Center *for* Rural Health

# Oral Health Services and Barriers to Care in North Dakota Long Term Care Facilities: Chartbook

**2016**


**Project Completed by**

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The Center for Rural Health (CRH), established in 1980, is one the nation's most experienced organizations committed to providing leadership in rural health. Their mission is to connect resources and knowledge to strengthen the health of people in rural communities. The CRH serves as a resource to health care providers, health organizations, citizens, researchers, educators, and policymakers across the state of North Dakota and the nation. Activities are targeted toward identifying and researching rural health issues, analyzing health policy, strengthening local capabilities, developing community-based alternatives, and advocating for rural concerns. Although many specific activities constitute the agenda of the Center, four core areas serve as the focus, to include: (1) education and information dissemination; (2) program development and community assistance; (3) research; and (4) policy analysis. The CRH is also home to five national programs.

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## Executive Summary

In August 2015, the Center for Rural Health (CRH) was funded by the North Dakota Department of Health (DoH), Oral Health Program to study the current oral health services and barriers to care among North Dakota long term care (LTC) residents. The CRH was a subcontract under funding provided to the DoH by the DentaQuest Foundation. As part of this agreement, CRH researchers completed a survey of all basic and nursing care facilities to identify oral health policies and procedures as well as barriers to providing oral health services in LTC facilities. This chartbook presents the findings of this 2015 survey.

**Key Findings**

- 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.
- Facilities without identified training on oral health were less likely to identify resident oral health as a high or essential priority (40% of those without training offered; 80% of those with training).
- Half (50%) of basic care facilities indicated no dental exam was completed for a new resident upon admission.
- Only 14% of the long term care facilities had heard of the Smiles for Life Curriculum offered, at no cost, by the North Dakota Department of Health Oral Health Program.

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# Methods

In August 2015, the Center for Rural Health (CRH) was funded by the North Dakota Department of Health (DoH), Oral Health Program to study the current oral health services and barriers to care among North Dakota long term care (LTC) residents. The CRH was a subcontract under funding provided to the DoH by the DentaQuest Foundation.

As part of this agreement, CRH researchers completed a survey of all basic care and nursing care facilities in North Dakota to identify oral health policies and procedures as well as barriers to providing oral health services in LTC facilities. This chartbook presents the findings of this 2015 survey. This resource does not provide detailed discussion of the results, nor does it provide policy or community recommendations. Output includes aggregate data stratified by rural-urban status and facility type (basic care, nursing care, combined nursing and basic care).

It is important to note that with the small sample size (47 LTC facilities) there are response categories with a small *n*. When interpreting the data as presented, please note the size of the sample and take into consideration the number of facilities that the data is describing. When the percentage is not an accurate reflection of the data because of a small cell size, the hard number of facilities will be presented. Percentages have also been rounded to the nearest whole number. This may lead to categorical totals equaling more than 100.

## Survey Development & Distribution

Researchers at the CRH developed a tool to disseminate among all LTC facilities in the state. The survey draft was reviewed by: the president of the North Dakota Long Term Care Association (ND LTCA); six staff at the ND DoH Oral Health Program to include the program director and the grant manager; and, one division director from a state community health center. After securing support from state partners, researchers obtained approval of the study from the University of North Dakota Institutional Review Board.

The electronic survey was disseminated via email by the ND LTCA on November 23, 2015. Two reminder emails were sent to eligible members with the final reminder sent December 14, 2015. The electronic survey, a pdf of the survey, and the invitation letter were sent to 80 nursing facilities and 68 basic care facilities. The survey was developed in Qualtrics.[1]

The invitation letter encouraged administrators and directors of nursing (DoNs) to take the survey together; however, the tool collected the individual(s) that responded to the request. Participants indicated if the survey had been completed by: (a) administrator only; (b) DoN only; or, (c) administrator and DoN together. While the administrator at each facility was well suited to answer questions regarding oral health policies and procedures, it was indicate that the DoN may have more knowledge of the oral health care practices occurring on the floor as well as the care requested and services utilized among residents.

The tool asked participants to identify: oral health care practices; staff responsible for various dental care services; knowledge of geriatric health among staff; billing procedures for oral health care; where care is provided for non-emergent and emergent dental problems; significance of barriers to providing oral health care at the facility; and, awareness of, and participation in, Smiles for Life. Information on Smiles for Life is covered in presentation of the data.

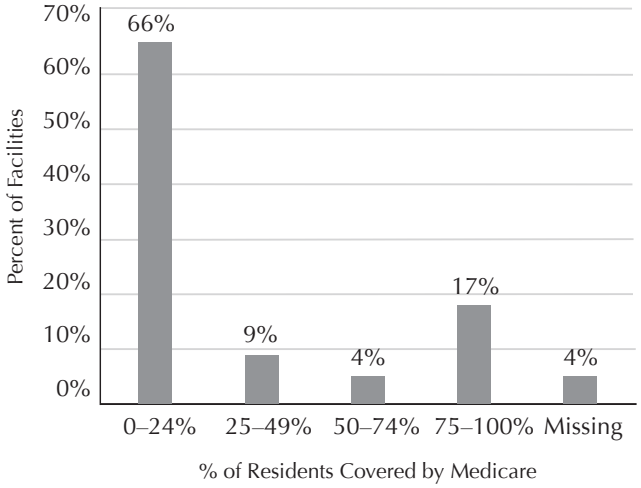
[1] The Qualtrics Research Suite is a powerful online survey tool available to all faculty, staff and students at the University of North Dakota for academic purposes. The Research Suite allows researchers the capacity to build complex surveys that fulfill a variety of research needs. This tool can build surveys incorporating features such as branching, skip logic, response timing, video and audio integration, direct export to SPSS and Excel, and many more. It is an electronic survey tool.

# Facility Demographics

Of the 148 eligible LTC facilities that received the invitation to participate, 60 submitted surveys (a 41% response rate). After cleaning the data and removing non-respondents, 47 facilities were included in final analyses; the response rate for completed surveys was 32%.

Roughly 23% of surveys were completed by the administrator and DoN together as requested. Administrators only accounted for 45% of the submissions while DoNs only submitted 32% of completed surveys. A majority of participating facilities were nursing facilities (51%) with an even distribution of basic care facilities (26%), and nursing and basic care combinations (23%). Facilities indicated a range of 16-255 total facility beds. A majority of residents at participating facilities were not covered by Medicare; 66% of facilities indicated that 0-24% of their residents were covered by Medicare. See Figure 1.

**Figure 1. Percent of Residents Covered by Medicare (n = 47)**




Facilities were located in both rural (53%) and urban (36%) communities with 5 facilities not providing a zip code. Rural and urban designations were identified by applying the Rural and Urban Commuting Area (RUCA) codes to each facilities' zip code. RUCA codes are a Census tract-based classification scheme that utilizes the standard Census Bureau Urbanized Area and Urban Cluster definitions in combination with work commuting information to characterize all of the nation's Census tracts regarding their rural and urban status and relationships; a ZIP Code RUCA approximation has also been developed and was applied. There was an even distribution of facilities by both facility type and respondent's title for both rural and urban communities. See Tables 1 and 2.

Facility type included basic care and skilled nursing facilities (nursing care). Currently North Dakota licenses basic care facilities and they are not certified by CMS to participate in the Medicare/Medicaid programs. Licensure of the basic care facility makes them eligible for state funding for basic care services. A skilled nursing facility is federally designated and may be part of a nursing home or hospital. Medicare certifies these facilities if they have the staff and equipment to give skilled nursing care, therapy services, and/or other related health services.

**Table 1. Participants' Facility Type by Rural-Urban Status (n = 42)**

| | Nursing Facility | Basic Care Facility | Nursing and Basic Care Combination | Total |
|---|---|---|---|---|
| **Urban** | 10 (58.8%) | 4 (23.5%) | 3 (17.6%) | 17 (100.0%) |
| **Rural** | 10 (40.0%) | 7 (28.0%) | 8 (32.0%) | 25 (100.0%) |

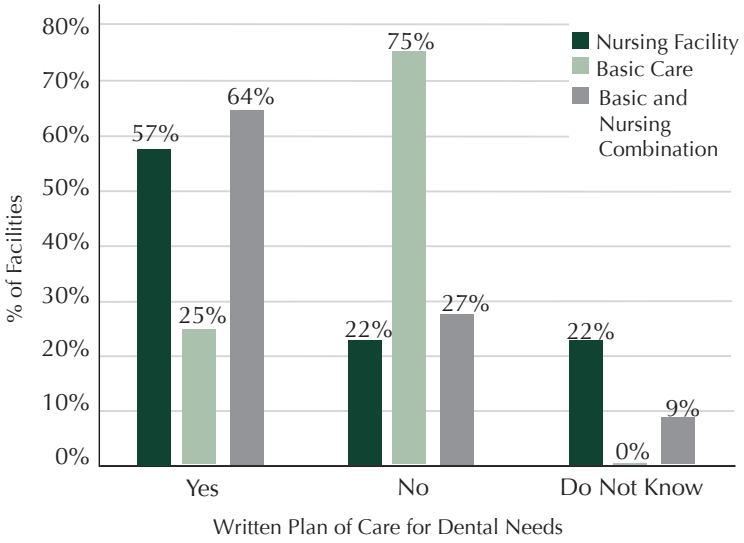
**Table 2. Respondent's Title by Rural-Urban Status (n = 42)**

| | Administrator Only | Director of Nursing (DoN) | Admin and DoN Together | Total |
|---|---|---|---|---|
| **Urban** | 7 (41.2%) | 5 (29.4%) | 5 (29.4%) | 17 (100%) |
| **Rural** | 11 (44%) | 8 (32.0%) | 6 (24%) | 25 (100%) |

# Oral Health Policies and Procedures

Only 50% of participating facilities indicated that they had a written plan of care for dental needs. This did not significantly vary between rural and urban facilities; however, basic care facilities were the least likely to have a written plan of care for dental needs. See Figure 2. Of the 23 facilities with a dental plan of care, only 3 LTC facilities indicated that a dental professional assisted in development of said plan; none of the three were basic care facilities.

**Figure 2. Percent of Facilities with Written Plan of Care for Dental Needs by Facility Type (n = 46)**




A majority of facilities did have a list of dental providers available and ready to accept resident referrals (72%). However, rural facilities (80%) were more likely than urban (59%) to have a list of dental providers for resident referral. See Figure 3. Basic care facilities were the least likely to have a list of dental providers for referral. See Figure 4.

**Figure 3. Percent of Facilities with List of Dental Providers for Referral by Rural-Urban Status (n = 42)**

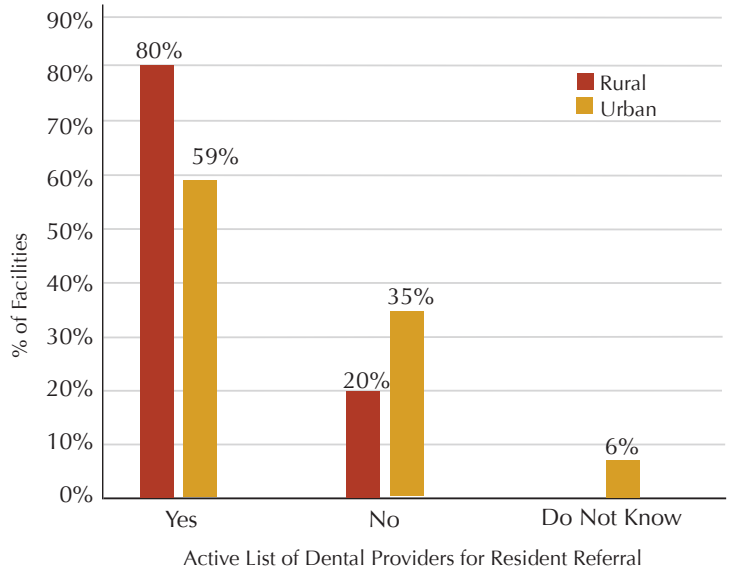
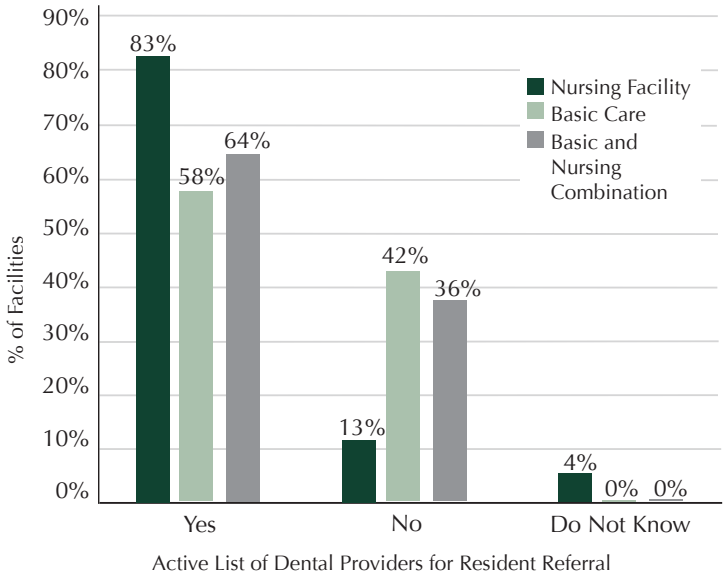


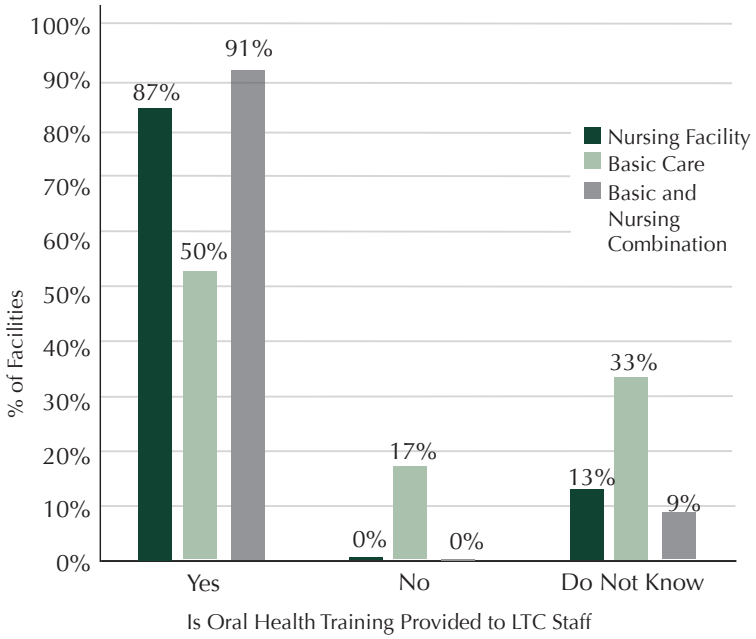
**Figure 4. Percent of Facilities with List of Dental Providers for Referral by Facility Type (n = 46)**



# LTC Staff Training and Oral Health Care Roles

A large majority (78%) of facilities indicated that LTC staff were provided training on oral health care and services; only 2 facilities did not provide training while 8 (17%) provided training only per request. Provided training did not vary significantly between rural (76% provided training) and urban (82%) facilities, though oral health care and services training was less likely in basic care facilities (50% provided training) than nursing (87%), and nursing and basic care combined (91%). See Figure 5.

**Figure 5. Percent of Facilities Providing Oral Health Training to Staff by Facility Type (n = 46)**

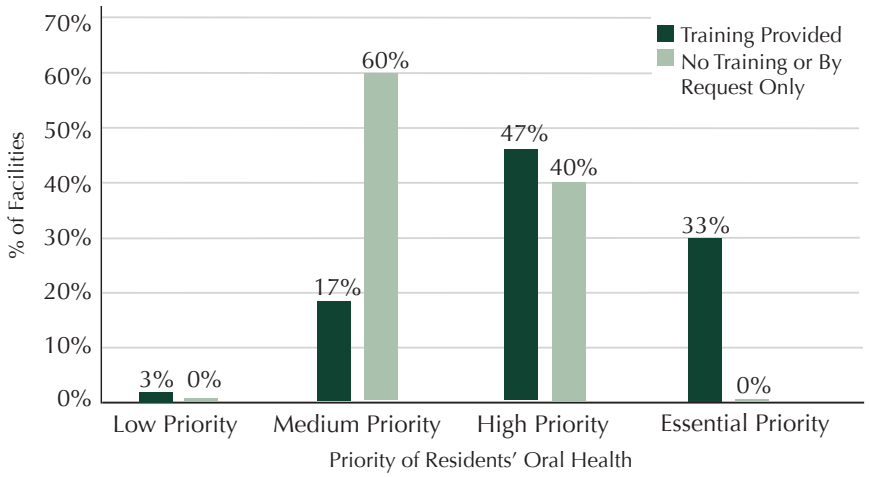



Smiles for Life is a free, online oral health training curriculum that has been widely distributed by the North Dakota Department of Health Oral Health Program. Health-care providers may take advantage of this training to develop knowledge about a variety of oral health care issues. Smiles for Life online training includes the following courses, among others: Geriatric Oral Health; The Relationship of Oral to Systemic Health; Adult Oral Health; and The Oral Examination. Learn more about Smiles for Life by accessing information provided here: http://www.ndhealth.gov/oralhealth/ndsmilesforlife.htm.

Only six facilities (14.3%) had heard about the Smiles for Life curriculum. Of those six, three had shared the learning opportunity with their nursing and nurse aide staff.

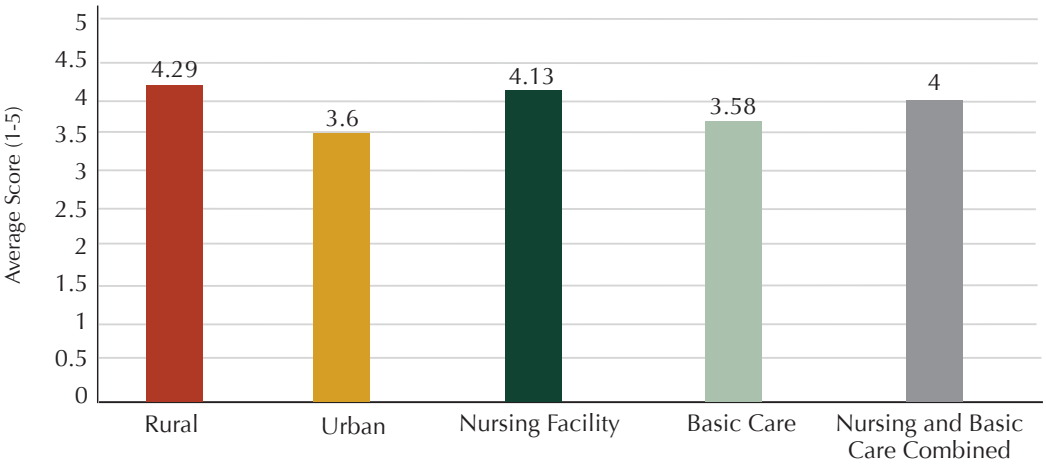
Oral health was a high or essential priority for a majority of LTC facilities (72%). Facilities that indicated they provided oral health staff training were more likely than those with no training or training by request only to rate oral health as an essential priority. See Figure 6.

**Figure 6. Priority of Residents' Oral Health by Facilities With & Without Oral Health Training (n = 46)**




On average, daily oral health care for residents was a greater priority for rural than urban facilities, and a lesser priority for basic care facilities. Priority was rated as either: not a priority (1); low priority (2); medium priority (3); high priority (4); or, essential priority (5). See Figure 7.

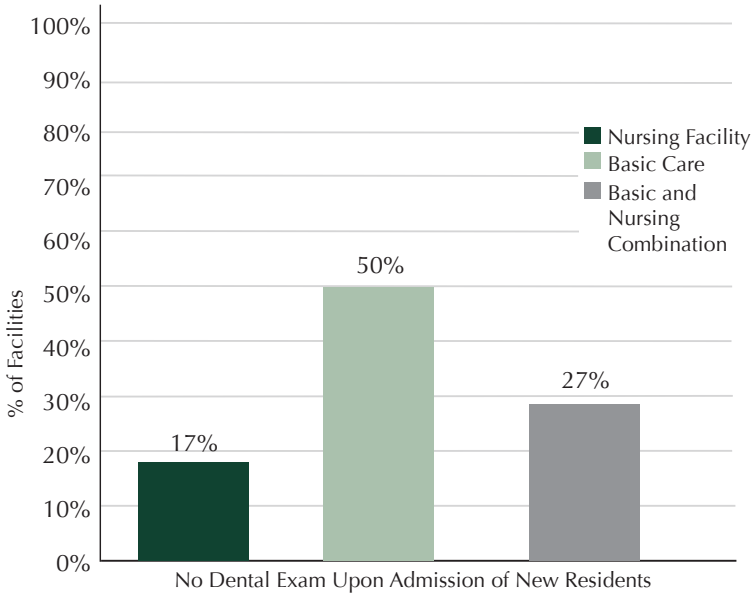
**Figure 7. Mean Daily Oral Health Care Priority Score (1-5) by Rural-Urban Status (n = 42) & Facility Type (n = 46)**




When asked who within the facility was responsible for completing the initial dental exam upon admission of a new resident, 28% of facilities (13) indicated no dental exam was given upon a new admission. Only 3 facilities indicated the initial exam was completed by a dental professional. Most common, the initial exam was completed by a unit charge nurse (42%).

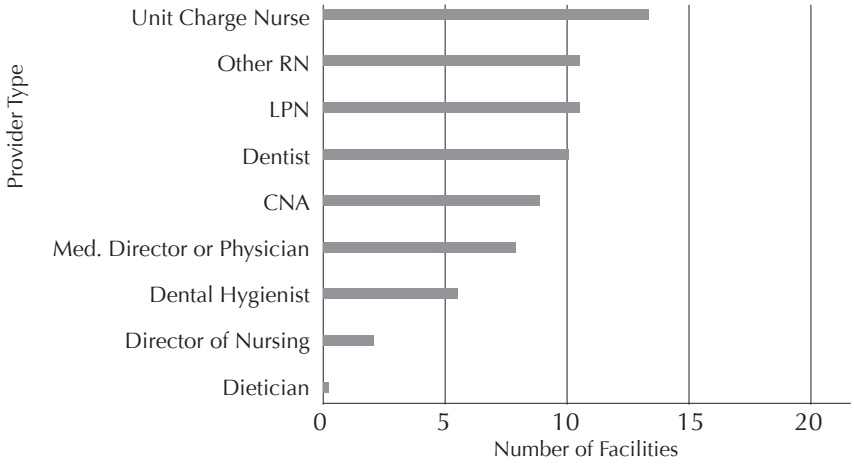
Rural (68%) and urban (77%) facilities were equally as likely to complete a dental exam upon admission of a new resident. Basic care facilities were the most likely to have not completed an exam upon admission. See Figure 8.

**Figure 8. Percent of Facilities That Do Not Complete a Dental Exam at Admission by Facility Type (n = 13)**



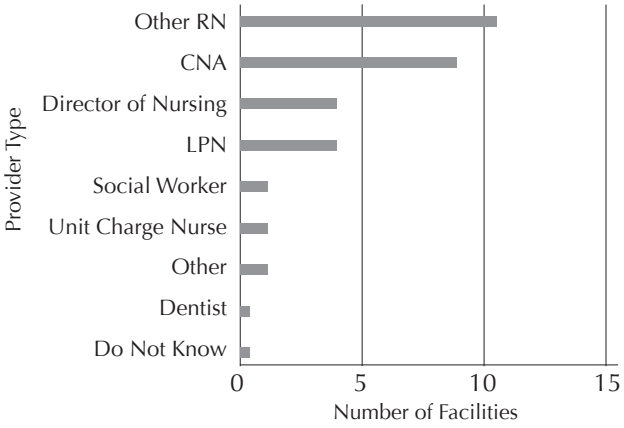

Four facilities indicated that they did not regularly examine the mouths of residents after the initial screening; 3 of the 4 were rural facilities. Among those facilities completing regular examinations of residents' mouths, staff primarily responsible for care were the unit charge nurse (13 of 47 facilities), registered nurses (11), licensed practical nurses (11), and dentists (10). Participants could select multiple staff if more than one type were responsible for examining residents' mouths. See Table 3.

**Table 3. Persons Responsible for Regular Exam of Residents' Mouths Post Admission (n = 47)**




Eight facilities did not have day-to-day coordination for oral health services. These eight facilities were evenly distributed between rural and urban communities as well as facility type. Participants selected the one provider type primarily responsible for the day-to-day coordination of a resident's dental plan of care. Day-to-day coordination was most likely to be the responsibility of RNs, outside of the unit charge nurse. See Table 4.

**Table 4. Person Responsible for Day-to-Day Coordination of Dental Plan of Care (n = 47)**

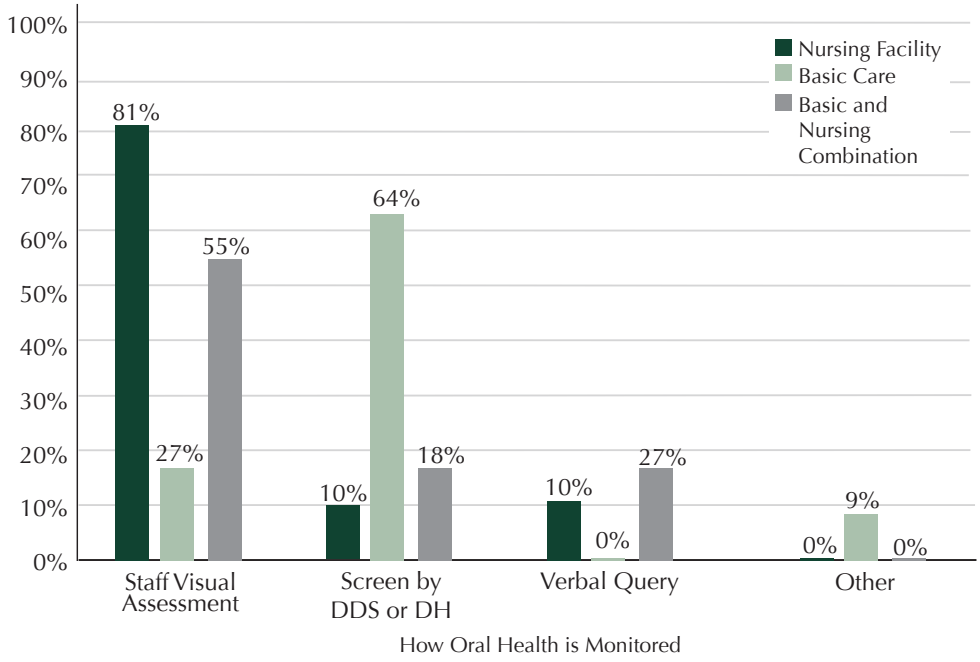


Facilities were asked to indicate how oral health was most likely to be monitored. Options included:

- Visual assessment by a staff member
- Screening examination by a dentist or dental hygienist
- Verbal query of a resident by a staff member
- Other
- Do not know

When asked how oral health was most likely to be monitored within the facility, 61% of respondents indicated that oral health status was monitored by staff members' visual assessments of residents' mouths. Basic care facilities were more likely to rely on screening examinations by a dentists or dental hygienist (64%) while nursing facilities more readily employed visual assessment by staff members. See Figure 9.

**Figure 9. Primary Mode of Oral Health Monitoring by Facility Type (n = 43)**



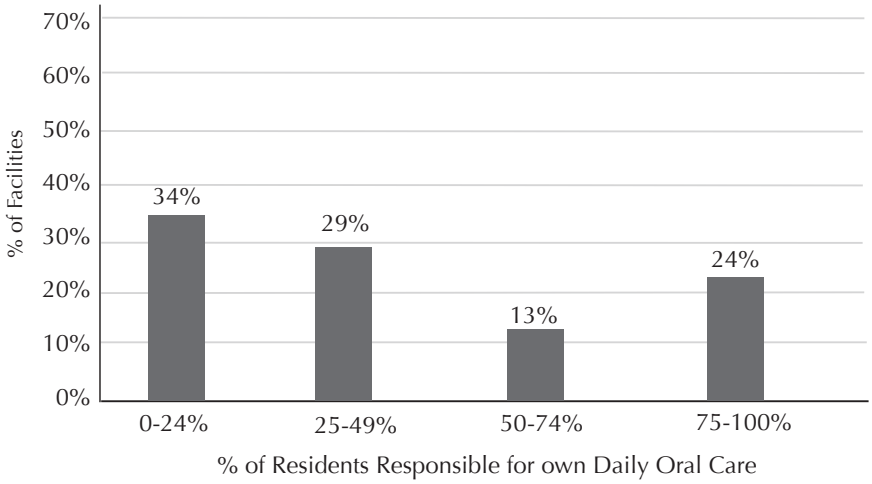
# LTC Oral Health Care and Provided Services

A majority of LTC facilities were satisfied (68%) or very satisfied (10%) with the way oral hygiene needs of residents were being met. There was little variation between rural and urban facilities and no differences between average satisfaction scores by facility type.

Among 84% of the LTC facilities, care staff (DoN, RN, LPN, or CNA) assisted residents with daily oral health care (to include brushing, flossing, and denture cleaning); 14% of facilities would provide assistance by request of a resident, a resident's family member, or dental professional. It was imperative that care staff provide daily care as respondents indicated that very few residents were responsible for their own oral health care.

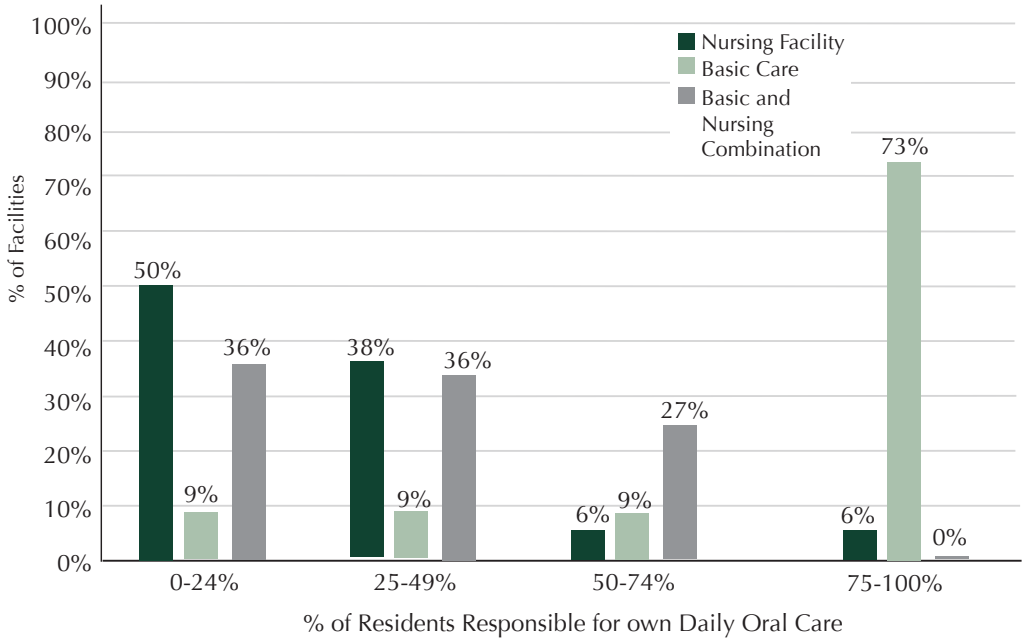
Among 91% of facilities, residents were provided with oral health supplies; an additional 7% provided supplies upon request of the residents. However, though they had as supplies available, many residents were not responsible for doing their own oral health care. Only 24% of facilities had a large majority or residents (75%) doing their own oral health care. See Figure 10.

**Figure 10. Percent of Residents Responsible for own Daily Oral Health Care (n = 38)**




Rural LTC facilities were more likely to have a larger percentage of their residents responsible for their own daily oral health care than urban facilities; 48% of rural respondents had 50% or more of their residents responsible for their own daily oral health care compared to 20% of urban facilities. Similarly, basic care facilities were far more likely to have residents responsible for their own daily dental care than nursing facilities. See Figure 11.

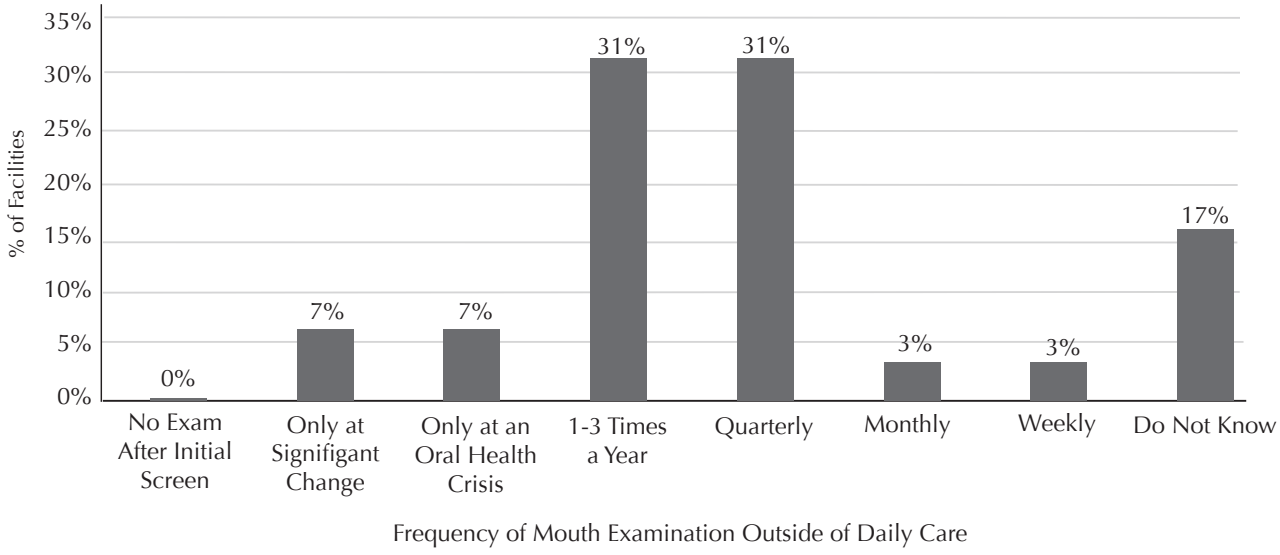
**Figure 11. Percent of Residents Responsible for own Daily Oral Health Care by Facility Type (n = 38)**




Though residents were not typically responsible for their own daily care, 19% of facilities provided resident education on the importance of good oral health with an additional 30% indicating they provided said training by request. There was no significant variation with regard to training between rural-urban status, or facility type.

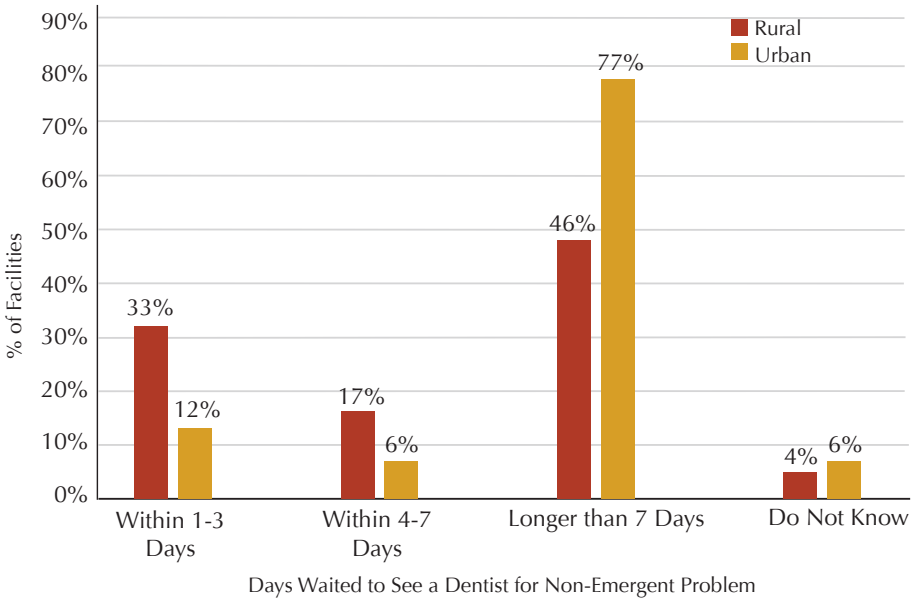
Facilities reported that care staff assisted with daily oral health care and provided oral health supplies; yet, respondents indicated that after initial examination (outside of daily brushing and flossing), residents' mouths were typically only examined 1-3 times a year or quarterly. See Figure 12.

**Figure 12. Frequency of Mouth Examination by a LTC Provider Outside of Daily Care (n = 29)**



When there was need for outside treatment for a dental problem, 93% of facilities indicated residents received treatment in a general dentist's office. When seeking care for a non-emergent dental problem (to include routine visits, periodic exams, preventive services, or basic restorative dental services without acute or chronic pain such as a filling, orthodontics, or periodontics) residents more often than not must wait longer than seven days; 33% of facilities indicated a resident with a non-emergency dental problem would been seen within 1-3 days. Rural facilities were more likely to arrange an appointment with a resident's dentist in a shorter window of time than urban facilities. See Figure 13.

**Figure 13. How Soon LTC Residents See a Dentist for Non-Emergent Dental Problems (n = 41)**




When providing oral health services to LTC residents, facilities were most commonly compensated by out-of-pocket payments made by the residents or residents' families (23 facilities). Other forms of compensation were Medicaid billing (22) and billing completed by the dental provider outside of the LTC facility (22). See Table 5.

**Table 5. How LTC Facilities are Compensated for Oral Health Services**

| Method of Compensation | # of Facilities |
|---|---|
| Out-of-pocket | 23 |
| Billed through Medicaid | 22 |
| Billed by the dental practice providing oral health services outside of the LTC facility | 22 |
| We are not compensated for the oral health services provided to our LTC residents | 8 |
| Billed to a third-party insurer | 7 |
| Covered as part of routine daily care/services at the LTC facility | 7 |
| Billed by the dental practice providing oral health services in the LTC facility | 7 |
| Do not know | 1 |

Much of the oral health care provided to residents is determined by the resident's stage of life. Only 22% of participants indicated that stage of life would not play a role in determining the oral health services provided; 44% said it would play a somewhat significant role, 29% said a very significant role, and 5% said an extremely significant role.

# Barriers to Providing Oral Health Services

Participants were asked to identify the significance of a variety of barriers to providing oral health services. Listed below are the top five barriers for rural and urban LTC facilities. Scoring for each barrier: not a problem (1); minor problem (2); moderate problem (3); and serious problem (4).

**Top five barriers to providing oral health services among rural facilities:**

1. Availability of a suitable dental treatment space in the LTC facility (2.87)
2. Resident's cognitive capacity (2.46)
3. Resident's physical capacity/condition (2.43)
4. Resident's financial concerns (2.35)
5. Willingness of a dentist to accept Medicaid (2.32)

**Top five barriers to providing oral health services among urban facilities:**

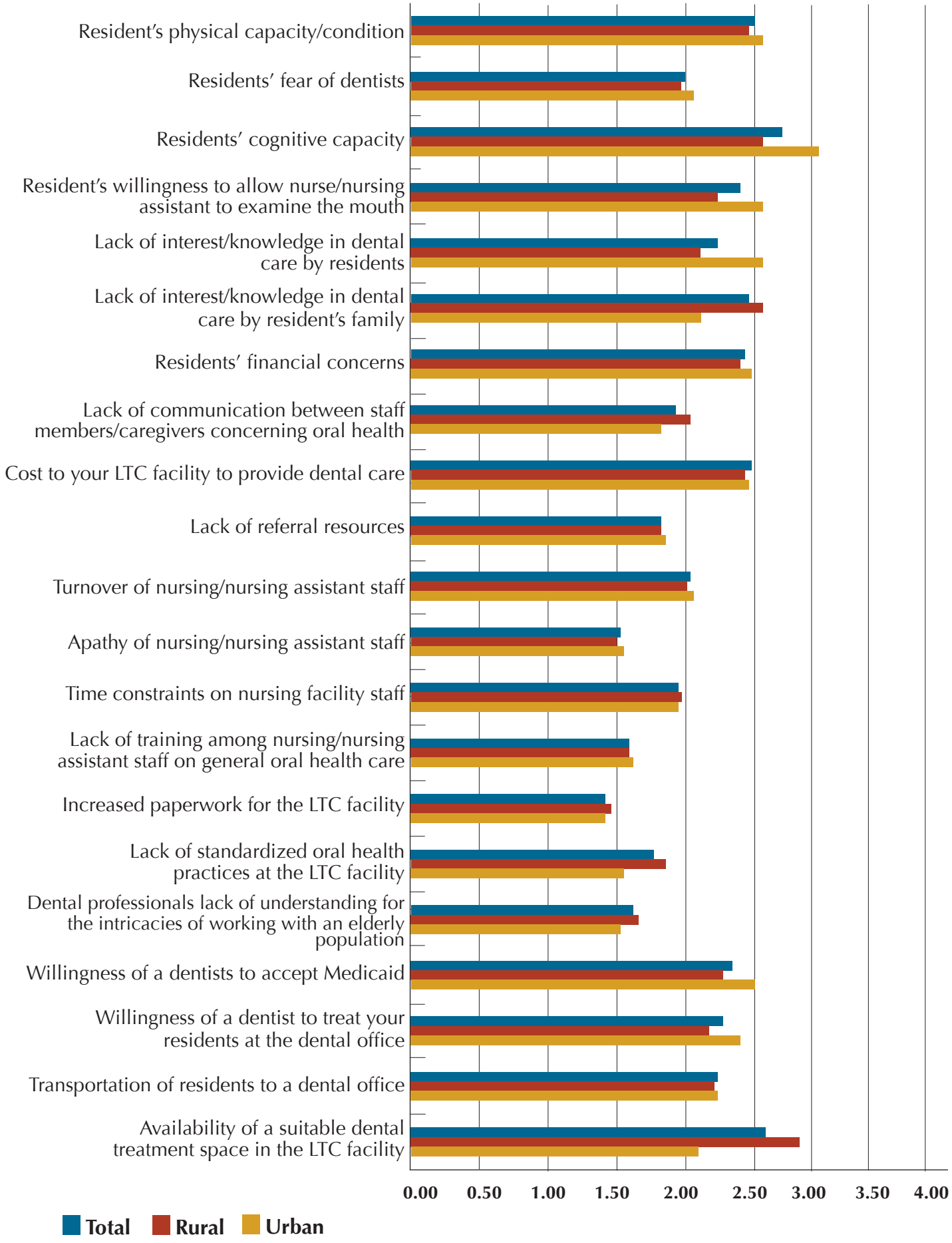
1. Resident's cognitive capacity (3.13)
2. Lack of interest/knowledge in dental care by residents (2.62)
3. Resident's physical capacity/condition (2.60)
4. Resident's willingness to allow nurse/nursing assistant to examine the mouth (2.57)
5. Willingness of a dentists to accept Medicaid (2.53)

Comparison of barriers between rural and urban are presented in Table 6 and Figure 14.

**Table 6. Significance of Barriers to Providing Oral Health Services by Rural-Urban Status**

| Barrier | Urban | Rural | Total | N |
|---|---|---|---|---|
| Availability of a suitable dental treatment space in the LTC facility | 2.15 | 2.87 | 2.61 | 36 |
| Transportation of residents to a dental office | 1.88 | 1.83 | 1.85 | 40 |
| Willingness of a dentist to treat your residents at the dental office | 1.93 | 1.65 | 1.76 | 38 |
| Willingness of a dentists to accept Medicaid | 2.53 | 2.32 | 2.41 | 37 |
| Dental professionals lack of understanding for the intricacies of working with an elderly population | 1.57 | 1.71 | 1.66 | 35 |
| Lack of standardized oral health practices at the LTC facility | 1.60 | 1.87 | 1.76 | 38 |
| Increased paperwork for the LTC facility | 1.38 | 1.48 | 1.44 | 39 |
| Lack of training among nursing/nursing assistant staff on general oral health care | 1.73 | 1.71 | 1.72 | 39 |
| Time constraints on nursing facility staff | 1.93 | 1.96 | 1.95 | 39 |
| Apathy of nursing/nursing assistant staff | 1.60 | 1.50 | 1.54 | 39 |
| Turnover of nursing/nursing assistant staff | 2.20 | 2.08 | 2.13 | 39 |
| Lack of referral resources | 1.86 | 1.83 | 1.84 | 37 |
| Cost to your LTC facility to provide dental care | 1.43 | 1.59 | 1.53 | 36 |
| Lack of communication between staff members/caregivers concerning oral health | 1.73 | 1.71 | 1.72 | 39 |
| Resident's financial concerns | 2.43 | 2.35 | 2.38 | 37 |
| Lack of interest/knowledge in dental care by resident's family | 1.77 | 2.04 | 1.94 | 36 |
| Lack of interest/knowledge in dental care by residents | 2.62 | 2.14 | 2.32 | 34 |
| Resident's willingness to allow nurse/nursing assistant to examine the mouth | 2.57 | 2.17 | 2.32 | 38 |
| Resident's cognitive capacity | 3.13 | 2.46 | 2.72 | 39 |
| Resident's fear of dentists | 2.14 | 1.91 | 2.00 | 37 |

**Figure 14. Significance of Barriers to Providing Oral Health Services by Rural-Urban Status**



**Top five barriers to providing oral health services among basic care facilities:**

1. Lack of interest/knowledge in dental care by residents (2.56)
2. Resident's cognitive capacity (2.55)
3. Resident's willingness to allow nurse/nursing assistant to examine the mouth (2.27)
4. Resident's physical capacity/condition (2.00)
5. Resident's financial concerns (1.91)

**Top five barriers to providing oral health services among nursing care facilities:**

1. Resident's cognitive capacity (2.75)
2. Willingness of a dentist to accept Medicaid (2.68)
3. Availability of a suitable dental treatment space in the LTC facility (2.65)
4. Resident's financial concerns (2.61)
5. Resident's physical capacity/condition (2.58)

**Top five barriers to providing oral health services among nursing and basic care combined facilities:**

1. Availability of a suitable dental treatment space in the LTC facility (3.22)
2. Resident's cognitive capacity (2.60)
3. Resident's physical capacity/condition (2.60)
4. Resident's financial concerns (2.50)
5. Willingness of a dentists to accept Medicaid (2.50)

Comparison of barriers between nursing care, basic care, and combined facilities are presented in Table 7 and Figure 15.

**Table 7. Significance of Barriers to Providing Oral Health Services by Facility Type**

| Barrier | Nursing | Basic | Combined | Total | N |
|---|---|---|---|---|---|
| Availability of a suitable dental treatment space in the LTC facility | 2.65 | 1.89 | 3.22 | 2.61 | 38 |
| Transportation of residents to a dental office | 2.05 | 1.27 | 2.10 | 1.86 | 42 |
| Willingness of a dentist to treat your residents at the dental office | 2.05 | 1.36 | 1.78 | 1.80 | 40 |
| Willingness of a dentist to accept Medicaid | 2.68 | 1.80 | 2.50 | 2.41 | 39 |
| Dental professionals lack of understanding for the intricacies of working with an elderly population | 1.78 | 1.11 | 1.80 | 1.62 | 37 |
| Lack of standardized oral health practices at the LTC facility | 1.80 | 1.40 | 1.90 | 1.73 | 40 |
| Increased paperwork for the LTC facility | 1.50 | 1.09 | 1.60 | 1.41 | 41 |
| Lack of training among nursing/nursing assistant staff on general oral health care | 1.80 | 1.45 | 1.70 | 1.68 | 41 |
| Time constraints on nursing facility staff | 2.05 | 1.45 | 2.10 | 1.90 | 41 |
| Apathy of nursing/nursing assistant staff | 1.55 | 1.45 | 1.50 | 1.51 | 41 |
| Turnover of nursing/nursing assistant staff | 2.35 | 1.36 | 2.30 | 2.07 | 41 |
| Lack of referral resources | 2.00 | 1.30 | 2.10 | 1.85 | 39 |
| Cost to your LTC facility to provide dental care | 1.72 | 1.20 | 1.60 | 1.55 | 38 |
| Lack of communication between staff members/caregivers concerning oral health | 1.95 | 1.27 | 1.60 | 1.68 | 41 |
| Resident's financial concerns | 2.61 | 1.91 | 2.50 | 2.38 | 39 |
| Lack of interest/knowledge in dental care by resident's family | 1.94 | 1.73 | 2.10 | 1.92 | 38 |
| Lack of interest/knowledge in dental care by residents | 2.12 | 2.56 | 2.20 | 2.25 | 36 |
| Resident's willingness to allow nurse/nursing assistant to examine the mouth | 2.26 | 2.27 | 2.20 | 2.25 | 40 |
| Resident's cognitive capacity | 2.75 | 2.55 | 2.60 | 2.66 | 41 |
| Resident's fear of dentists | 2.00 | 1.73 | 2.10 | 1.95 | 39 |
| Resident's physical capacity/condition | 2.58 | 2.00 | 2.60 | 2.43 | 40 |

**Figure 15. Significance of Barriers to Providing Oral Health Services by Facility Type**