CHARGE NURSE	
Name of resident's dentist/dental home: _____	Phone Number: _____
Date of last dental exam: _____	24-hour dental emergency contact, if available: _____
Dental intake screening completed <input type="checkbox"/> Yes <input type="checkbox"/> No	Next appointment, if treatment needed: _____
Referral made: <input type="checkbox"/> Yes <input type="checkbox"/> No	Provider: _____
Annual dental exam scheduled: <input type="checkbox"/> Yes <input type="checkbox"/> No	Date: _____
<b>COGNITIVE PROBLEMS: Cognitive problem(s) limiting ability to perform personal dental hygiene</b>	
<input type="checkbox"/> Needs Reminders to clean teeth/dentures	
<input type="checkbox"/> Cannot remember steps to complete oral hygiene	
<input type="checkbox"/> Decreased ability to understand others or to perform tasks following demonstration	
<b>FUNCTIONAL IMPAIRMENT: Functional impairment(s) limiting ability to perform personal dental hygiene</b>	
<input type="checkbox"/> Impaired hand dexterity	
<input type="checkbox"/> Decreased mobility	
<input type="checkbox"/> Limitation in upper extremity range of motion	
<input type="checkbox"/> Less of voluntary arm movement	
<input type="checkbox"/> Resists assistance with activities of daily living	
<input type="checkbox"/> Requires adaptive equipment for oral hygiene	
<b>DRY MOUTH: Causing buildup of oral bacteria</b> <input type="checkbox"/> Yes <input type="checkbox"/> No	
Medications (from MDS and medication administration record):	
<input type="checkbox"/> Antipsychotics	<input type="checkbox"/> Antidepressants
<input type="checkbox"/> Sedatives	<input type="checkbox"/> Antihypertensives
<input type="checkbox"/> Antinoplastic	<input type="checkbox"/> Antibiotamines
<input type="checkbox"/> Anxiolytics	<input type="checkbox"/> Anticonvulsants
<input type="checkbox"/> Antianxiety agents	<input type="checkbox"/> Diuretics
<input type="checkbox"/> Decongestants	<input type="checkbox"/> Antiemetics
<input type="checkbox"/> Narcotics	<input type="checkbox"/> Hypnotics
<b>DISEASES AND CONDITIONS: That which may be related to poor oral hygiene, oral infection</b>	
<input type="checkbox"/> Unstable diabetes related to oral infection	
<input type="checkbox"/> Poor nutrition	
<input type="checkbox"/> Recurrent pneumonia related to aspiration of saliva contaminated due to poor oral hygiene	
<input type="checkbox"/> Endocarditis related to oral infection	
<input type="checkbox"/> Sores in mouth related to poor-fitting dentures	
Daily Oral Care Plan Developed <input type="checkbox"/> Yes <input type="checkbox"/> No	
Oral Health Toolkit Prepared <input type="checkbox"/> Yes <input type="checkbox"/> No	
Supplies required in oral health toolkit are determined by the initial oral health screen, and may include:	
<input type="checkbox"/> Toothbrush	<input type="checkbox"/> Kidney dish
<input type="checkbox"/> Flow handle	<input type="checkbox"/> Floss
<input type="checkbox"/> Toothettes	<input type="checkbox"/> Denture cleaner
<input type="checkbox"/> Toothpaste	<input type="checkbox"/> Toothpick
<input type="checkbox"/> Facecloth	<input type="checkbox"/> Mouth prop
<input type="checkbox"/> Denture cup	<input type="checkbox"/> Proxabrush
<input type="checkbox"/> Denture brush	
<input type="checkbox"/> President	<input type="checkbox"/> Chlorhexidine Mouthwash
<input type="checkbox"/> Daily oral care plan	
Other notes: _____	
Unit charge nurse signature: _____ Date: _____	

The unit charge nurse will complete page two of the resident oral health screen and develop the daily dental care plan based off of the recommendations in the screening tool.



## Barriers

- Participation among dental providers
- Participation among nursing facilities
- Physical environment needed for dental screens
- Reimbursement
- Supervision laws
- Prescribing authority

## Solutions

- Dental provider education, referrals, opportunity
- Nursing home education
- State Medicaid programs – “Dental Screen” billing code
- Public health hygienists, preventive screen only

31

## Daily Oral Care Plans

Using the Completed Screening Tool, the unit charge nurse can develop the Daily Oral Care Plan. The plan should

- Indicate the resident’s ability to assist in his/her own dental hygiene.
- List all supplies included in the individual’s oral health toolkit.
- Track frequency of dental care needed and provided (e.g., number of times brushing per day).
- Provide a place for direct care providers to note any observed dental concerns.

32

## Oral Health Toolkit

Each resident should be supplied an oral health toolkit containing supplies needed to maintain good oral hygiene. Supplies required in a resident's oral health toolkit are determined by the initial oral health screen and may include:

- Toothbrush
- Kidney dish
- Floss handle
- Floss
- Toothettes
- Denture cleaner
- Toothpaste
- Facecloth
- Mouth prop
- Denture cup
- Proxabrush
- Denture brush
- Prevident
- Daily oral care plan
- Chlorhexidine Mouthwash

33

Center for Rural Health



## Contact us for more information!

Shawnda Schroeder

[Shawnda.Schroeder@med.und.edu](mailto:Shawnda.Schroeder@med.und.edu)

The full Promising Practice Guide may be found at:

<https://ruralhealth.und.edu/assets/1123-4538/standardized-dental-screening-for-new-nursing-home-residents.pdf>

501 North Columbia Road, Stop 9037  
Grand Forks, North Dakota 58202-9037  
[ruralhealth.und.edu/what-we-do/oral-health](http://ruralhealth.und.edu/what-we-do/oral-health)

