



Center *for* Rural Health

Post-Assessment of the Long Term Care Oral Health
Program:

Aggregate Report

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Project Completed by

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The Center for Rural Health

The Center for Rural Health (CRH), established in 1980, is one the nation's most experienced organizations committed to providing leadership in rural health. The CRH mission is to connect resources and knowledge to increase the health status of people in rural communities. The CRH serves as a resource to healthcare 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: (1) education and information dissemination; (2) program development and community assistance; (3) research and evaluation; and (4) policy analysis. The CRH is also home to six national programs.

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Executive Summary

In August 2016, research staff at the CRH were contracted by the North Dakota Department of Health (DoH) Oral Health Program to complete a post-assessment among long term care facilities (LTC) participating in the LTC Oral Health Program. Four facilities were included in the analyses and were each provided facility-specific reports to utilize in identifying future work within the program. This report provides a discussion of the aggregate results, identifying program successes and failures, as well as perceptions of the program from the perspective of administrative and direct care staff.

Key Findings

- CNAs were the least likely to be aware of a written plan of care (47% did not know). CNAs were also the provider type identified most frequently as the provider responsible for the day-to-day coordination of a resident's dental plan.
- Facilities A and C indicated that no oral health policy, procedure, or care practice has been revised or developed as a result of participation in the LTC Oral Health Program. Facilities B and D did not agree as to whether or not policies had been reviewed or developed.
- All four facilities had a written plan of care for dental needs. However, 42% of staff were unaware of the plan. If care staff are unaware, they are not capable of executing the policy.
- Roughly 40% of LPNs and 45% of CNAs agreed or strongly agreed that nursing and nurse aide staff resisted participation in the LTC Oral Health program compared to only 14% of RNs.
- CNAs and LPNs more commonly experienced resistance among residents' family members, and residents, while RNs were less likely to have witnessed said behavior among either. Those provider types who engage in more frequent and direct care for residents and their family members perceived greater resistance to the program.
- Only 13% of the nursing and nurse aide staff had heard of the free Smiles for Life training.
- CNAs and LPNs believed more residents were responsible for their own dental care than RNs did, which may then impact the daily care provided by the LPN and CNA staff.

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Introduction

At the time of evaluation, six LTC facilities in North Dakota were providing dental care to LTC residents in their respective LTC facilities. The six participating facilities included:

Baptist Health Care Center	Bismarck, North Dakota
Missouri Slope Lutheran Care Center	Bismarck, North Dakota
Sanford Health St. Vincent's Continuing Care Center	Bismarck, North Dakota
Sanford Sunset Continuing Care Center	Mandan, North Dakota
Towner County Living Center	Cando, North Dakota
Rolette Community Care Center	Rolette, North Dakota

Towner County Living Center and Rolette Community Care Center began to work with Northland Community Health Center, located in Turtle Lake, North Dakota in 2016. Though both facilities have completed pre-assessments, neither had been in practice long enough to adequately evaluate their progress at the time of this post-assessment. Four LTC facilities in Bismarck and Mandan have been working with Bridging the Dental Gap (BDG) to provide onsite oral health care services to residents. These LTC facilities began working with BDG between 2011 and 2014.

Baptist Health Care Center	September, 2013
Missouri Slope Lutheran Care Center	September, 2011
Sanford Health St. Vincent's Continuing Care Center	September, 2011
Sanford Sunset Continuing Care Center	July, 2014

Post-assessment surveys were completed in the spring of 2016. Individual post-assessment reports were provided to each of the participating facilities in May and June 2016. Results in this report discuss variable outcomes by facility, and the varied perceptions of program efficacy by provider type (administration, directors of nursing, and other nursing and nurse aide staff).

Data indicate there are areas for each of the LTC facilities to continue to improve the oral health culture among direct care staff and LTC residents.

However, it is imperative to note that these four facilities are among a select six in North Dakota that have made an effort to provide oral health care services in the LTC setting, providing care to an otherwise disparate population.

To read a complete report on the oral health services provided, the dental policies and procedures in place, and the barriers to providing dental care in North Dakota LTC facilities, read Oral Health Services and Barriers to Care in North Dakota Long Term Care Facilities at ruralhealth.und.edu/pdf/2016-oral-health-ltc-chartbook.pdf.

Acronyms used in the report:

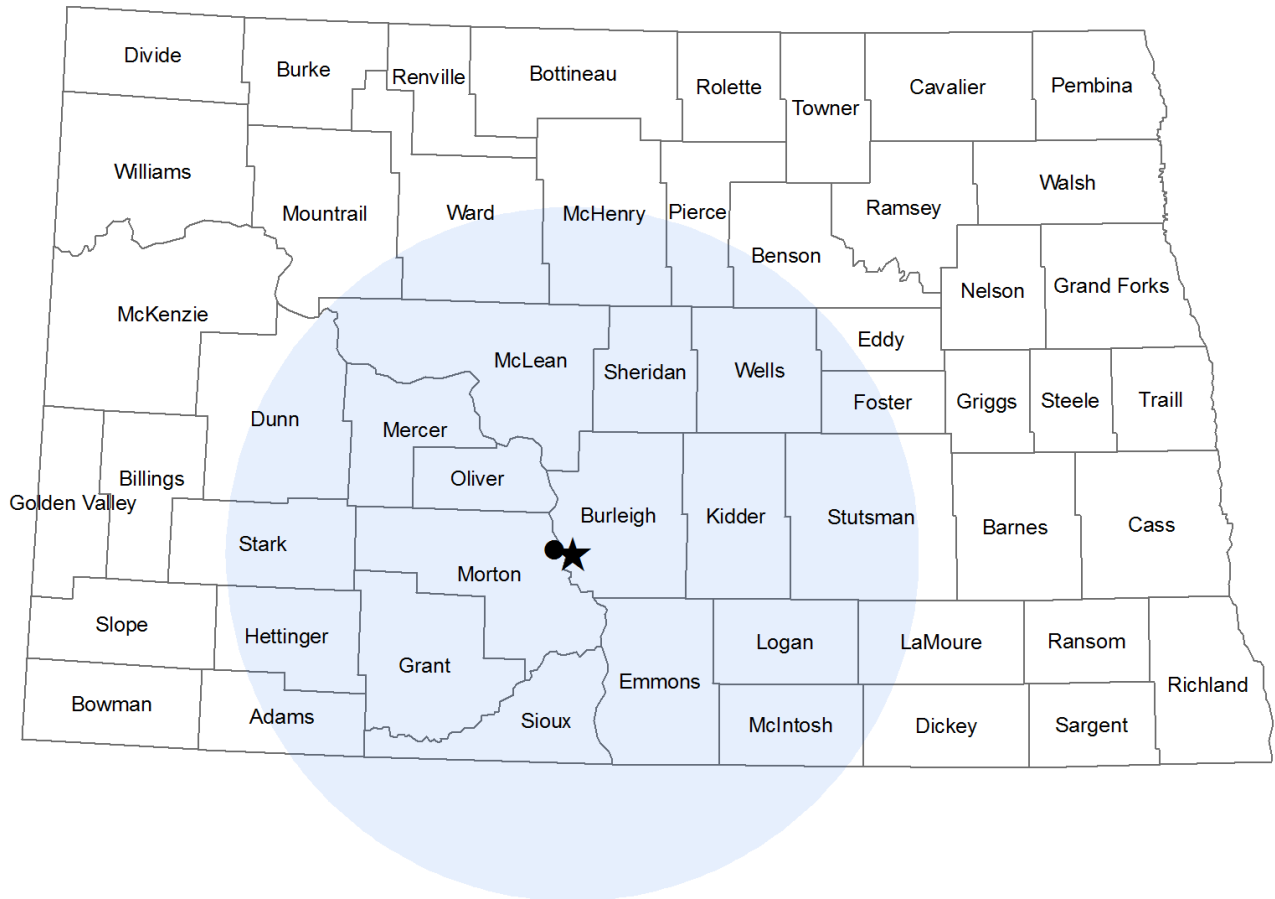
BDG	Bridging the Dental Gap	DoN	director of nursing
CNA	certified nursing assistant	LPN	licensed practical nurse
DDS	doctor of dental surgery – dentist	LTC	long term care
DH	dental hygienist	RN	registered nurse

Background

Bridging the Dental Gap

Bridging the Dental Gap (BDG) is a stand-alone community dental clinic located in Bismarck, North Dakota. The clinic's primary purpose is to provide dental services on a sliding-fee scale based on patients' ability to pay. It serves the area's homeless, refugees, uninsured, incarcerated youth and adults, and others who are at or below the 200% poverty level. BDG defines its mission as "providing access to dental care for underserved populations in North Dakota" and currently provides service to patients within a 100-mile radius of Bismarck/Mandan.

Figure 1. Percent of Respondents by Provider Type



Any individual may receive dental services from BDG. To qualify for reduced fee services on a sliding-fee scale, an individual must:

- Reside within a 100-mile radius of Bismarck/Mandan
- Be a low-income or uninsured child accompanied by a parent or guardian, or a low-income or uninsured adult with emergency dental needs
- Supply proof of total household income and family size

Approximately 68% of the clinic's patients are on Medicaid. Patients not on Medicaid are required to make some form of payment at the time of service to cover at least part of the costs. BDG is a nonprofit organization and is funded by patient payments, Medicaid, insurance payments, grants, and donations. It is a member of the United Way agencies.

BDG provides the following dental care services:

- Exams
- X-rays
- Cleanings (prophies)
- Fillings (composite and amalgam)
- Space maintainers for children
- Partial and full dentures
- Root canals
- Extractions
- Dental Sealants
- Fluoride varnish
- Night splints
- Crowns
- Stainless steel crowns
- Bridges
- Referrals to oral surgeons, endodontics, and orthodontics
- Root planing and scaling for deep cleaning gums due to infection

The clinic is open Monday through Thursday from 8:00 am – 5:00 pm and provides more than 600 patient appointments for dental care each month. Patient care is handled through appointments, although patients experiencing severe tooth pain are given appointments as soon as possible, with some receiving care the same day.

BDG assisted to establish the Ronald McDonald Care Mobile Program, a mobile dental clinic that began February 1, 2012. BDG is the clinical service provider for the Care Mobile and oversees the dental staff on the mobile clinic. BDG also provides outreach services to LTC facility residents, as mentioned. Dentists, hygienists, and dental assistants provide services in four long term care facilities in the Bismarck-Mandan area. This outreach was made possible through a three-year grant from the U.S. Health Resources and Services Administration (HRSA).

Baptist Health Care Center

Baptist Health Care Center is located in Bismarck, North Dakota and has been providing LTC services for 75 years. The facility offers skilled nursing and hospice services as well as other outpatient services including home care, homemaking, therapy services, and respite care. There are 140 beds devoted to skilled nursing care, 18 of which are dedicated as part of the memory care unit. Baptist Health Care Center has been working collaboratively with BDG since September 2013. You can learn more about Baptist Health Care Center at baptisthealthcarecenter.org.

Missouri Slope Lutheran Care Center

Missouri Slope Lutheran Care Center has been providing skilled nursing care services for over 50 years in Bismarck, North Dakota. The facility provides care for 225 skilled nursing care residents, of which 83 are in private rooms. Though not part of this assessment, the facility also provides assisted living services. Missouri Slope Lutheran Care Center provides skilled nursing care, memory care, physical therapy, occupational therapy, and speech therapy as well. Missouri Slope Lutheran Care Center has been working collaboratively with BDG since September 2011. For more information, visit www.mslcc.com.

Sanford Health St. Vincent's Continuing Care Center

Sanford Health St. Vincent's Continuing Care Center is a 101 bed skilled nursing facility that accommodates residents who require medical assistance. The Bismarck, North Dakota center is divided into three areas: Emmanuel Place, Sacred Heart Place, and Benedict Place. Emmanuel Place, a 41-bed unit, handles a majority of residents with the most acute medical needs. The unit has 33 private and four semi-private rooms. Sacred Heart Place is a 40-bed unit featuring 32 private rooms and four semi-private rooms. Benedict Place provides care specifically designed to meet the needs of residents diagnosed with dementia or Alzheimer's disease. Sanford Health St. Vincent's Continuing Care Center began working with BDG to provide oral health care to residents in September, 2011. This unit has 10 oversized semi-private rooms and its own dining and activity areas. To learn more, visit www.sanfordhealth.org/locations/sanford-health-st-vincent's-continuing-care-center.

Sanford Sunset Continuing Care Center

Sanford Sunset Continuing Care Center has been providing skilled nursing care to residents in Mandan, North Dakota for over two decades. The new facility, built in 2008, consists of 120 private rooms and four double rooms. Sanford Sunset Continuing Care Center began working with BDG to provide oral health care to residents in July, 2014. To learn more, visit www.sanfordhealth.org/locations/sanford-health-sunset-drive-continuing-care-center.

Methods

In partner with BDG, CRH researchers identified a primary contact at each of the four participating facilities. Facilities were contacted via e-mail and invited to participate. In the initial invitation, the administrator was provided with a cover letter, a draft of the survey, and a discussion of the proposed methods for dissemination. All facility administrators agreed to participate.

Survey Development

CRH research staff and faculty developed a post-assessment tool. The tool was developed in partnership with, and reviewed by, the DoH Oral Health Program staff, the BDG LTC program lead, and the president of the State LTC Association; the tool and applied research methods were approved by the University of North Dakota Institutional Review Board.

The survey assessed the current oral health policies and procedures, individual perceptions of the program's efficacy, barriers to providing oral health care in a LTC setting, and oral health training access and utilization among direct care staff.

Survey Dissemination

The proposed method encouraged the administrator and/or DoN to disseminate the electronic survey, developed in Qualtrics¹, to all nursing and nurse aide staff. In addition, each facilities' administrators and DoNs were encouraged to participate. The electronic notification to complete the survey carried a two-week deadline, at which time, facilities were given the total number of completed surveys to share with their staff along with a reminder, and an extension of the deadline by one and a half weeks. A third and final reminder would then also be sent.

Though this was the proposed method, it was only executed as such among staff at two of the four facilities. The slight variation in dissemination implemented at each of the facilities is identified below.

Baptist Health Care Center

Baptist Health Care Center staff assisted in dissemination of the survey to all nursing and nurse aide staff through two electronic notifications. After the second notification, the response rate was far below needed participation to adequately inform the post-assessment. CRH research faculty worked with the facility and provided the same survey and cover letter on paper. The CRH paid for the postage to mail the stack of paper surveys to the facility. Blank surveys were left in a common area for nursing and nurse aide staff to take and complete, if interested. After two weeks, all completed (anonymous) surveys were returned in one pre-paid envelope to CRH researchers.

Missouri Slope Lutheran Care Center

Missouri Slope Lutheran Care Center employed the dissemination method originally proposed. The facility was notified of the response rate after the third reminder, and asked if they were satisfied with the response rate, or if they would prefer to also employ a paper survey. They were satisfied with the response rate.

Sanford Health St. Vincent's Continuing Care Center

Sanford Health St. Vincent's Continuing Care Center staff assisted in dissemination of the survey to all nursing and nurse aide staff through two electronic notifications. After the second notification, the response rate was below needed participation to adequately inform the post-assessment. CRH research faculty worked with the facility and provided the same survey and cover letter on paper. The CRH paid for the postage to mail the stack of paper surveys to the facility. Blank surveys were made available

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.

at a nursing staff meeting, while additional copies were made available at a monthly nursing aide staff meeting. All completed (anonymous) surveys were returned in one pre-paid envelope to CRH researchers.

Sanford Sunset Continuing Care Center

Sanford Sunset Continuing Care Centered employed the dissemination method originally proposed. The facility was notified of the response rate after the third reminder, and asked if they were satisfied with the response rate, or if they would prefer to also employ a paper survey. They were satisfied with the response rate.

Data Analysis

Data were exported from Qualtrics, and cleaned in SAS. Researchers provided output, and facility-specific chartbooks to each participating facility. For this report, the same analyses were run but to compare perceptions across each facility, and between each provider type. The independent provider types collected for this assessment included:

- Administration
- DoN
- Other Nursing & Nurse Aide Staff
 - RN
 - LPN
 - CNA
 - Other

Provider Variability

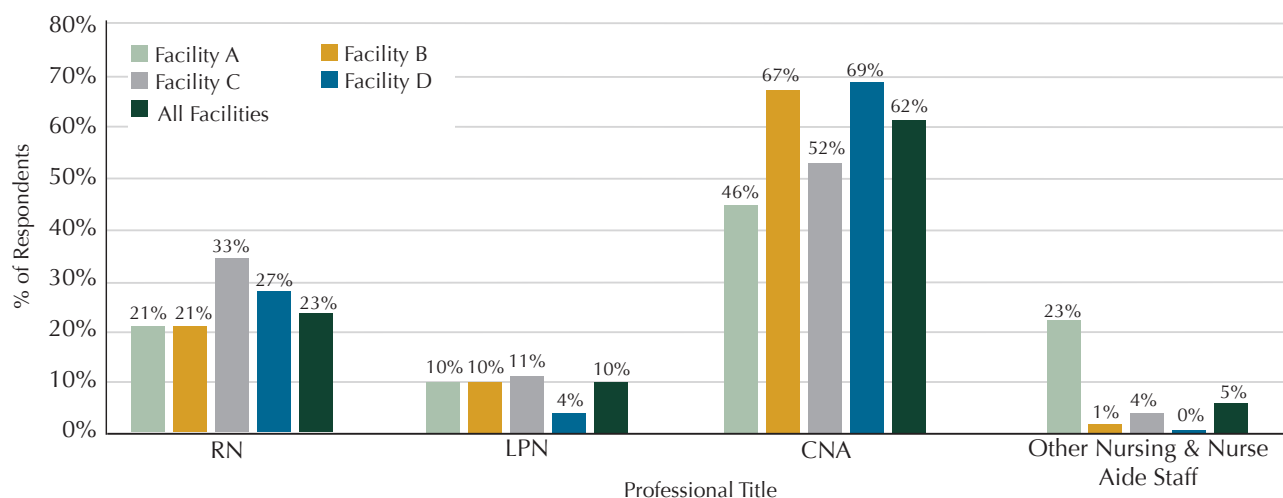
To ensure a larger cell size, respondents who identified “other” when asked their provider type, who then subsequently wrote in certified medical assistant (CMA) as their title, were recoded to be included in the analyses related to CNA ($n = 14$). There were 13 of the 260 other nursing and nurse aide staff who additionally marked “other” and proceeded to identify as a: dietitian (1); licensed social worker (1); medical records technician (1); restorative therapist (2); ward clerk (1); and no response (7). These individuals accounted for less than 5% of total survey respondents (274). Provider data were analyzed with and without the “other” nursing and nurse aide professions with no significant variation. For clarity and appropriate cell size, the “other” nursing and nurse aide participants were omitted from the following data presentation of provider variability. The “other” responses were included in the facility-specific reports provided back to the participating LTC settings, and are included in the facility totals of this report. All results have been rounded to the nearest whole percentage which may result in totals greater/less than 100%.

Results: Facility Variability

Four facilities participated in this post-assessment. To protect anonymity, their names have been removed from presentation of the data. Instead, they will from this point forward be identified as facilities A, B, C, and D. In addition, all data are presented as total percentages, with no sample size (n) provided. The sample size has been omitted to reduce the risk of facility identification.

Overall, 95% of respondents among all facilities were other nursing and nurse aide staff (RN, LPN, CNA); only 2% and 3% were administration and DoN respectively. There was greater variability among facilities in the percent of participation among nurse and nurse aide staff. Facility A had a larger percentage of other nursing and nurse aide staff than any other facility and, as a result, also had the lowest percentage of CNAs respond. Figure 1.

Figure 1. Response Rate by Facility and Provider Type



Program Satisfaction & Impact

Participants rated their satisfaction with both the way in which residents' oral hygiene needs were being met while participating in the LTC Oral Health Program, and the quality of the dental team treating residents. A majority of all participants were satisfied or very satisfied (84%) with how residents' oral hygiene needs were being met (Figure 2). However, 41% of administration and direct care staff at Facility C were very dissatisfied/dissatisfied though participating in the Oral Health LTC Program. That same facility also had more dissatisfaction with the quality of care provided than other facilities, though for this measure, a majority were still very satisfied or satisfied overall (93%). Figure 3.

Figure 2. Satisfaction with way Oral Hygiene Needs of Residents were Being Met by Facility

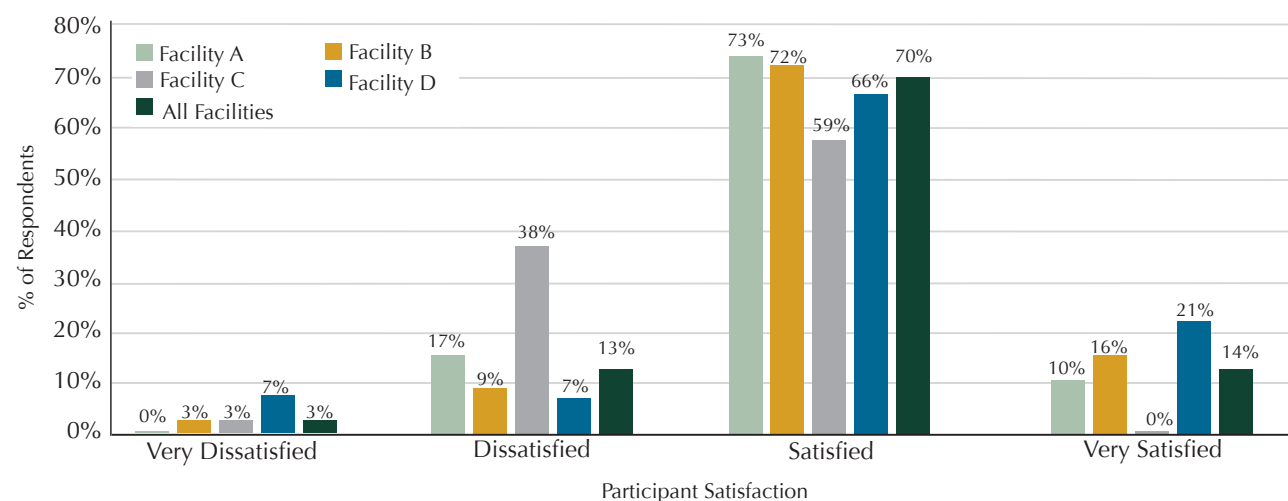
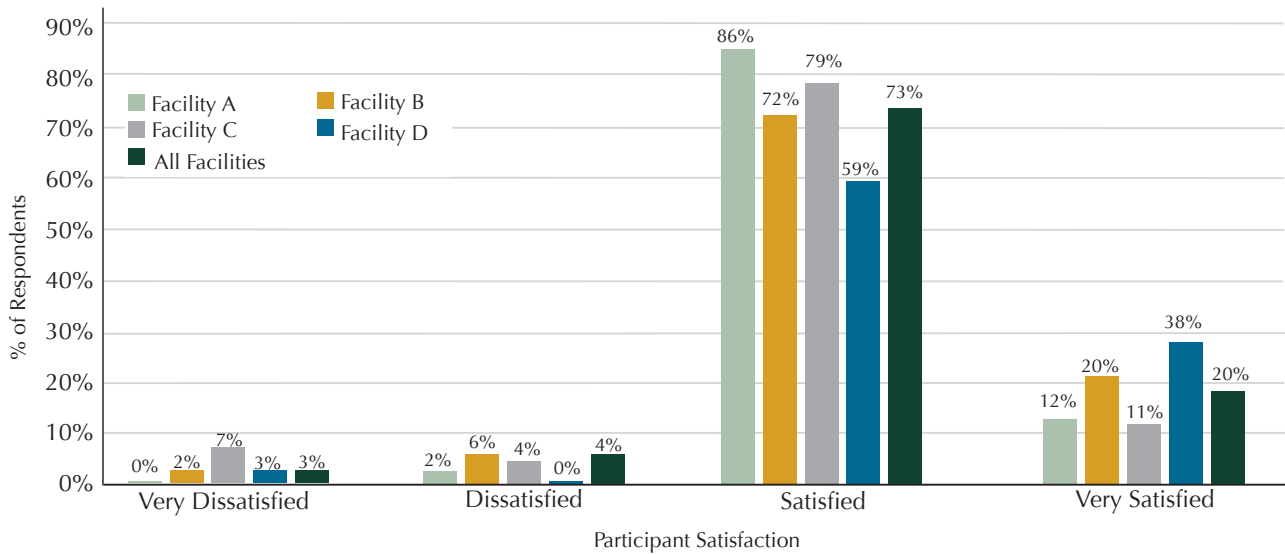


Figure 3. Satisfaction with Quality of Dental Treatment Provided by Dental Professionals by Facility

To assess the efficacy of the program, participants were asked to indicate how much they agreed or disagreed with nine statements related to the program's impact. Each statement required the respondents to mark one of the following: strongly disagree (1); disagree (2); agree (3); strongly agree (4); do not know (n/a).

A majority of all staff (administration, DoN, and other nursing and nurse aide staff) working within all four facilities agreed or strongly agreed (84%) that by participating in the program, the access to oral health services had improved for residents (Figure 4). Likewise, the program had been easy to implement (Figure 5), though fewer staff strongly agreed to this statement than the previous (16% compared to 34%). Resources provided were beneficial for both residents (84% agreed/strongly agreed) and staff (77% agreed/strongly agreed). Figures 6-7.

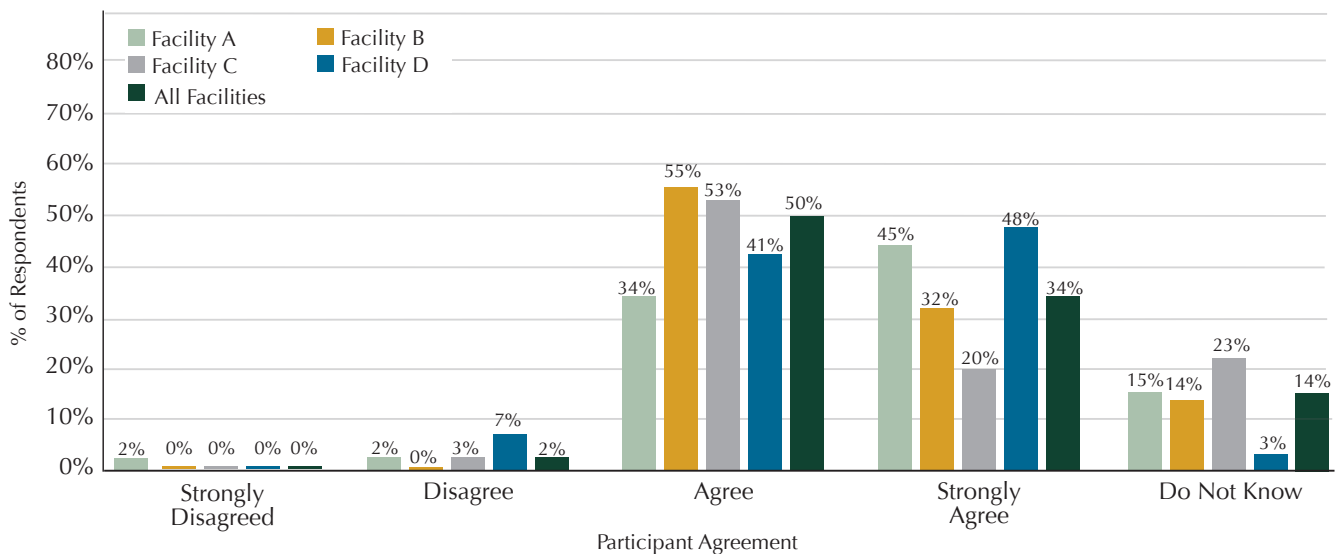
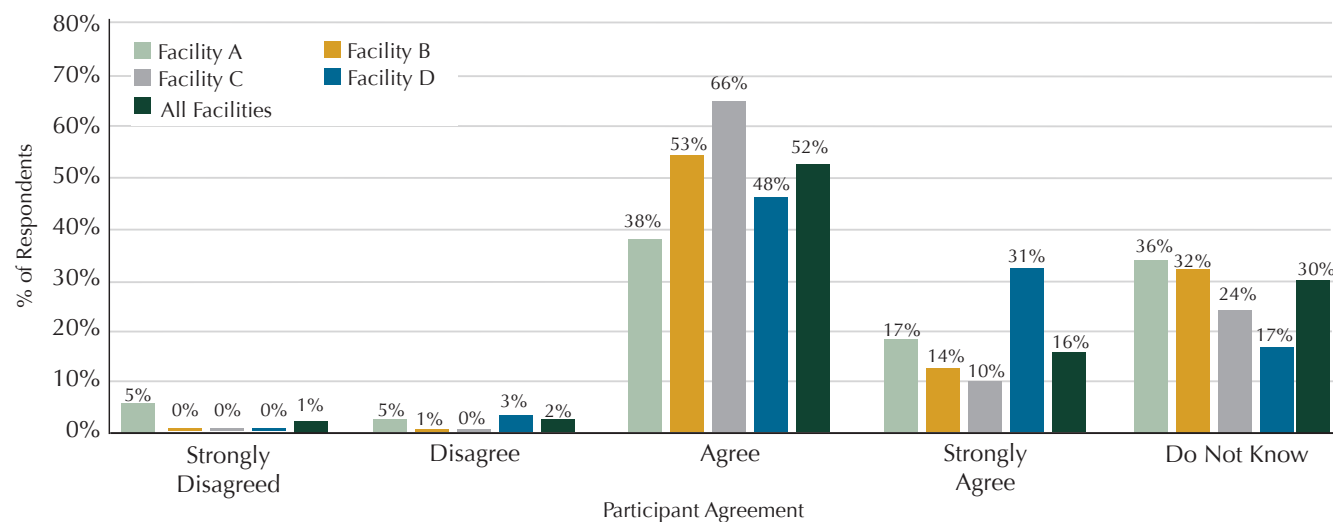
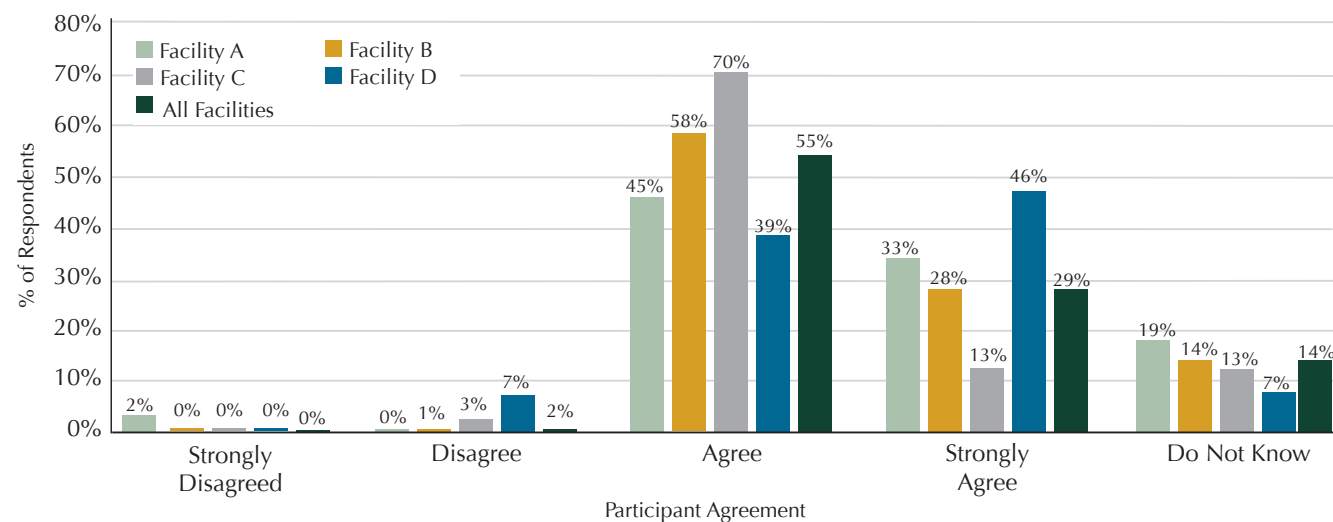
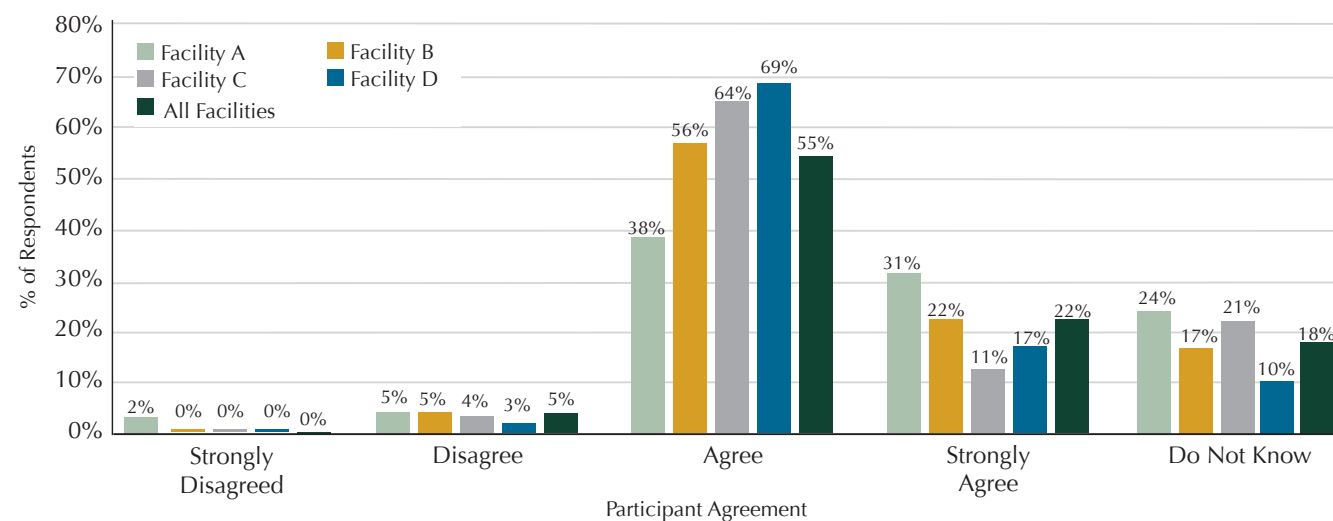
Figure 4. Participation Improved Access to Oral Health Services for Residents: Facility Agreement

Figure 5. The Program was Easy to Implement: Facility Agreement**Figure 6. The Resources Provided were Beneficial for Residents: Facility Agreement****Figure 7. The Resources Provided were Beneficial for Staff: Facility Agreement**

Facility A observed the least resistance to the program among nursing and nurse aide staff; only 19% agreed or strongly agreed that nursing and nurse aide staff resisted participation compared to 38%, 40%, and 40% among Facility B, C, and D respectively. Figure 8. Facility staff perceived less resistance among residents than they did among other staff. Figure 9. Many were unaware of whether or not residents' families resisted participation. Figure 10.

Figure 8. Nursing & Nurse Aide Staff Resisted Participation in the Program: Facility Agreement

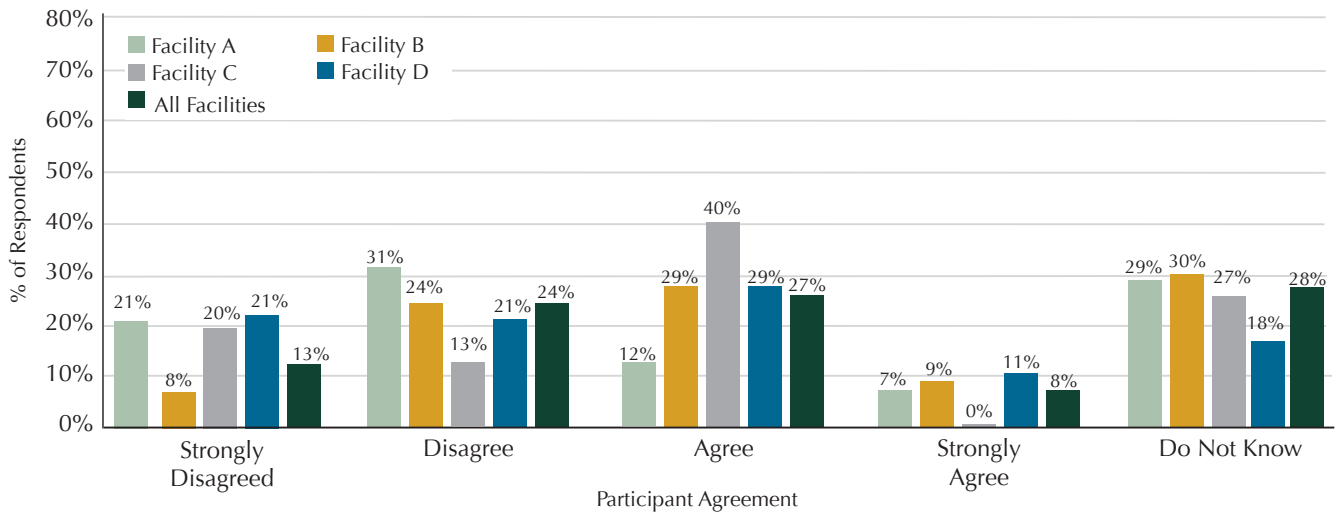


Figure 9. Residents Resisted Participation in the Program: Facility Agreement

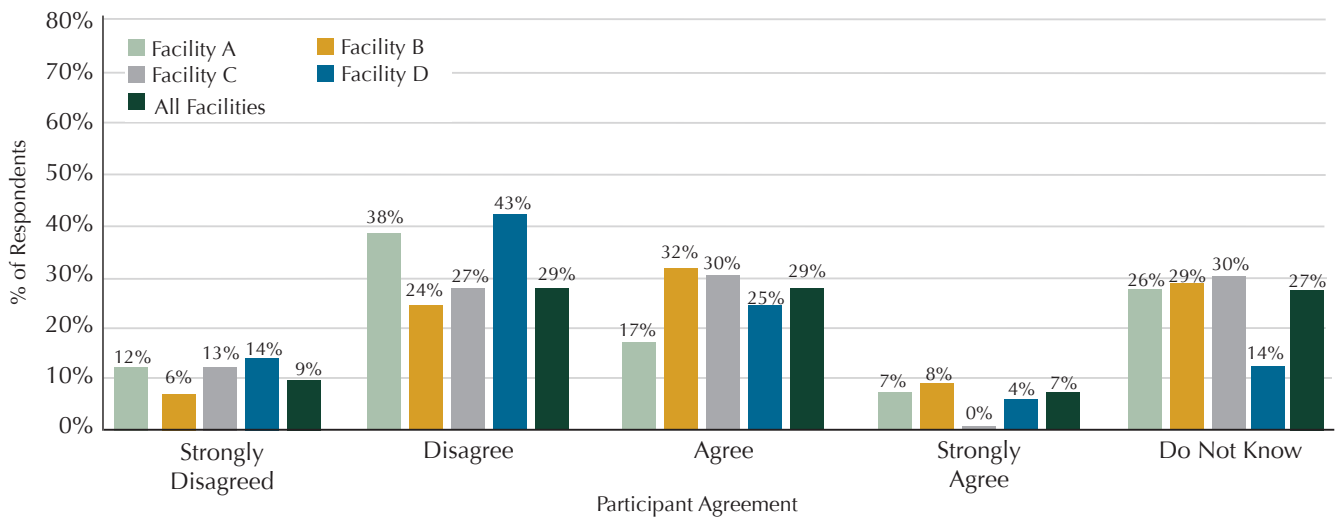
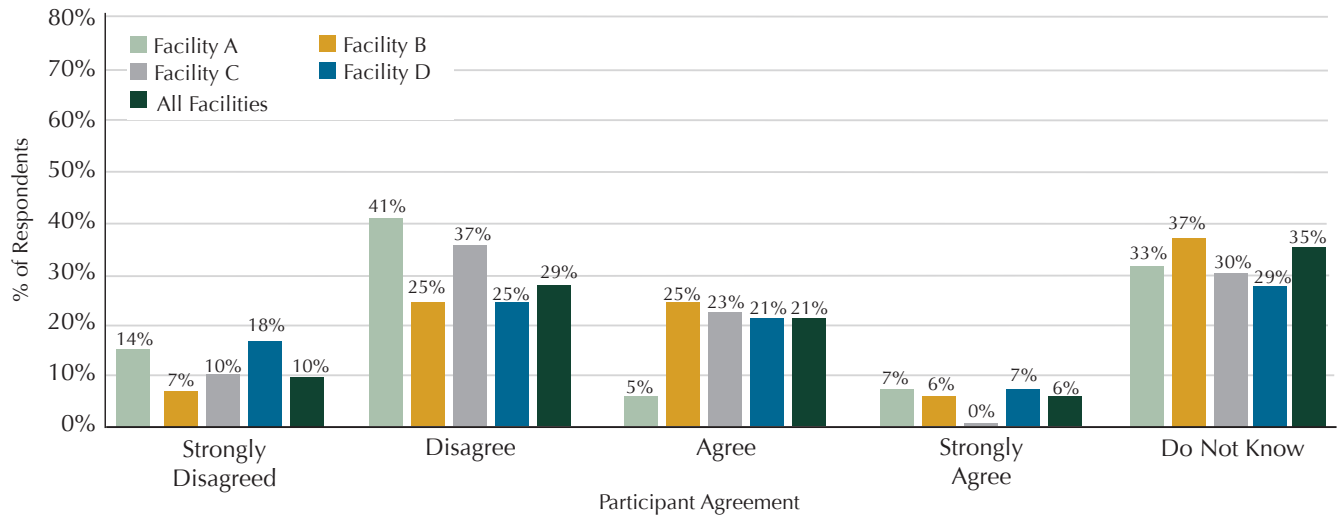


Figure 10. Residents' Family Members Resisted Participation in the Program: Facility Agreement

A majority of staff at all four participating LTC facilities agreed or strongly agreed that oral health knowledge among both staff, and residents improved as a result of participation in the program. However, administration and direct care staff at Facility A were more likely to disagree/strongly disagree that knowledge had improved for both.

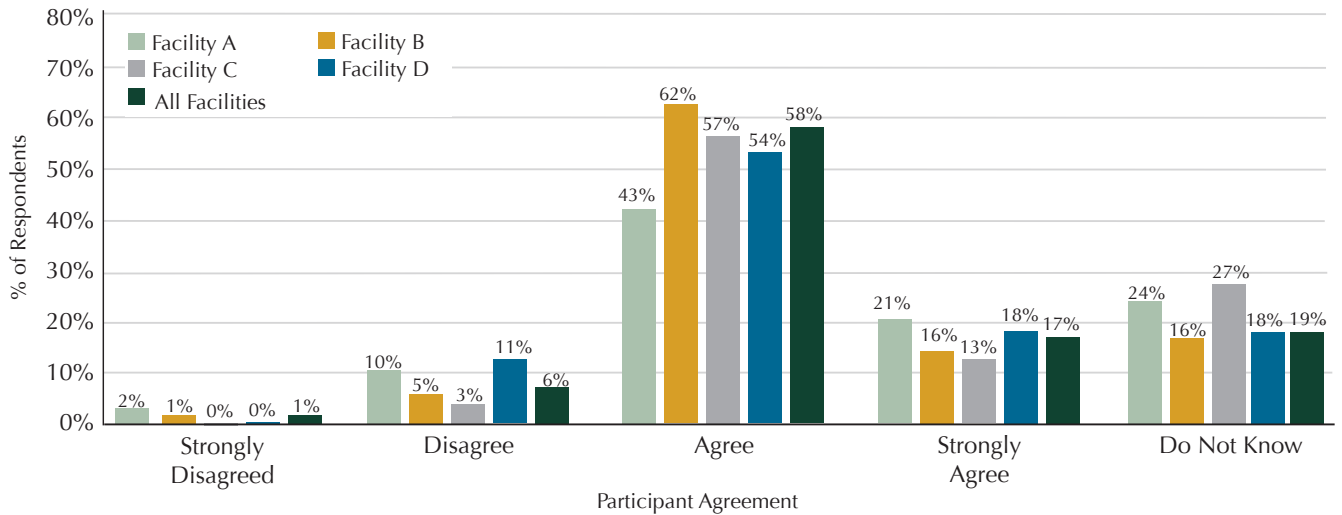
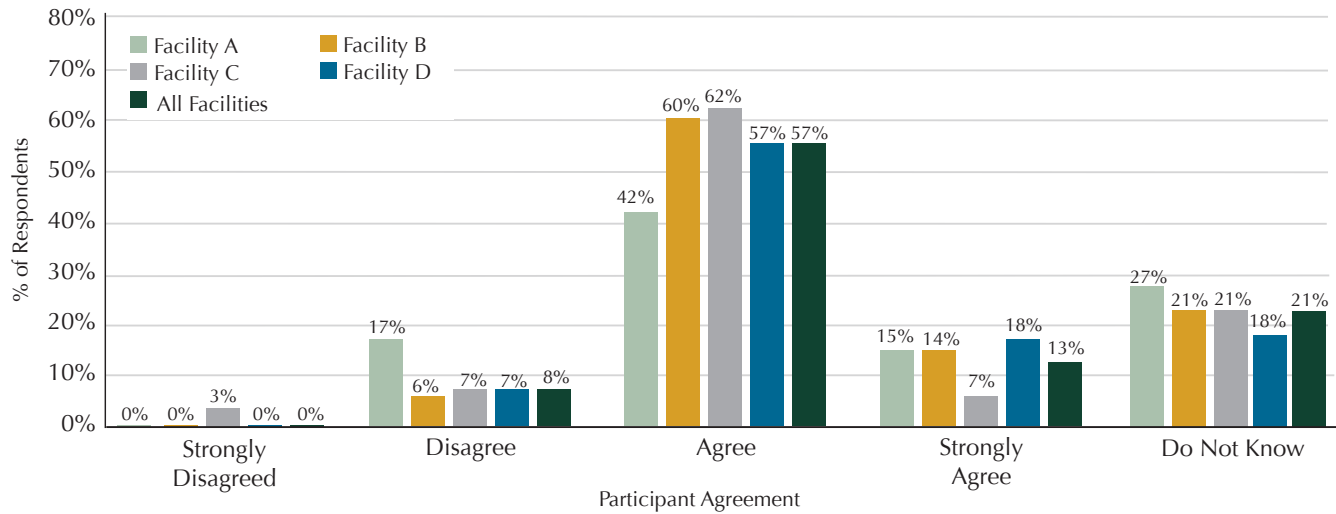
Figure 11. Oral Health Knowledge/Awareness Among Staff Improved: Facility Agreement

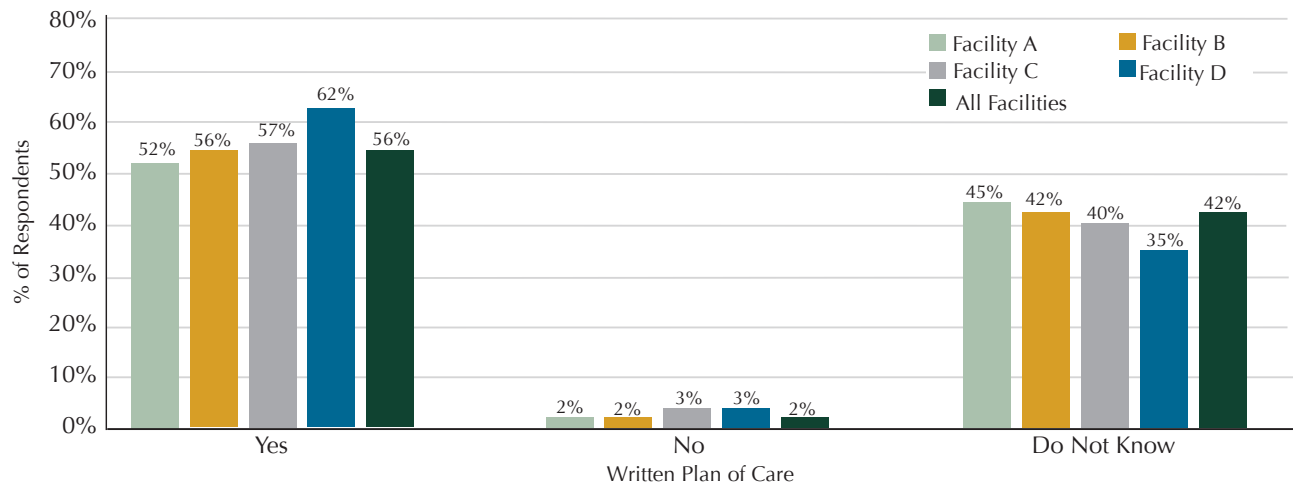
Figure 12. Oral Health Knowledge/Awareness Among Residents Improved: Facility Agreement

Current Oral Health Policies, Procedures, & Perceptions

Nearly all (97%) respondents (administrator, DoN, and nursing and nurse aide staff) across all four facilities believed that oral health was a priority of daily resident care at their respective facilities. Participants then responded to a series of questions related to the oral health policies and procedures employed to determine if this priority was evident within applied care.

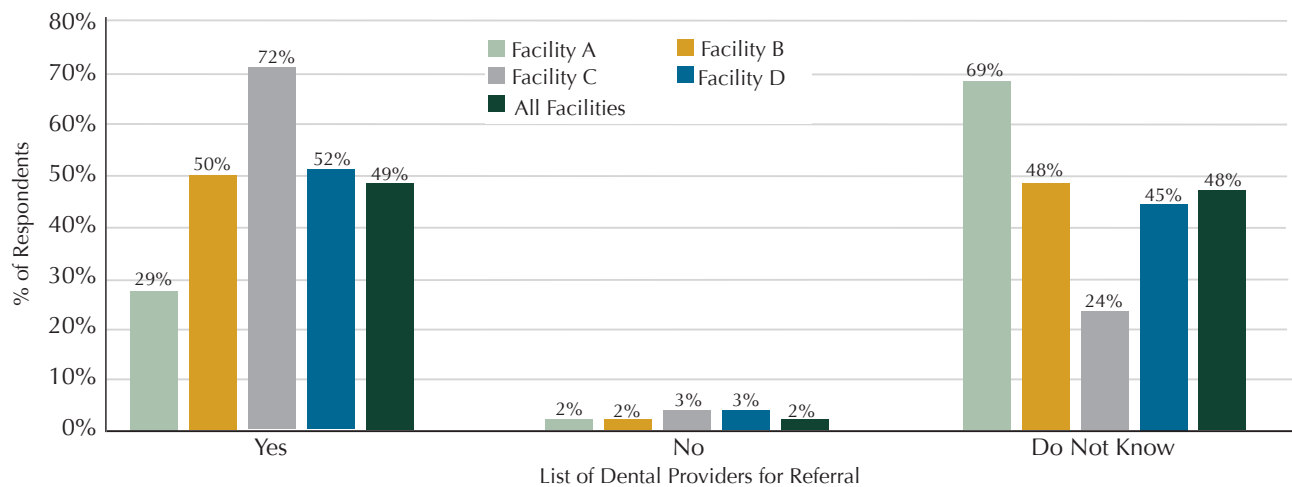
Two facilities indicated that no oral health policy, procedure, or care practice has been revised or developed as a result of participation in the LTC Oral Health Program (Facilities A and C). Administrative staff at Facilities B and D did not agree as to whether or not policies had been reviewed or developed.

All four facilities had a written plan of care for dental needs. However, a large percentage of staff across all facilities (42%) were unaware of whether or not their respective facilities had a plan of care (Figure 13). If care staff are unaware of the written plan of care for dental needs, they are not capable of executing the policy. There is opportunity for administration at all four facilities to educate staff on the plan and its content in an effort to improve the overall culture of oral health among LTC staff.

Figure 13. Knowledge of Written Plan of Care for Dental Needs by Facility

Those who were aware of the dental plan of care did not agree as to whether or not a dental professional had assisted in development or reviewed the plan of care. The administrators and DoNs at one facility indicated that a dental professional had not assisted or reviewed the plan of care. DoNs at two of the four facilities stated there was assistance from a dental provider, though administrators at those same facilities did not know. Finally, the fourth facility did not have agreement among DoNs and administrators as to whether or not assistance/review had been provided.

Three of the four facilities had a list of dental providers for referral as confirmed by the DoNs and other administration. The administrator at the fourth facility stated that there was no list for referral. Facility C is the only facility in which a large majority (72%) of all administrative and direct care staff were aware of a list of dental providers for referral. Facility A had the largest percentage of staff unaware of a referral list (69%). Figure 14.

Figure 14. Knowledge of List of Dental Providers for Resident Referral by Facility

A large majority of staff at Facility B indicated that training was provided to care staff regarding oral health concerns (79%). Figure 15. While Facility B had a greater knowledge of care staff training among employees than the other facilities, only 33% of those same individuals identified training provided for residents on the importance of good oral health. Figure 16. Facility D had the greatest percentage of staff identify oral health training for residents (55%).

Figure 15. Knowledge on Oral Health Training Provided to LTC Staff by Facility

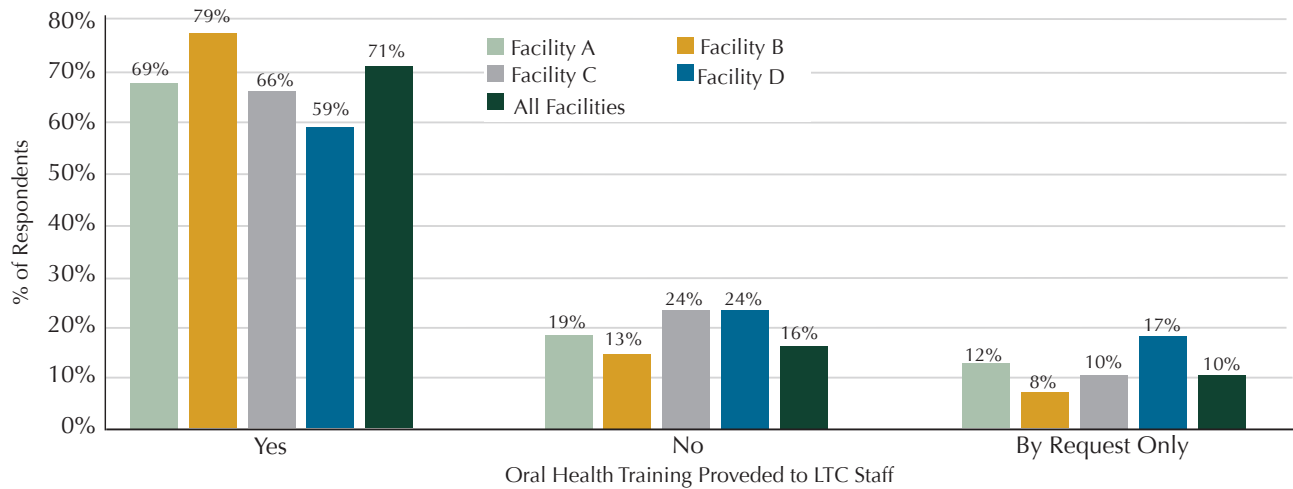
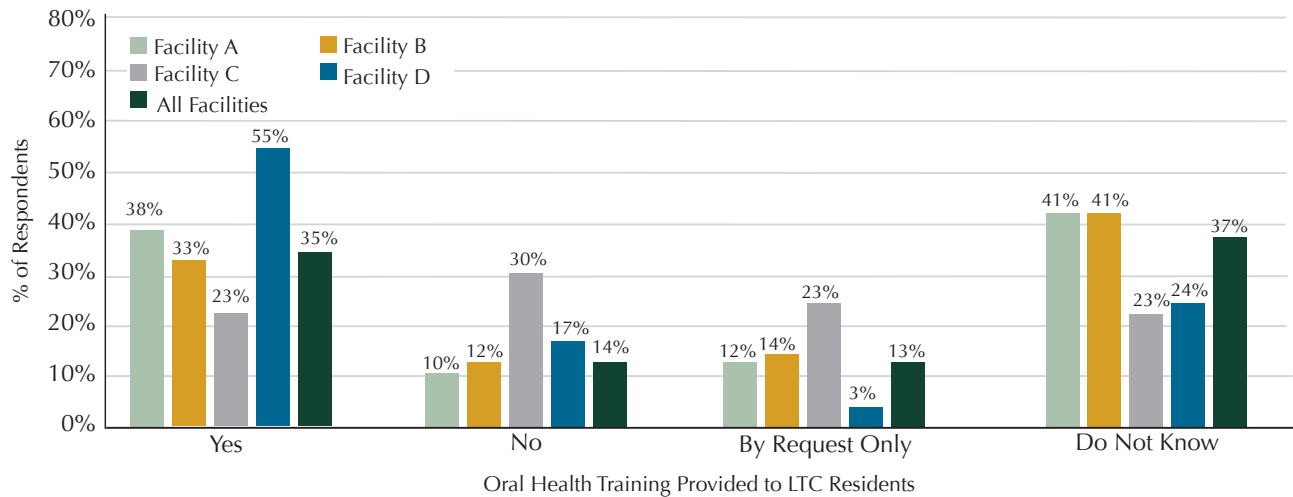


Figure 16. Knowledge on Oral Health Training Provided to LTC Residents by Facility



While training is not consistently identified as offered to residents in the LTC facility, respondents indicated that residents were provided with oral health supplies (96%) and that care staff assisted all residents with their daily oral health care (96%). Residents were not typically responsible for their own daily oral health care and instead relied on care staff for assistance.

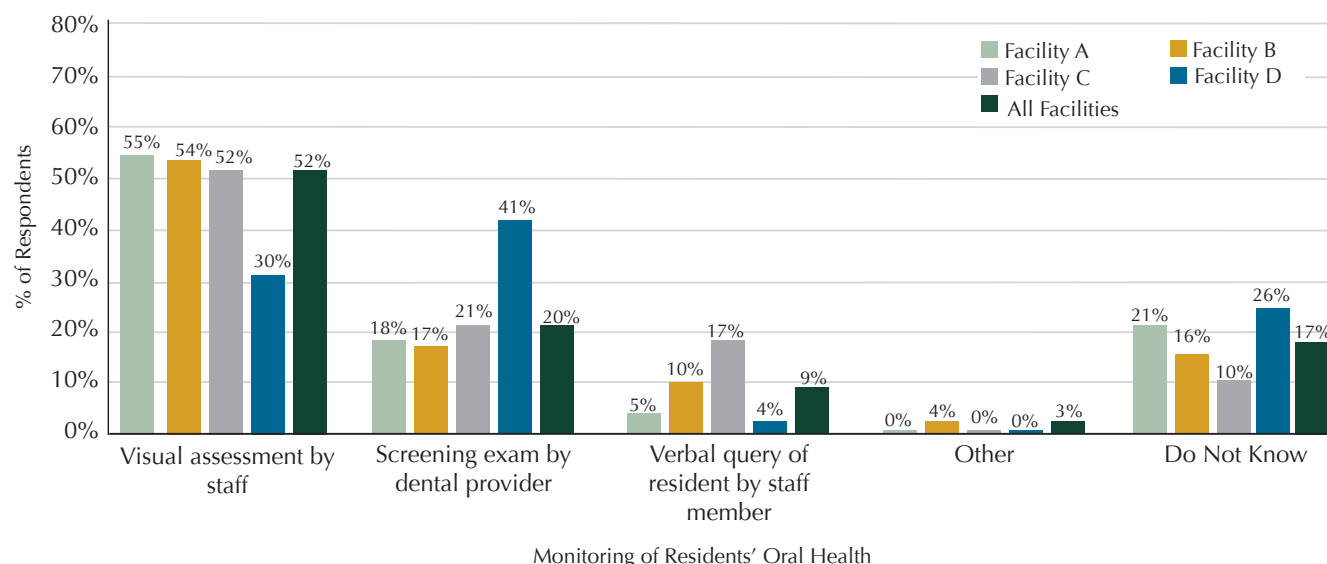
Care staff training was said to have been provided by the majority overall, yet hardly any participants (82%) had never heard of the free Smiles for Life Training. Subsequently, few had completed the free oral health curriculum.

Smiles for Life is a free, online oral health training curriculum. Healthcare providers may take advantage of this training to develop knowledge about a variety of oral health care issues. The online training includes the following courses:

- Geriatric Oral Health
- Adult Oral Health
- The Oral Examination
- The Relationship of Oral to Systemic Health
- Child Oral Health
- Acute Dental Problems
- Oral Health and the Pregnant Patient
- Caries Risk Assessment, Fluoride Varnish and Counseling

Learn more about Smiles for Life: www.ndhealth.gov/oralhealth/ndsmilesforlife.htm.

Figure 17. How Resident Oral Health is Monitored by Facility



It is imperative that LTC direct care staff be provided training on oral health care, and be made aware of the dental plans of care and other policies and procedures at their respective facilities. These are the individuals responsible for providing direct oral health care to residents. In fact, a majority of respondents indicated that oral health of residents was most likely monitored by visual assessment by a staff member (52%). Facility D was the only facility in which staff indicated that oral health was predominantly monitored by screening examinations completed by a dentist or dental hygienist (41%) with only 30% indicating it was completed by staff visual assessments. Figure 17.

Oral Health Care Provided & Staff Responsible

Only 7% of all administrative and direct care staff indicated that an oral health exam was not completed upon admission of a new resident. However, a majority did not know (50%). Respondents varied in their identification of who was responsible for the initial exam, with the unit charge nurse identified more often than any other provider type. Responses included:

- Do not know 50%
- Unit charge nurse 17%
- Other RN 6%
- Other 2%
- DDS in LTC facility 4%
- Private DDS office 3%

Table 1. Care Staff Responsible for the Initial Oral Health Exam Upon New Resident Admission by Facility

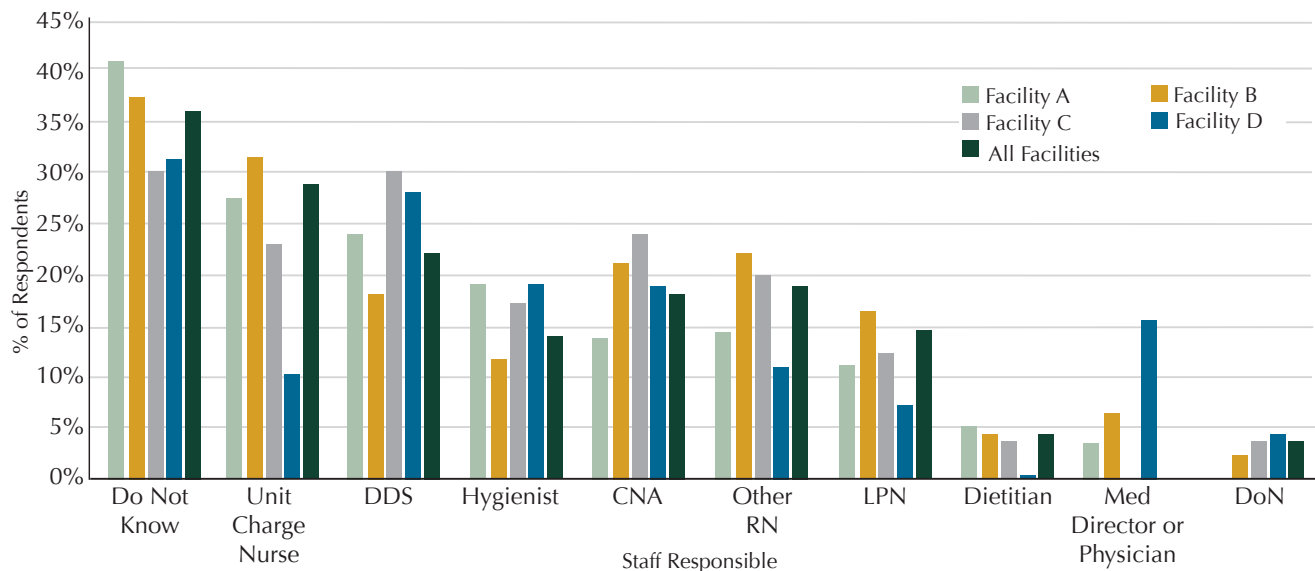
	No Exam	Unit Charge Nurse	Other RN	Other	DDS in LTC Facility	Private DDS Office	Dental Hygienist at private office	Do Not Know
Facility A	2%	29%	7%	2%	10%	0%	2%	45%
Facility B	8%	12%	5%	1%	2%	4%	2%	52%
Facility C	10%	33%	7%	3%	3%	3%	0	40%
Facility D	10%	10%	3%	7%	7%	3%	0	52%
All Facilities	7%	17%	6%	2%	4%	3%	2%	50%

Similarly, the unit charge nurse was also identified most frequently as responsible for examining residents' mouths after the initial screen. Respondents were asked to identify any and all staff responsible and were able to select more than one. Staff primarily responsible were:

- Unit Charge Nurse (28%)
- DDS (21%)
- CNA (20%)
- Other RN (19%)
- LPN (14%)

Table 2. Care Staff Responsible for Examining Residents' Mouths after the Initial Screen by Facility

	No Exam	Unit Charge Nurse	Other RN	Dentist	CNA	LPN	Do Not Know
Facility A	0%	29%	14%	24%	14%	12%	41%
Facility B	4%	32%	21%	17%	20%	16%	37%
Facility C	17%	23%	20%	30%	23%	13%	30%
Facility D	0%	10%	10%	28%	21%	7%	31%
All Facilities	4%	28%	19%	21%	20%	14%	36%

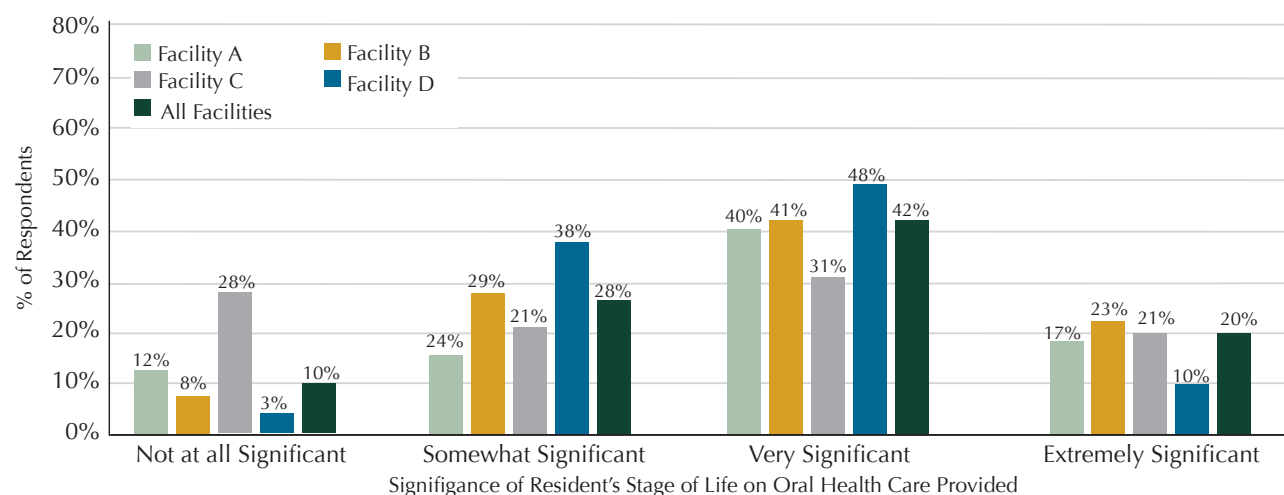
Figure 18. Staff Responsible for Examining the Mouth after Initial Screen by Facility

Though staff were identified as responsible for examining residents' mouths after the initial screen, respondents indicated that mouths were most commonly only examined quarterly (19%) though a larger proportion of staff (52%) did not know how often. The facility was participating in Bridging the Dental Gap, in which an oral health provider visits the facility to provide oral health services to residents; yet, 48% of participants indicated that residents generally went to a general dentist's office to receive outside treatment for a dental problem; 37% did not know.

Staff generally did not know how long a resident would wait to see a dentist for a non-emergent dental need (57%). Those that indicated a time frame primarily identified longer than seven days (19%). A non-emergent dental need was defined as: routine visits; periodic exams; preventive services; and, basic restorative dental services without acute or chronic pain such as a filling, orthodontics, or periodontics.

The oral health care and services provided to the residents at the LTC facility were contingent on the resident's stage of life. Roughly 62% of LTC administrative and direct care staff indicated that a resident's stage of life played a very or extremely significant role in determining the oral health services provided. Facility C had the largest percentage of staff indicate that stage of life was not at all significant in predicting oral health services provided to residents (28%). Figure 19.

Figure 19. Role Resident's Stage of Life Played in Determining Oral Health Services Provided



Barriers to Providing Oral Health Care

Respondents rated each barrier on the following scale: 1 = not a problem; 2 = minor problem; 3 = moderate problem; 4 = serious problem. Only one barrier was identified as a moderate to serious problem (3.3) on average. However, this barrier was only rated by the administrators and DoNs.

The top five barriers identified as a minor to serious problem among administration and direct care staff collectively among all four participating facilities included:

- Willingness of a DDS to accept Medicaid 3.3*
- Resident's cognitive capacity 2.4
- Resident's financial concerns 2.4*
- Residents willingness to allow exam of mouth 2.3
- Resident's physical capability/condition 2.3

Average ratings with an asterisk (*) are those that were only rated by administration and DoNs. After omitting barriers that nursing and nurse aide staff did not rate, no barrier was identified as a moderate or serious problem on average. The top five barriers rated as minor to moderate included:

- Resident's cognitive capacity 2.4
- Residents willingness to allow exam of mouth 2.3
- Resident's physical capability/condition 2.3
- Turnover among nursing/nurse aide staff 2.2
- Resident's fear of DDS 2.1

Figure 20. Barrier Severity, Average Score for all Staff by Facility: Top 10

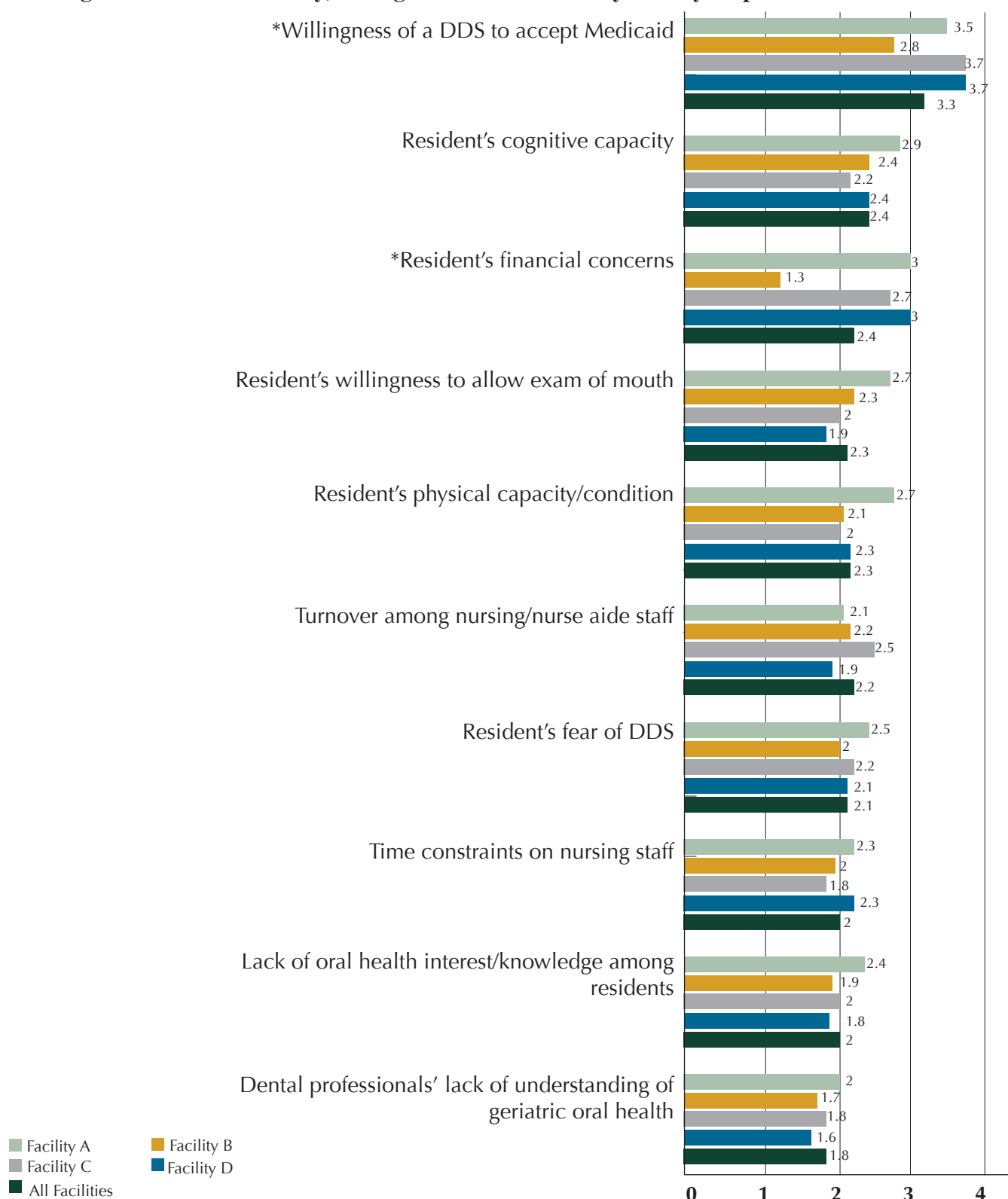
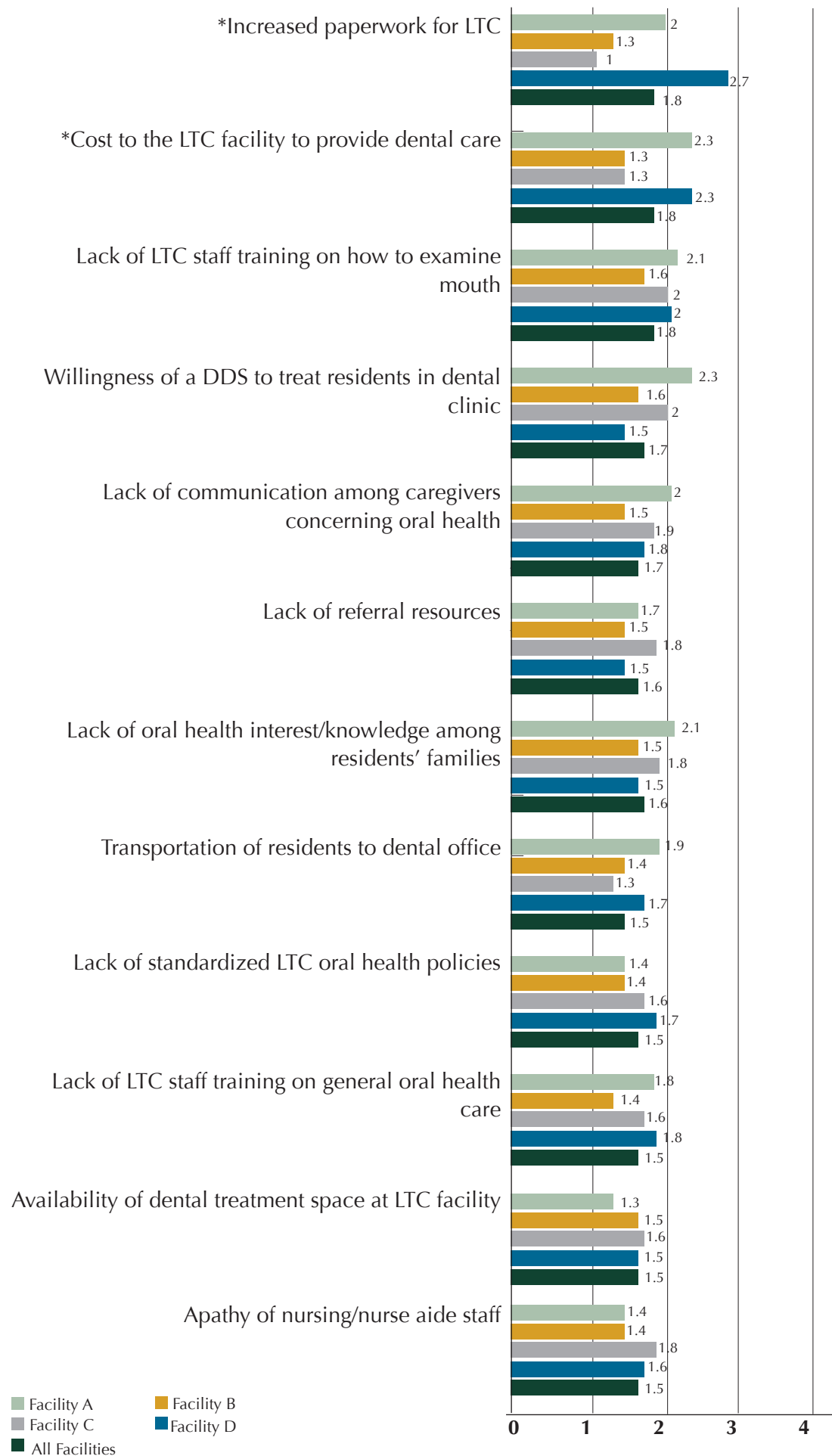


Figure 21. Barrier Severity, Average Score for all Staff by Facility

Results: Provider Variability

While data indicated that the program's efficacy was variable between the participating LTC facilities, each individual facility report also indicated varied perceptions of impact by provider type. There was considerable disagreement between RN, LPN, and CNA on a variety of oral health care practices in the LTC facilities, and a gap between perceived oral health knowledge as well. DoN and administrator responses are discussed in the analyses, but are largely omitted from graphic presentation because of their small response rate (six administrators and eight DoNs total). When totals are presented in the following analyses, "other" nursing and nurse aide staff are omitted for clarity. Nursing and nurse aide staff refer to those who identified as RN, LPN, or CNA.

Program Satisfaction & Impact

Participants rated their satisfaction with both the way in which residents' oral hygiene needs were being met while participating in the LTC Oral Health Program, and the quality of the dental team treating residents. A majority of all provider types were either satisfied or very satisfied with how residents' oral hygiene needs were being met; however, only 28% of LPNs reported dissatisfaction. Figure 22. Though there was a level of dissatisfaction with how the oral health needs of residents were begin met, nearly all nursing and nurse aide staff (93%) were satisfied/very satisfied with the quality of the dental treatment that was provided by dental professionals to the LTC residents. Figure 23.

Figure 22. Satisfaction with way Oral Hygiene Needs of Residents were Being Met by Provider Type

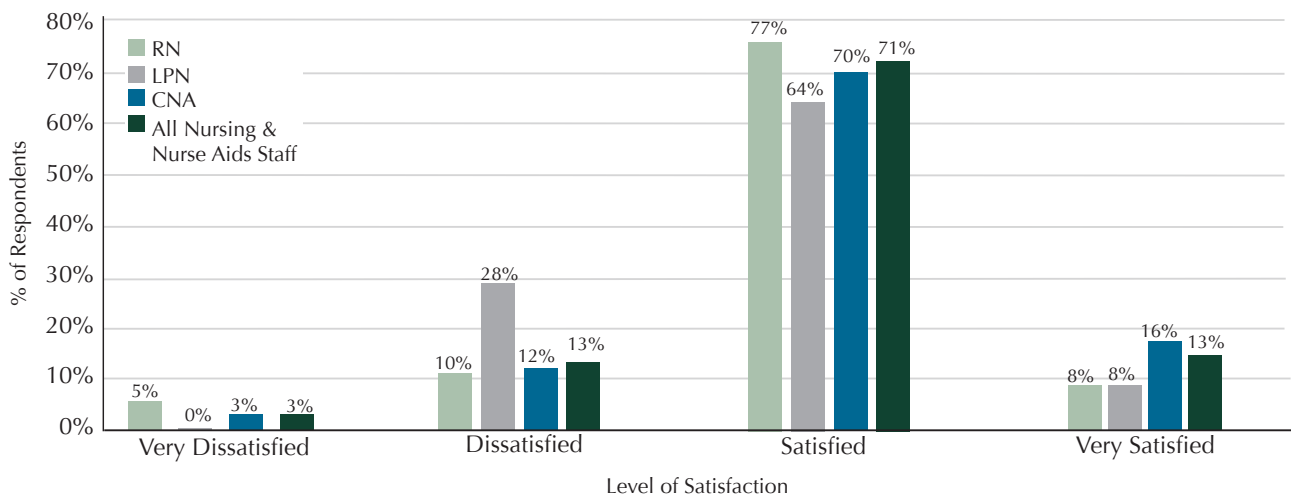
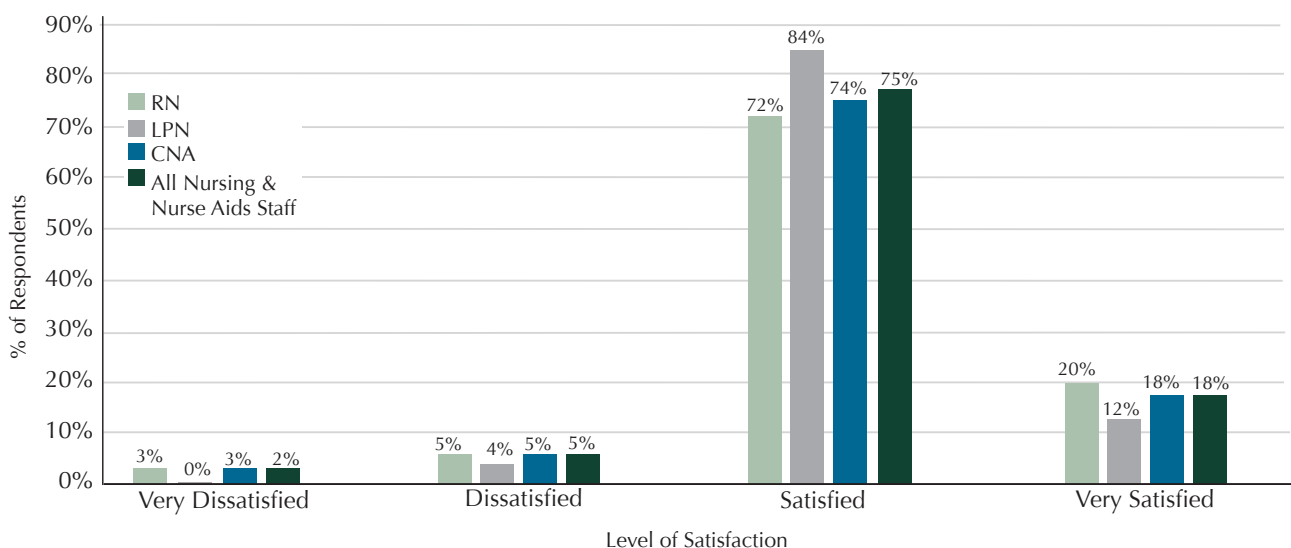


Figure 23. Satisfaction with Quality of Dental Professionals' Dental Treatment by Provider Type



To assess the efficacy of the program, participants were asked to indicate how much they agreed or disagreed with nine statements related to the program's impact. Each statement required the respondents to mark one of the following: strongly disagree (1); disagree (2); agree (3); strongly agree (4); do not know (n/a).

A majority of all staff (administration, DoN, and other nursing and nurse aide staff) agreed or strongly agreed (84%) that by participating in the program, the access to oral health services had improved for residents at the facility. RNs were the most likely provider to strongly agree that access had been improved for residents (53%). Figure 24. The program had been easy to implement (67% agreed/strongly agreed), and resources provided were beneficial for both residents (85% agreed/strongly agreed) and staff (79% agreed/strongly agreed). Figures 25-27. Again, it was RNs who were most likely to strongly agree to the benefit of the oral health resources.

Figure 24. Participation Improved Access to Oral Health Services for Residents: Level of Agreement by Provider Type

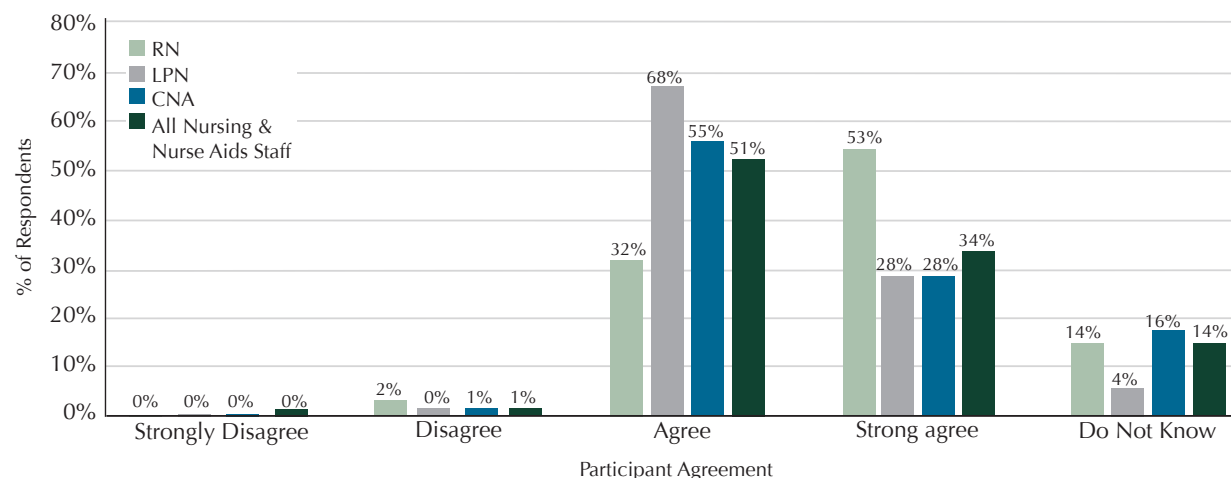


Figure 25. The Program was Easy to Implement: Level of Agreement by Provider Type

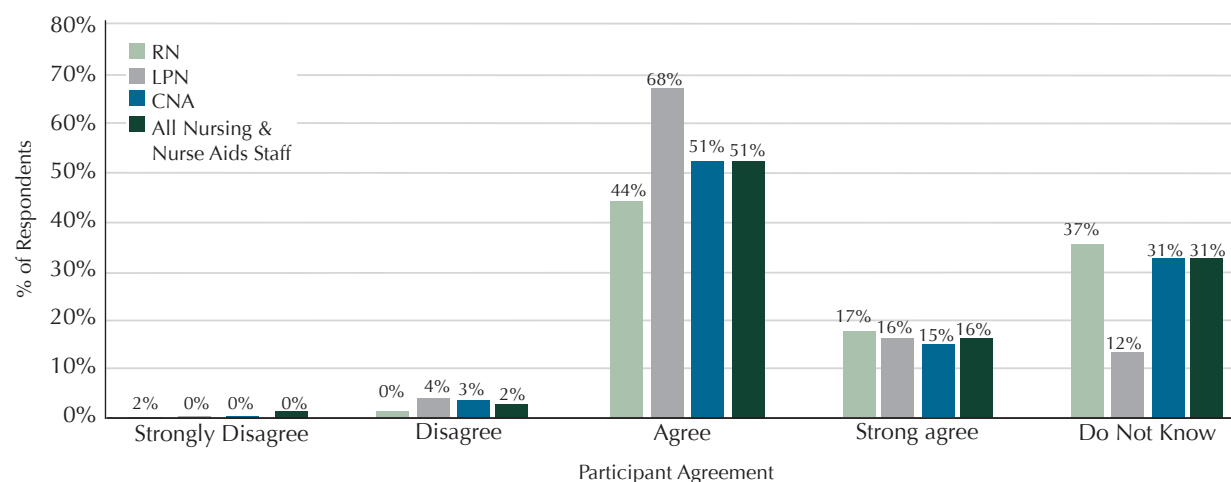


Figure 26. The Resources Provided were Beneficial for Residents: Level of Agreement by Provider Type

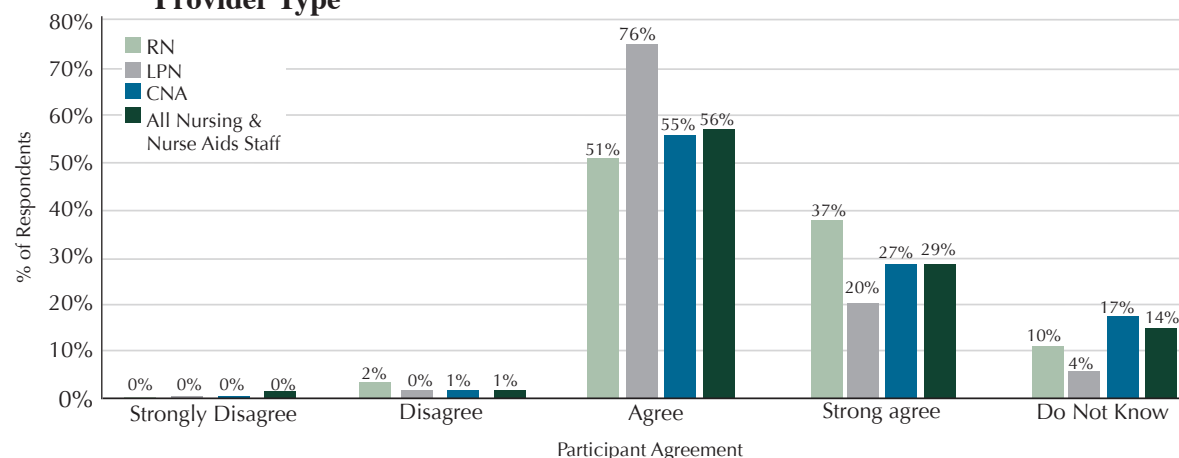
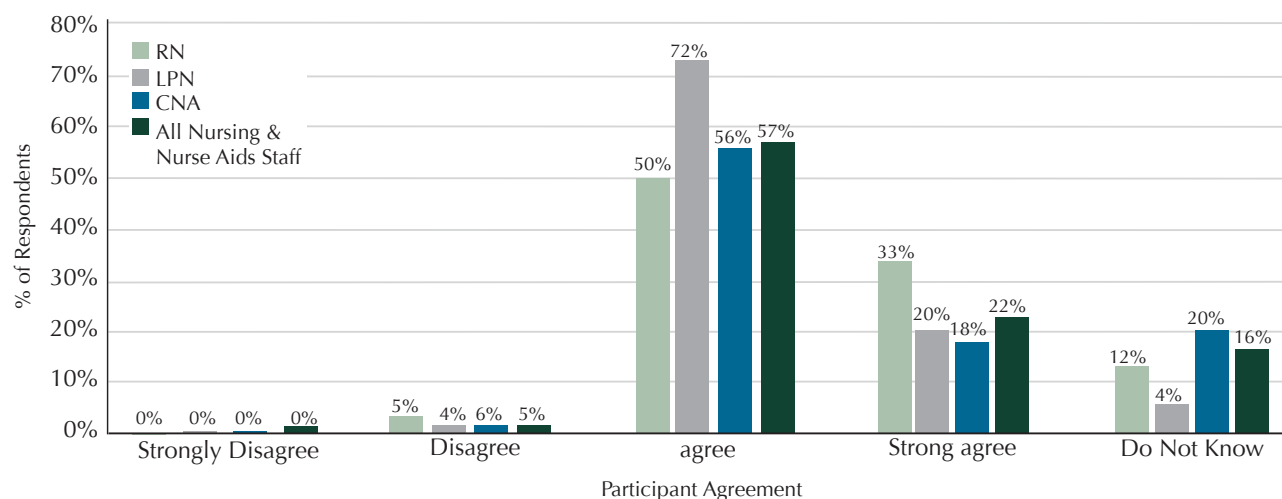


Figure 27. The Resources Provided were Beneficial for Staff: Level of Agreement by Provider Type

RNs were the only nursing and nurse aide provider type in which a majority of respondents (68%) did not perceive resistance to program participation among nursing and nurse aide staff. Roughly 40% of LPNs and 45% of CNAs agreed or strongly agreed that nursing and nurse aide staff resisted participation in the LTC Oral Health program compared to only 14% of RNs. Figure 28. Similarly, it was again CNAs and LPNs that more commonly experienced resistance among residents' family members, and residents' while RNs were less likely to have witnessed said behavior among either. Figures 29-30. Those provider types who engage in more frequent and direct care for residents and their family members perceived greater resistance to the program.

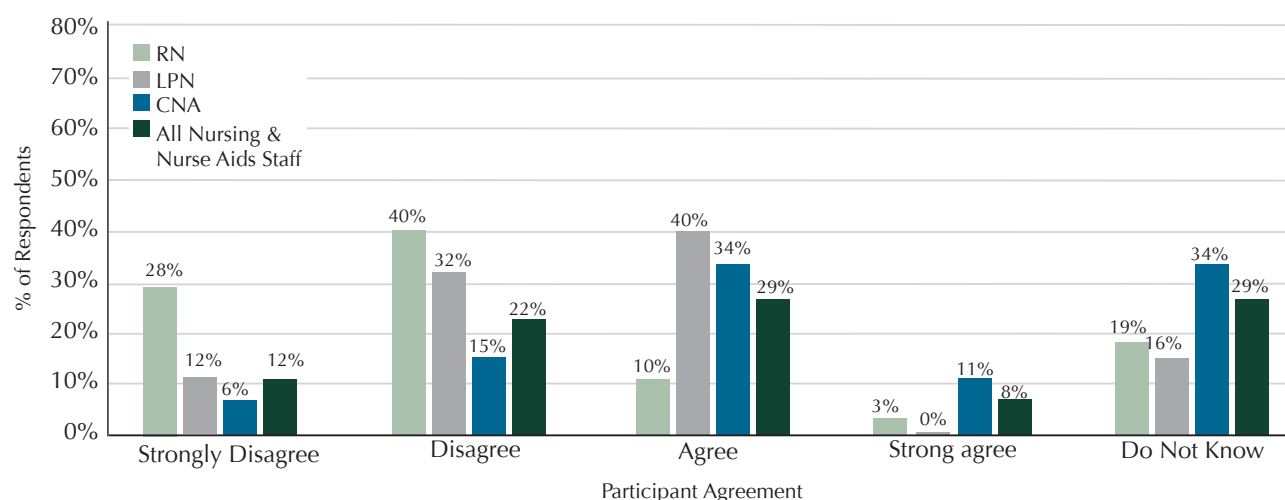
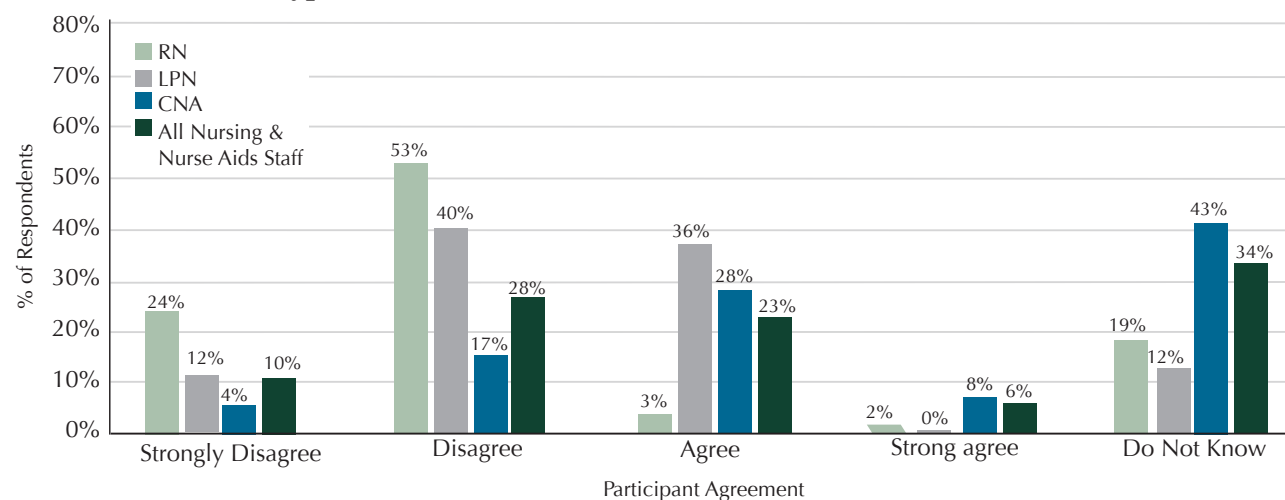
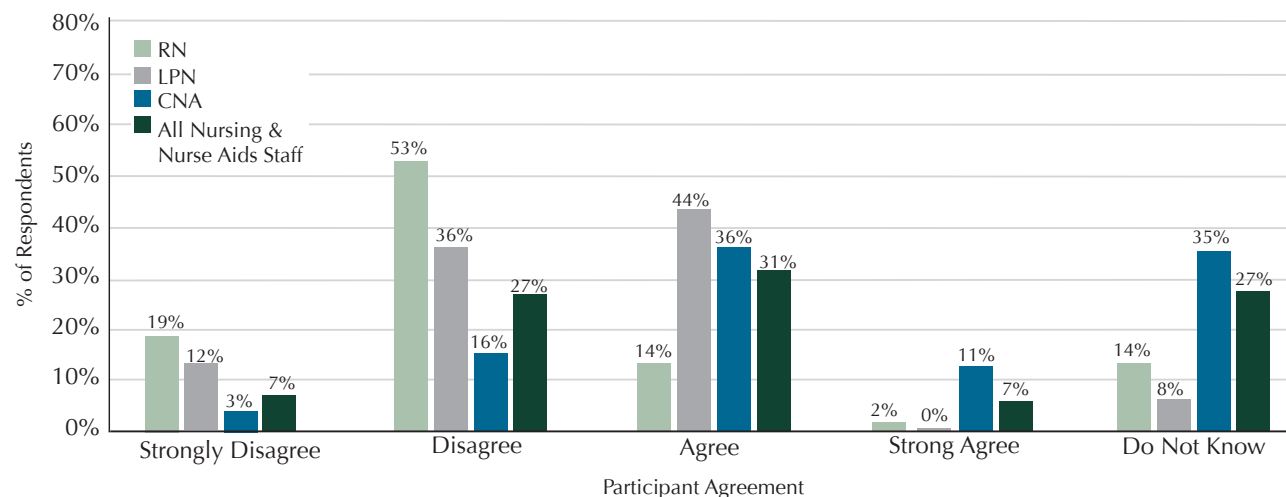
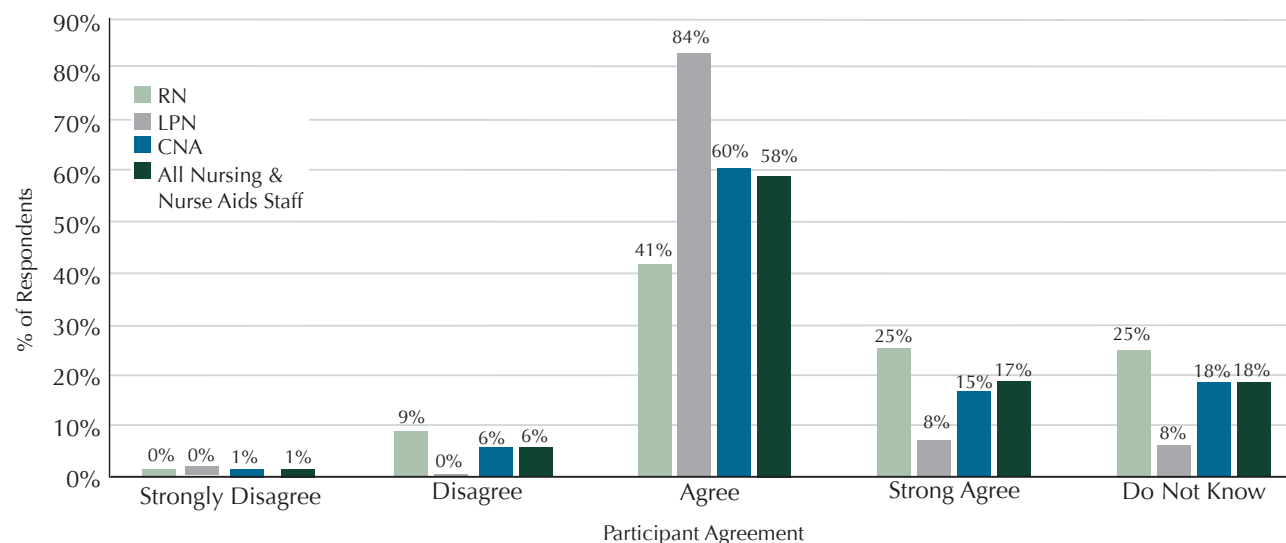
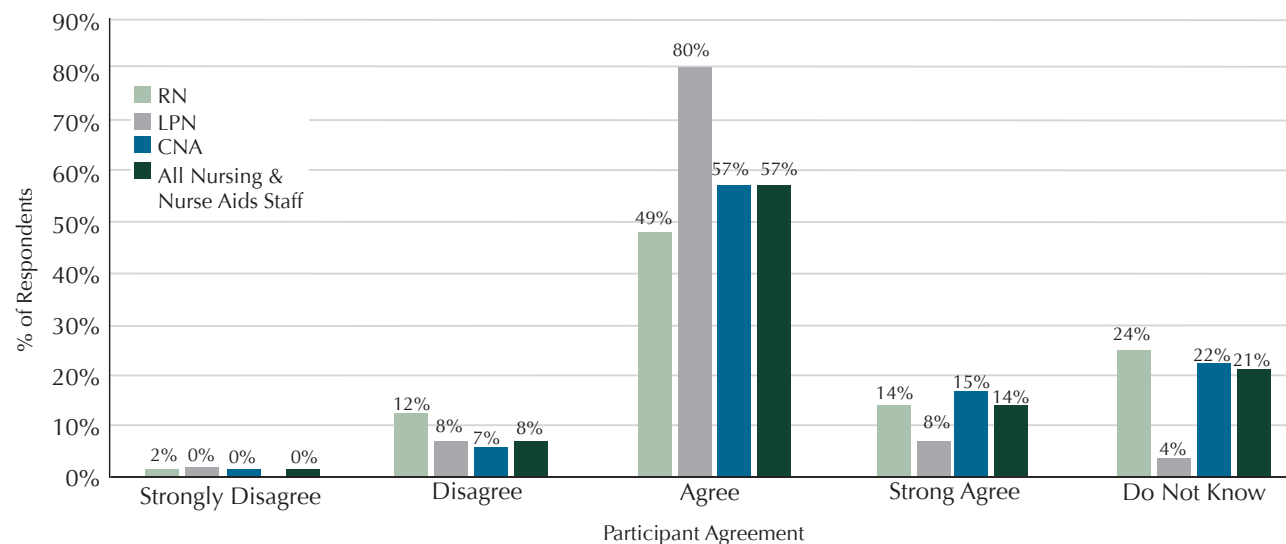
Figure 28. Nursing & Nurse Aide Staff Resisted Participation in the Program: Agreement by Provider Type**Figure 29. Residents' Family Members Resisted Participation in the Program: Agreement by Provider Type**

Figure 30. Residents Resisted Participation in the Program: Agreement by Provider Type

A majority of staff agreed or strongly agreed that oral health knowledge among both staff (Figure 31), and residents (Figure 32) improved as a result of participation in the program.

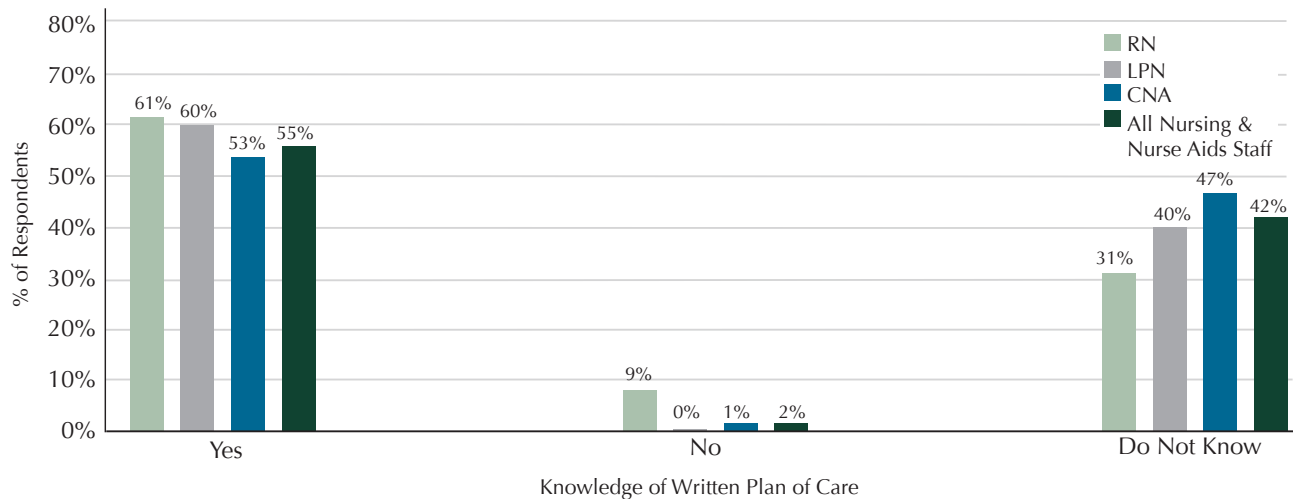
Figure 31. Oral Health Knowledge/Awareness among Staff Improved: Agreement by Provider Type**Figure 32. Oral Health Knowledge/Awareness among Residents Improved: Agreement by Provider Type**

Current Oral Health Policies, Procedures, & Perceptions

Nearly all (97%) respondents believed that oral health was a priority of daily resident care at their respective facilities. Participants responded to a series of questions related to the oral health policies and procedures employed to determine if this priority was evident within applied care.

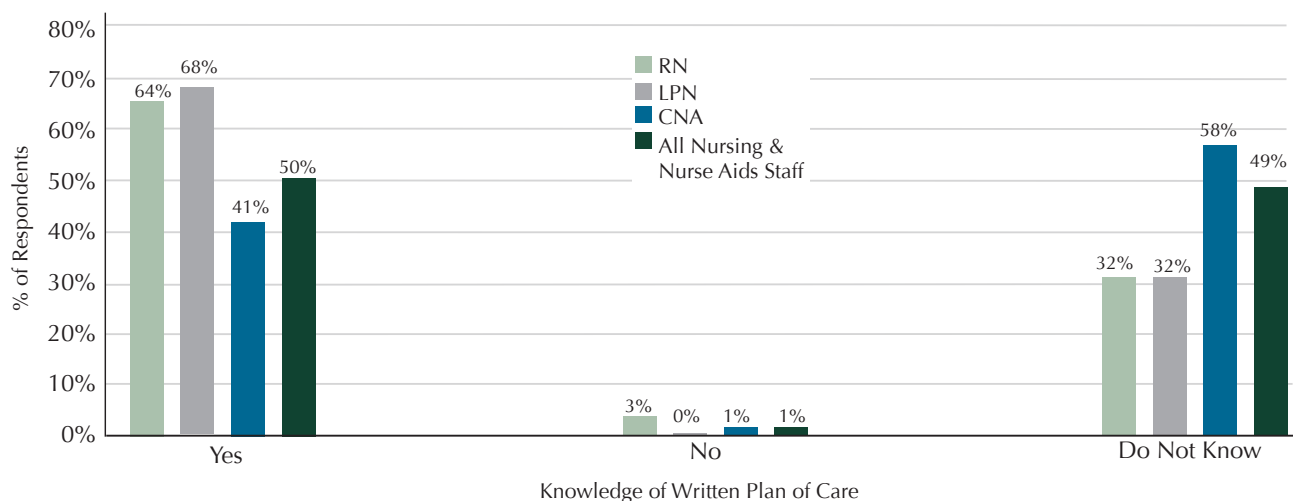
All four facilities had a written plan of care for dental needs. However, a large percentage of nursing and nurse aide staff across all facilities were unaware of whether or not their respective facilities had a plan of care. CNAs were the least likely to be aware of a written plan of care (47% did not know). Figure 33. This is a concern, because CNAs were also the provider type identified most frequently across all four facilities as the provider responsible for the day-to-day coordination of a resident's dental plan.

Figure 33. Knowledge of Written Plan of Care for Dental Needs by Provider Type

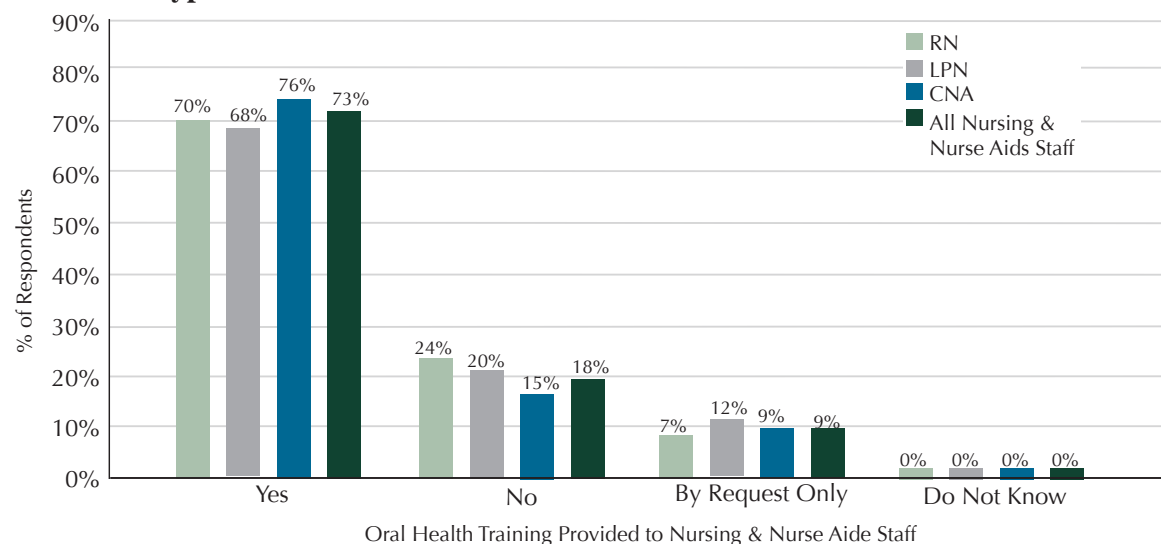


Three of the four facilities had a list of dental providers for referral as confirmed by the DoNs and other administration. The administrator at the fourth facility stated that there was no list for referral, and the DoNs did not know. Among all facilities, only 41% of CNAs were aware of a list of a referral list. Figure 34.

Figure 34. Knowledge of List of Dental Providers for Resident Referral by Provider Type



CNAs were the most likely provider type to identify available oral health training for nursing and nurse aide staff (76% compared to 70% and 68% of RNs and LPNs respectively). However, 24% of RNs and 20% of LPNs did not believe there were trainings made available. Figure 35.

Figure 35. Knowledge of Oral Health Training Provided for Nursing & Nurse Aide Staff by Provider Type

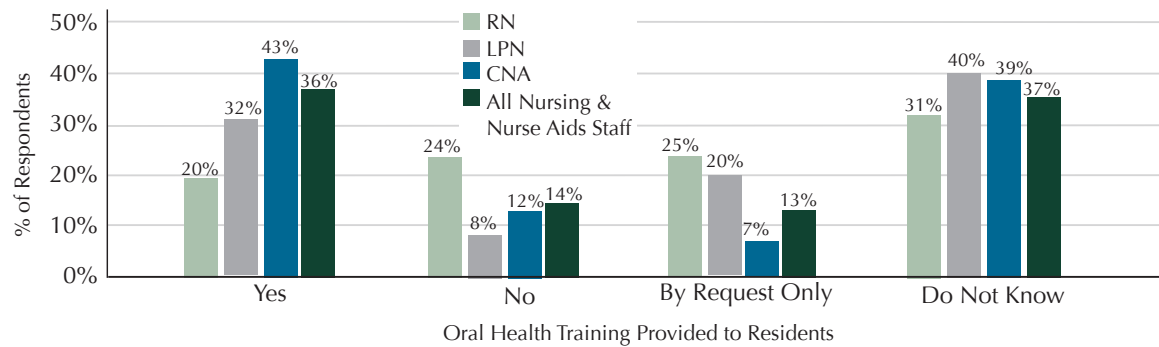
Though a majority of direct care staff recognized trainings were provided, only 13% of the nursing and nurse aide staff had heard of the free Smiles for Life geriatric oral health training, offered online to all North Dakota health providers. Subsequently, only five respondents had completed the free oral health training.

Smiles for Life is a free, online oral health training curriculum. Healthcare providers may take advantage of this training to develop knowledge about a variety of oral health care issues. The online training includes the following courses:

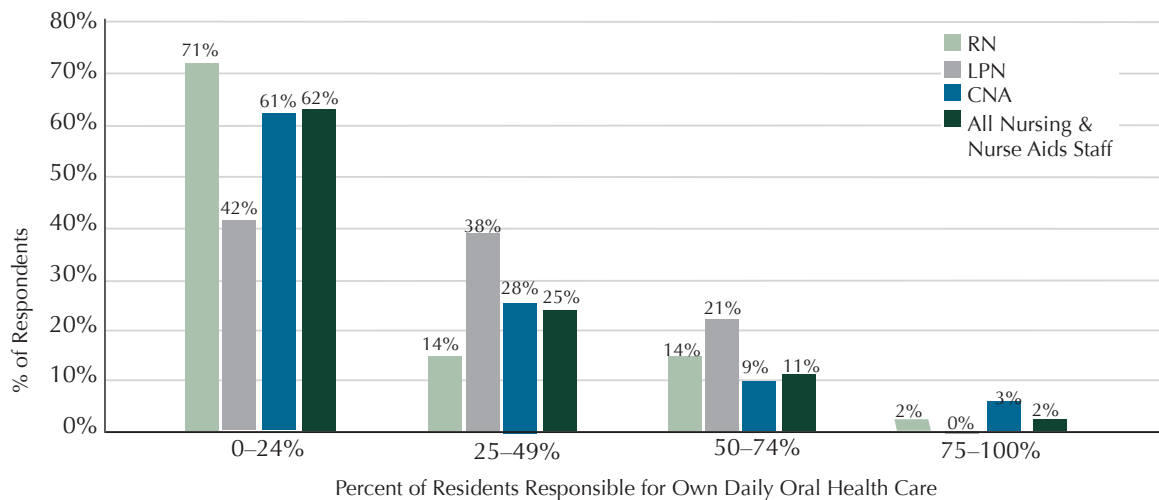
- Geriatric Oral Health
- Adult Oral Health
- The Oral Examination
- The Relationship of Oral to Systemic Health
- Child Oral Health
- Acute Dental Problems
- Oral Health and the Pregnant Patient
- Caries Risk Assessment, Fluoride Varnish and Counseling

Learn more about Smiles for Life: www.ndhealth.gov/oralhealth/ndsmilesforlife.htm.

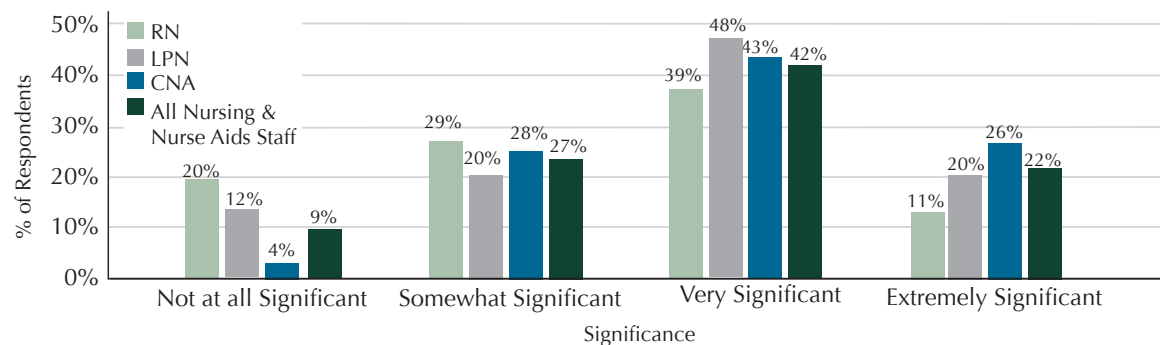
Nursing and nurse aide staff reported oral health training, however, only 36% of nursing and nurse aide staff agreed that education sessions on the importance of good oral health were made available to residents in the facility. CNAs were the most likely (43%) to identify oral health education provided to residents, and it may be that they are the provider offering that information while providing direct care. Figure 36.

Figure 36. Knowledge of Oral Health Training Provided for Residents by Provider Type

While training is not consistently identified as offered to residents in the LTC facility, nursing and nurse aide respondents indicated that residents were provided with oral health supplies (96%) and that care staff assisted all residents with their daily oral health care (96%). Residents were not typically responsible for their own daily oral health care and instead relied on care staff for assistance. However, 71% of RNs identified between 0-24% of residents as responsible for doing their own daily oral health care while only 42% of LPNs and 61% of CNAs reported the same. CNAs and LPNs believed more residents were responsible for their own dental care than RNs did, which may then impact the daily care provided by the LPN and CNA staff. Figure 37.

Figure 37. Providers' Perceptions of Percent of Residents Responsible for Own Daily Oral Health Care

The oral health care and services provided to the residents at the LTC facility were contingent on the resident's stage of life. Roughly 64% of nursing and nurse aide staff indicated that a resident's stage of life played a very or extremely significant role in determining the oral health services provided. However, only 51% of RNs identified stage of life as very/extremely significant compared to 68% of CNAs; conversely 20% of RNs said it was not significant at all while only 4% of CNAs agreed. Findings indicate that CNAs are more likely than RNs to assess a resident's overall health/stage of life before determining the level of oral health care to be provided. Figure 38.

Figure 38. Role Resident's Stage of Life Played in Determining Oral Health Services Provided by Provider Type

Barriers to Providing Oral Health Care

Respondents rated each barrier on the following scale: 1 = not a problem; 2 = minor problem; 3 = moderate problem; 4 = serious problem. Only one barrier was identified as a moderate to serious problem (3.3) on average, but this barrier was only rated by the administration and DoNs. The five barriers identified as a minor to moderate problem among administration and direct care staff collectively included:

- Willingness of a DDS to accept Medicaid 3.3*
- Resident's cognitive capacity 2.4
- Resident's financial concerns 2.4*
- Resident's willingness to allow exam of mouth 2.3
- Resident's physical capacity/condition 2.2

Average ratings with an asterisk (*) are those that were only rated by administration and DoNs. After omitting barriers that nursing and nurse aide staff did not rate, no barrier was identified as a moderate or serious problem on average. The top five barriers rated as minor to moderate problems included:

- Resident's cognitive capacity 2.4
- Resident's willingness to allow exam of mouth 2.3
- Resident's physical capacity/condition 2.2
- Turnover among nursing/nurse aide staff 2.1
- Resident's fear of DDS 2.1

Table 3. Average Barrier Severity by Provider Type

	All Respondents (n = 261)	Administration & DoN (n = 14)	RN (n = 60)	LPN (n = 25)	CNA (n= 162)
*Willingness of a DDS to accept Medicaid	3.3	3.3	-	-	-
Resident's cognitive capacity	2.4	2.8	2.7	2.3	2.3
*Resident's financial concerns	2.4	2.4	-	-	-
Resident's willingness to allow exam of mouth	2.3	2.8	2.5	2.1	2.2
Resident's physical capacity/condition	2.2	2.4	2.3	2.4	2.1
Turnover among nursing/nurse aide staff	2.1	2.6	2.2	2.1	2.1
Resident's fear of DDS	2.1	2.1	2.1	2.3	2.0
Time constraints on nursing staff	2.0	2.8	2.1	1.8	2.0
Lack of oral health interest/knowledge among residents	1.9	2.2	2.2	1.9	1.9
Lack of LTC staff training on how to examine mouth	1.8	2.1	1.9	1.7	1.7
*Cost to the LTC facility to provide dental care	1.8	1.8	-	-	-
*Increased paperwork for LTC facility	1.8	1.8	-	-	-
Dental professionals' lack of understanding of geriatric oral health	1.7	2.6	1.8	1.8	1.6
Willingness of a DDS to treat residents in dental clinic	1.7	2.3	1.9	1.7	1.5
Lack of communication among caregivers concerning oral health	1.7	1.9	1.9	1.8	1.7
Lack of oral health interest/knowledge among residents' families	1.6	2.1	1.7	1.6	1.6
Lack of referral resources	1.6	1.9	1.6	1.6	1.5
Lack of LTC staff training on general oral health care	1.5	1.6	1.7	1.6	1.5
Lack of LTC staff training on how to clean the mouth	1.5	1.5	1.6	1.6	1.5
Availability of dental treatment space at LTC facility	1.5	1.6	1.5	1.5	1.5
Apathy of nursing/nurse aide staff	1.5	1.6	1.6	1.5	1.4
Transportation of residents to dental office	1.5	2.2	1.4	1.6	1.4
Lack of standardized LTC oral health policies	1.5	1.6	1.4	1.5	1.5

Following is each barrier, in order of severity (also, as ordered in the above table) as rated by all administrative and direct care staff. The total includes all nursing and nurse aide staff, DoN, and administration. Four barriers are not presented below because only the DoN and administration were required to report. These barriers included:

- Willingness of a DDS to accept Medicaid
- Resident's financial concerns
- Increased paperwork for the LTC facility
- Cost to the LTC facility to provide dental care

Figure 39. Residents Cognitive Ability: Barrier Severity

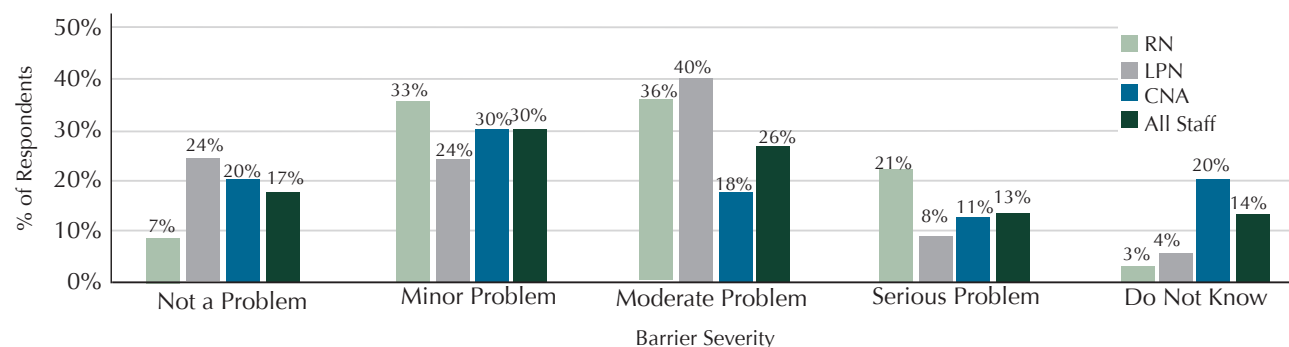


Figure 40. Resident's Willingness to Allow Exam of Mouth: Barrier Severity

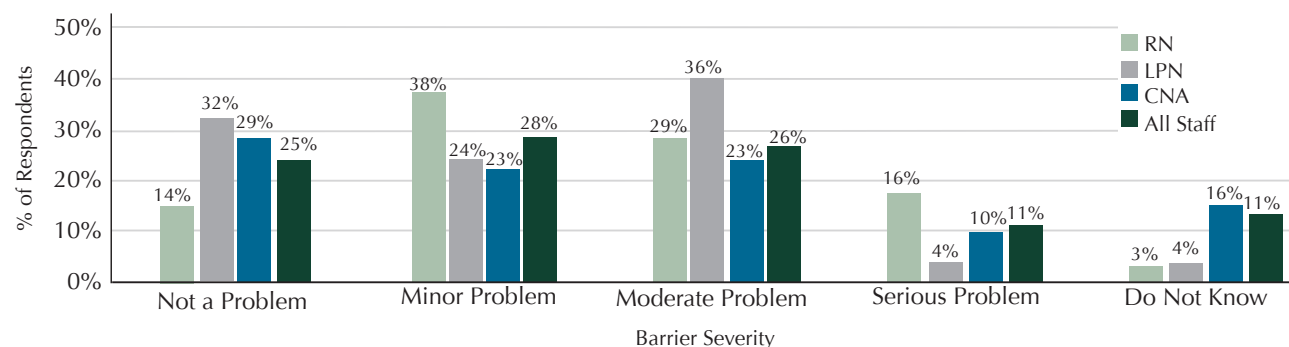


Figure 41. Resident's Physical Capacity/Condition: Barrier Severity

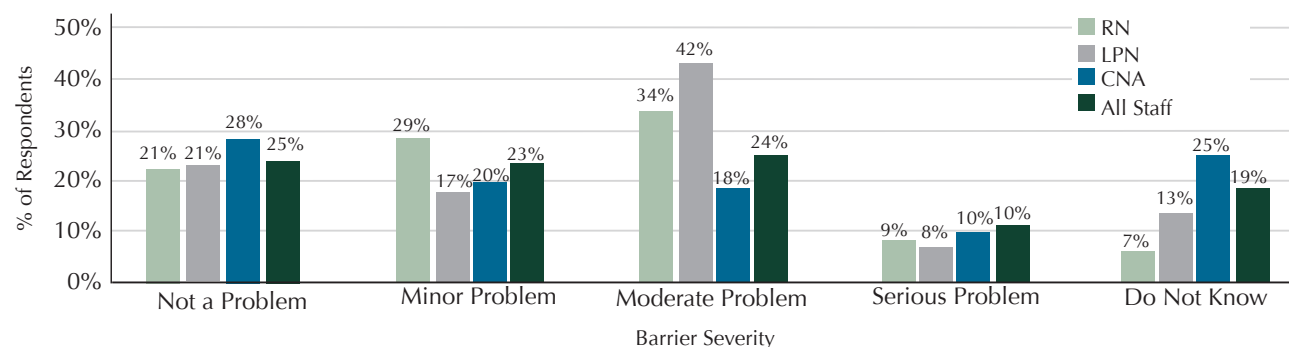


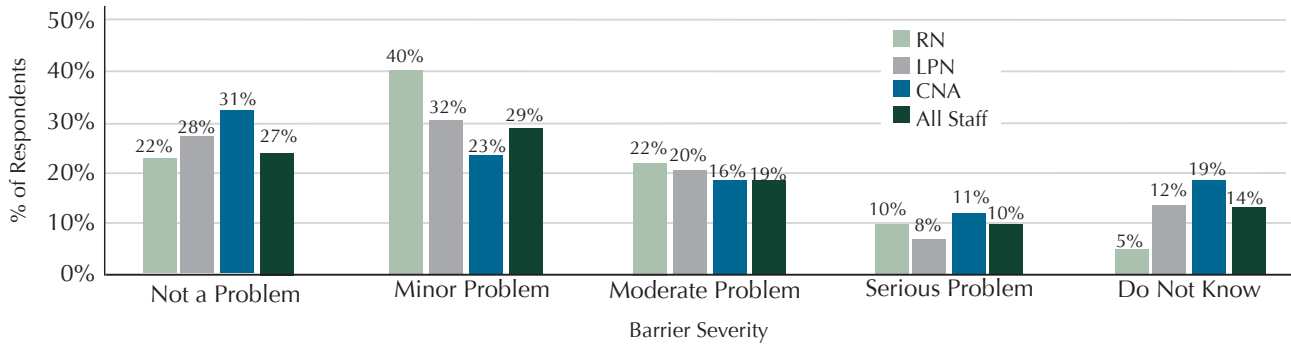
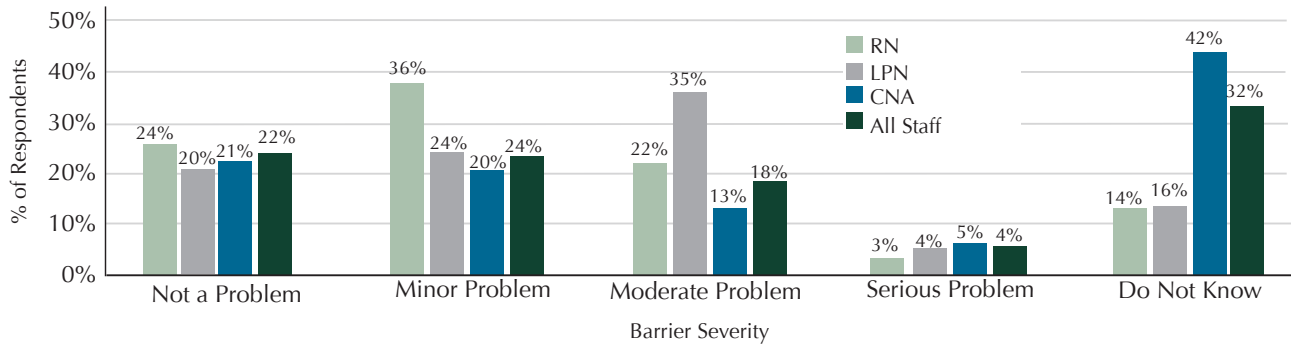
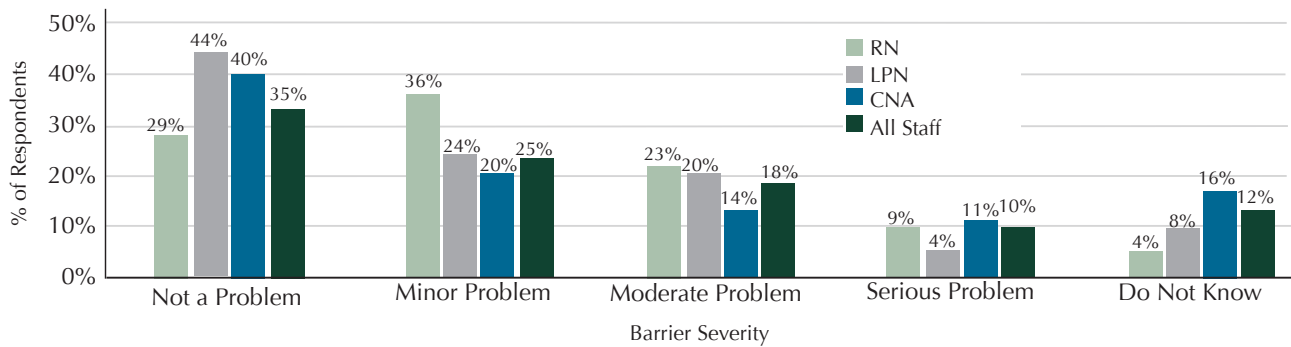
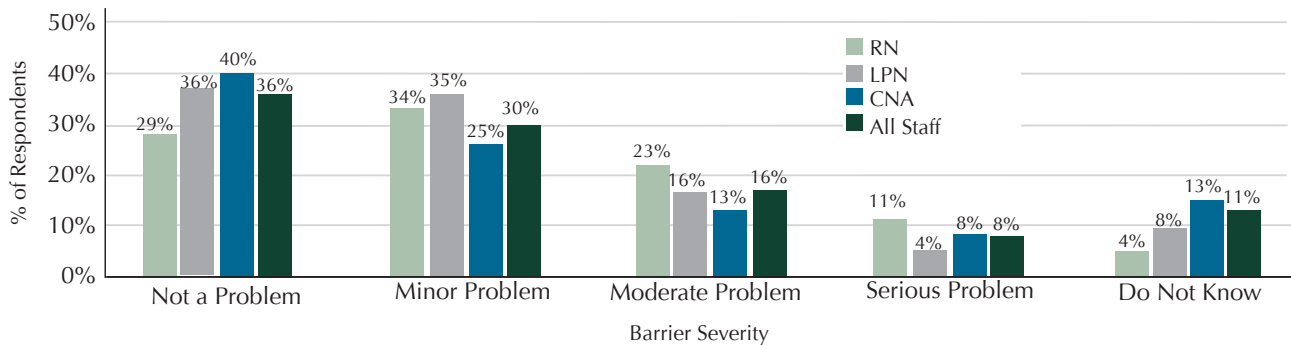
Figure 42. Turnover among Nursing/Nurse Aide Staff: Barrier Severity**Figure 43. Resident's Fear of DDS: Barrier Severity****Figure 44. Time Constraints on Nursing Staff: Barrier Severity****Figure 45. Lack of Oral Health Interest/Knowledge among Residents: Barrier Severity**

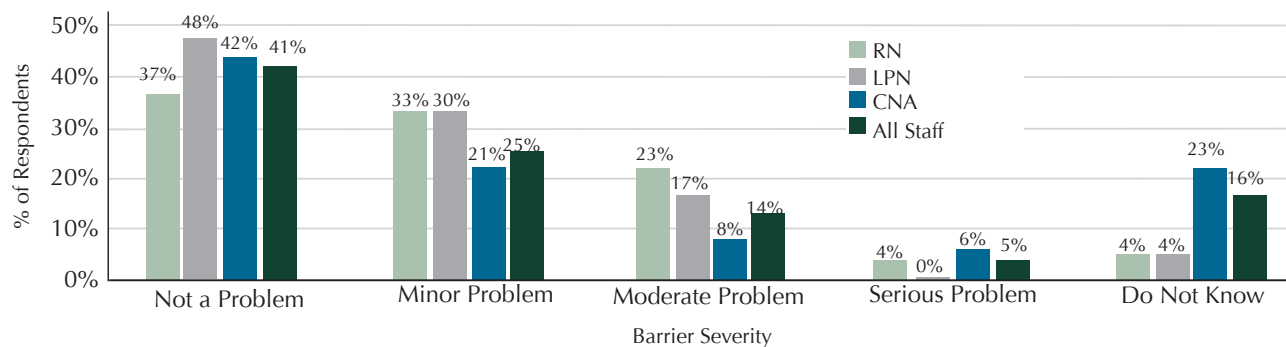
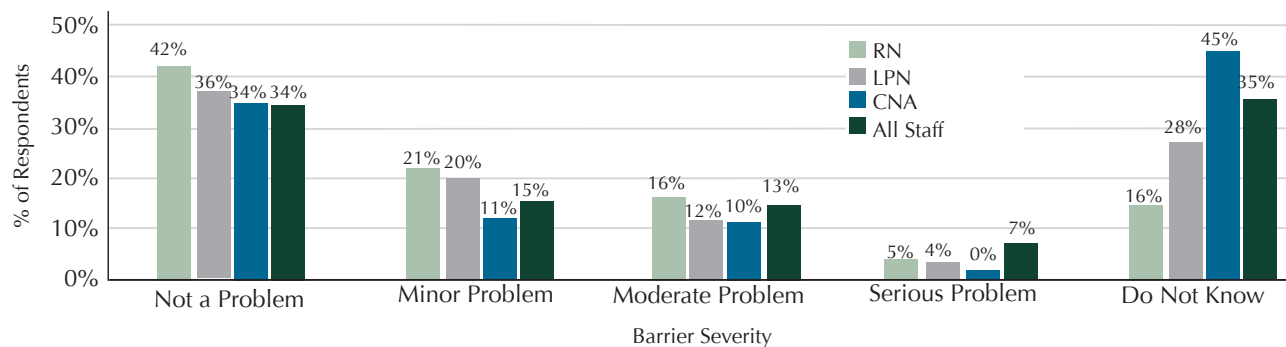
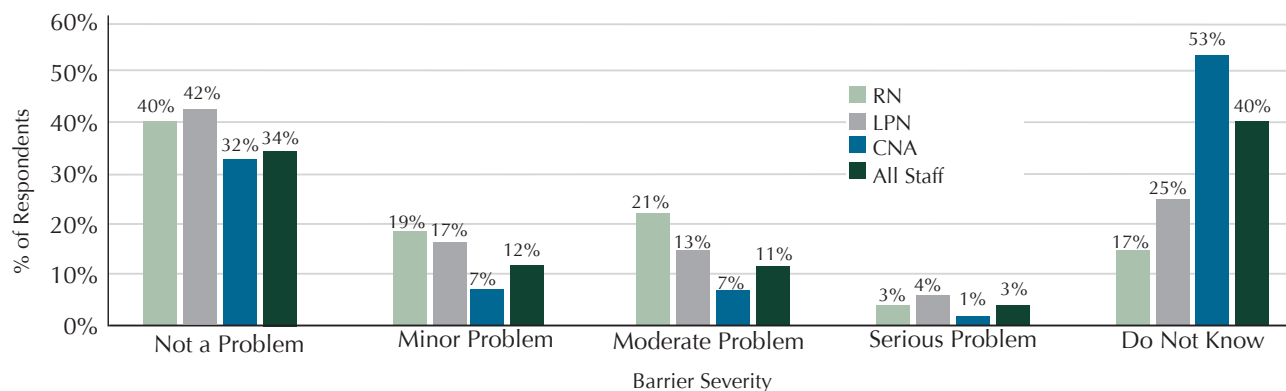
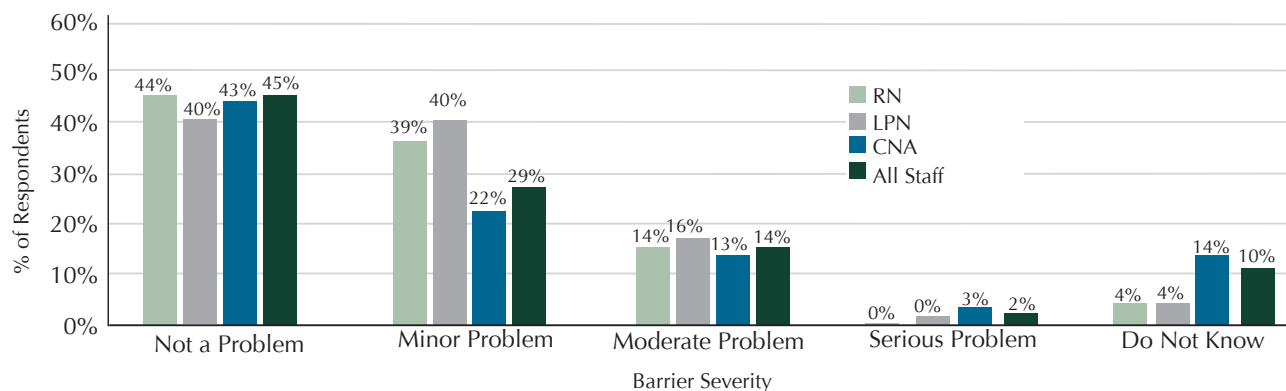
Figure 46. Lack of LTC Staff Training on How to Examine Mouth: Barrier Severity**Figure 47. Dental Professionals' Lack of Understanding of Geriatric Oral Health: Barrier Severity****Figure 48. Willingness of a DDS to Treat Residents in Dental Clinic: Barrier Severity****Figure 49. Lack of Communication among Caregivers Concerning Oral Health: Barrier Severity**

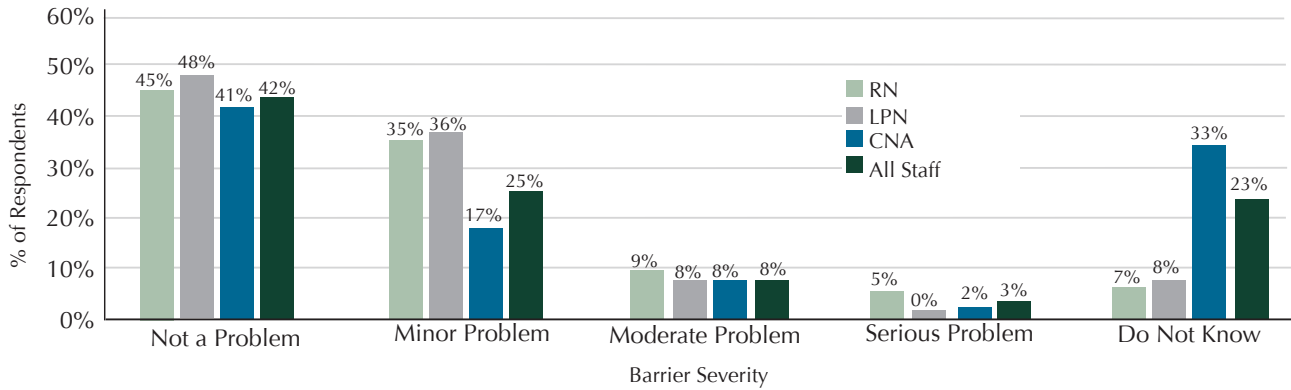
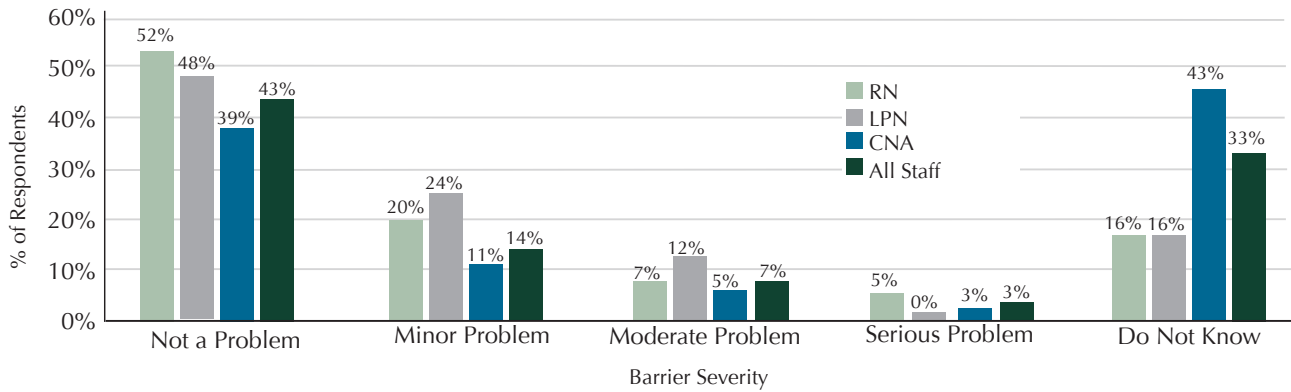
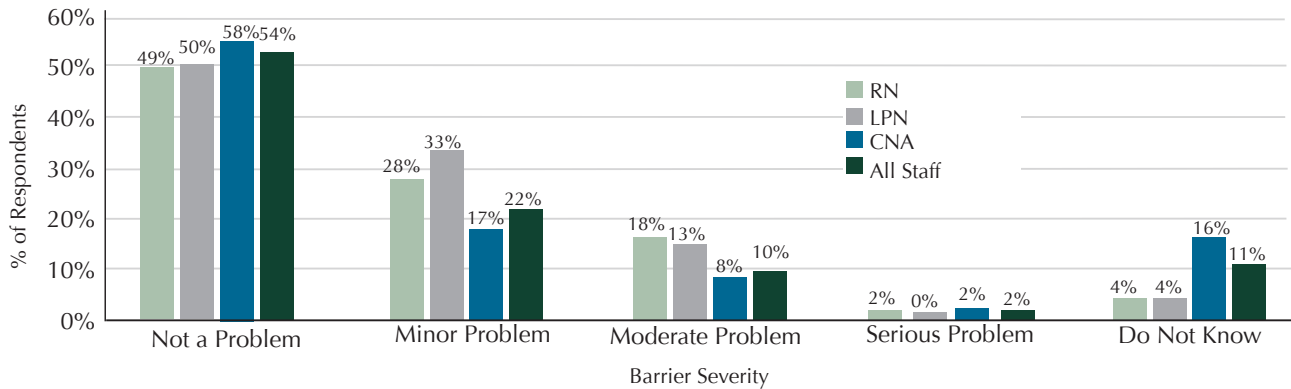
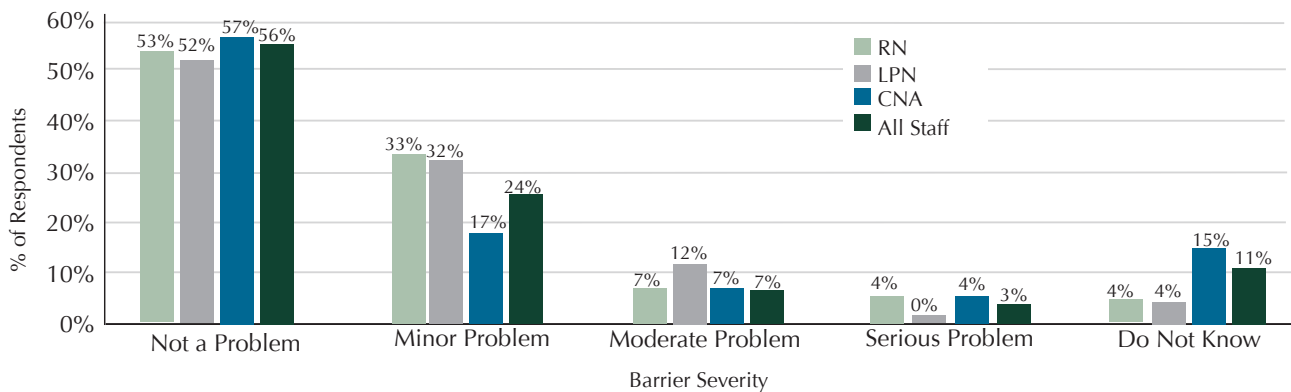
Figure 50. Lack of Oral Health Interest/Knowledge among Residents' Families: Barrier Severity**Figure 51. Lack of Referral Resources: Barrier Severity****Figure 52. Lack of LTC Staff Training on General Oral Health Care: Barrier Severity****Figure 53. Lack of LTC Staff Training on how to Clean the Mouth: Barrier Severity**

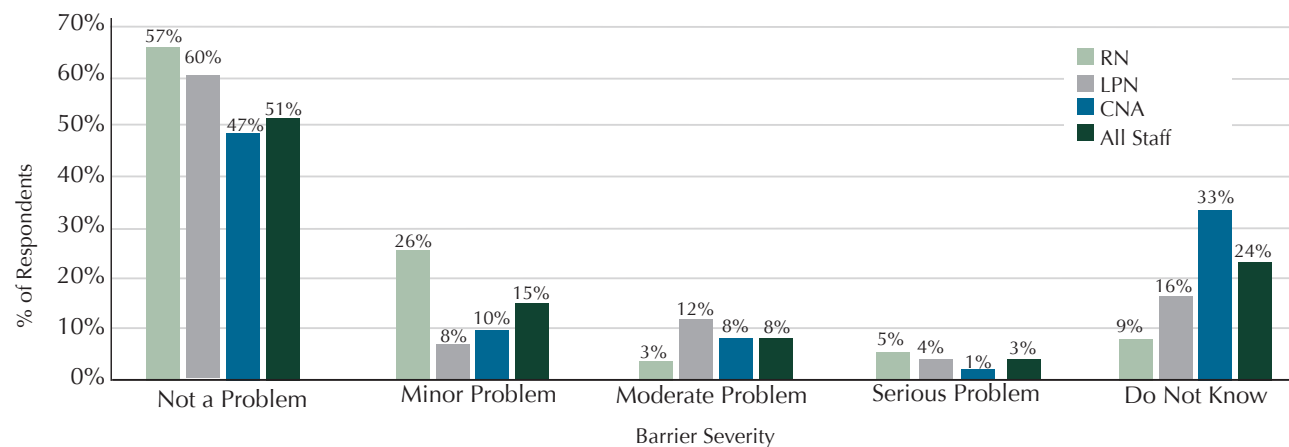
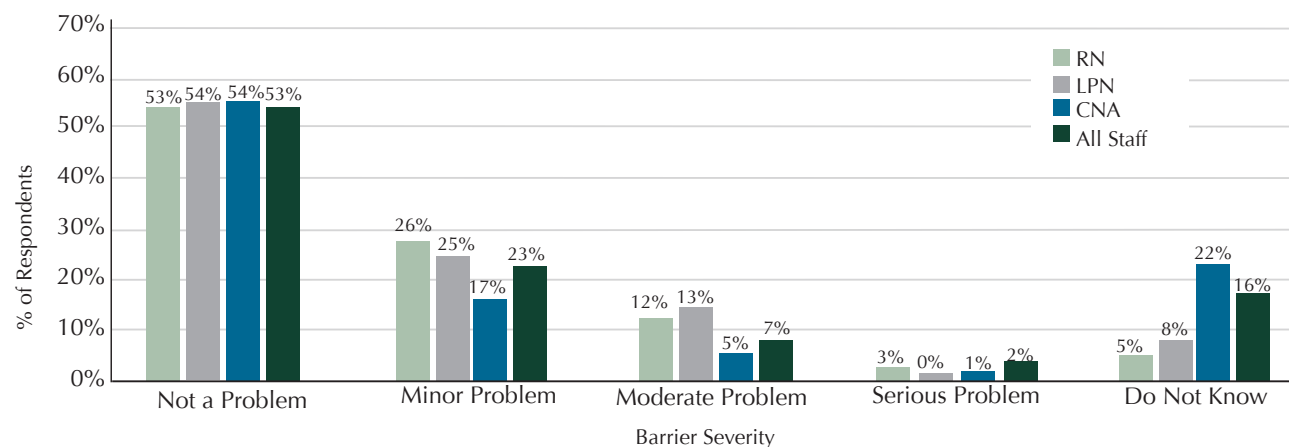
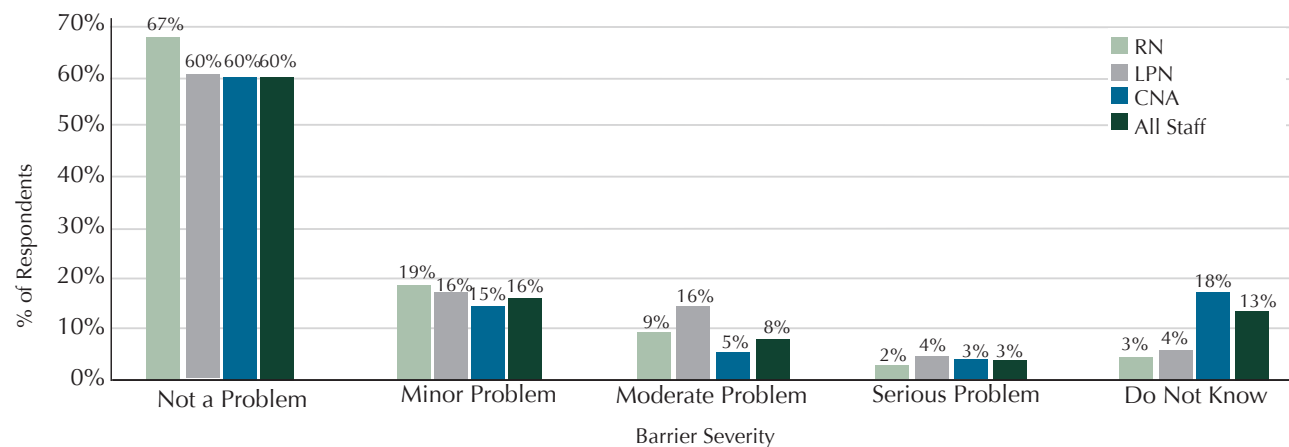
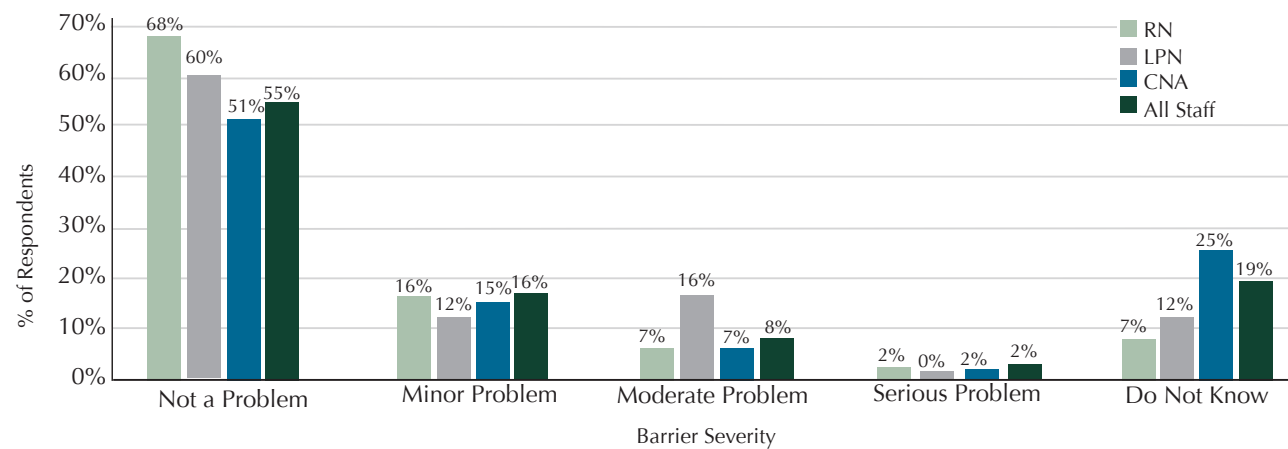
Figure 54. Availability of Dental Treatment Space at LTC Facility: Barrier Severity**Figure 55. Apathy of Nursing/Nurse Aide Staff: Barrier Severity****Figure 56. Transportation of Residents to Dental Office: Barrier Severity**

Figure 57. Lack of Standardized LTC Oral Health Policies: Barrier Severity



Discussion & Recommendations

Overall, the program improved access to oral health care services for the LTC residents. LTC staff were satisfied with the care provided by the oral health professionals, and believed, on average, that the knowledge of oral health among staff and residents improved as a result of participation. The program had been easy to implement, and the resources provided were beneficial to LTC residents and staff.

However, there is room for improvement. Participation in the program did not definitively lead to any new or revised policies or procedures at the four participating facilities. Facilities A and C indicated that no oral health policy, procedure, or care practice has been revised or developed as a result of participation while Facilities B and D did not agree as to whether or not policies had been reviewed or developed.

All four facilities had a written plan of care for dental needs. However, 42% of staff were unaware of the plan. CNAs were the least likely to be aware of a written plan of care (47% did not know). CNAs were also the provider type identified most frequently as the provider responsible for the day-to-day coordination of a resident's dental plan. If care staff are unaware, they are not capable of executing the policy. CNAs and LPNs also believed more residents were responsible for their own dental care than RNs did, which may then impact the daily care provided by the LPN and CNA staff.

Roughly 40% of LPNs and 45% of CNAs agreed or strongly agreed that nursing and nurse aide staff resisted participation in the LTC Oral Health program compared to only 14% of RNs. CNAs and LPNs more commonly experienced resistance among residents' family members, and residents, while RNs were less likely to have witnessed said behavior among either. Those provider types who engage in more frequent and direct care for residents and their family members perceived greater resistance to the program.

Finally, only 13% of the nursing and nurse aide staff had heard of the free Smiles for Life training around geriatric oral health.

While direct care staff and administration at the four participating facilities have made an effort to improve the oral health status of residents in their respective facilities, there are opportunities to improve the culture of oral health. It is recommended that staff participate in the free online training provided through the North Dakota DoH Oral Health Program, and that facilities focus on reflecting their perceived importance of oral health in their daily care practices.