

Acknowledgements

The research team would like to extend special thanks to the following for their assistance with this evaluation:

- Kimberlie Yineman, Oral Health Program Director, North Dakota Department of Health
- Toni Hruby, Oral Heal Prevention Coordinator, North Dakota Department of Health
- Grace Njau, Oral Health Epidemiologist, North Dakota Department of Health
- Janna Pastir, Director, Division of Health Promotion, North Dakota Department of Health

The North Dakota Department of Health Oral Health Program provided financial support for this project.

The authors assume responsibility for any errors of omission, logic, or otherwise. Any opinions, findings, and conclusions expressed in this publication are those of the authors and do not necessarily reflect the views of the Center for Social Research, North Dakota State University, or the study sponsors.

Please address your inquiries regarding this publication to: Center for Social Research at NDSU, P.O. Box 6050, Department 2362, Fargo, ND 58108-6050, Phone: 701-231-8621, Email: nancy.hodur@ndsu.edu.

NDSU is an equal opportunity institution.

Copyright © 2018 by Hodur and Gao. All rights reserved. Readers may make verbatim copies of the document for non-commercial purposes by any means, provided this copyright notice appears on all such copies.

Table of Contents

Program Description	1
Evaluation Methodologies	2
Results	3
Stakeholder Interviews	3
Program Strengths	3
Ability to Collaborate	3
Impartiality	4
Education and Outreach	5
Challenges and Areas of Improvement	5
Data analysis and Information Dissemination	6
Set Priorities	6
Volunteer Burnout	7
Lack of Financial Resources	7
Recommendations	7
Case Study in Collaboration: NDOHP School-Based Sealant Program	8
Partnership Survey Results	11
Oral Health Care Needs in North Dakota	11
Level of Emphasis on Various Activities	13
Challenges Impacting Oral Health	16
Top Priorities	19
Other Barriers or Challenges	21
Respondent Affiliations	23
Additional Comments	24
Conclusions	25
Appendix A: Partnership Evaluation Survey 2017	27

List of Figures

Figure 1.	North Dakota Oral Health Program Collaborations	10
Figure 2.	Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?	
Figure 3.	How much emphasis (e.g., attention, resources) do you think the North Dakota Oral Health Program and other partner organizations have given to each of the following areas over the past fiscal year?	
Figure 4.	Using a one to five scale, with one being "not at all" and five being "a great deal," how much do each of the following challenges impact oral health in North Dakota?	19
Figure 5.	What should be the top priorities for the Oral Health Program and other partner organizations? Please rank the following on their order of importance, with one being most important and seven being least important	_
	List of Tables	
Table 1.	List of Tables Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?	12
	Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being	
Table 2.	Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?	15
Table 2.	Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?	15 18 g

Program Description

The North Dakota Department of Health (NDDoH) Oral Health Program (OHP) is committed to improving the oral health of North Dakotans through prevention and education by using innovative and cost-effective approaches to promote oral health. The OHP functions as the "backbone" organization for public oral health services in North Dakota. The OHP seeks to foster community and statewide partnerships to improve oral health and enhance access to dental care. The current oral health cooperative agreement from the Centers for Disease Control and Prevention (CDC) strengthens the OHP's infrastructure and capacity to carry out core public health functions. The core functions in the current grant cycle (2013-2018) include 1) maintaining and expanding the efforts of community water fluoridation, 2) providing continuous surveillance and monitoring of oral health activities and outcomes; 3) documenting the burden of oral diseases; 4) implementing the state plan to address prioritized oral health needs by collaboration of key stakeholders; 5) strengthening the partnership network to advancing oral health; and 6) implementing a school-based sealant program.

Collaboration with stakeholders with shared goals is critical to leverage financial resources. A network of internal and external agency partners, nonprofit organizations, dental health providers, foundations, third-party payers, educational institutions, and communities can facilitate outcomes and achieve shared goals. These partnerships have greatly contributed to the activities and core functions of the program. Infrastructure funding ensures that the OHP retains competent leadership and staffing, including a program director, program manager, prevention coordinator, public health dentist, public health hygienist, fiscal coordinator, an epidemiologist, an administrative assistant, contracted communications, and evaluation specialists. The OHP program contracts with the North Dakota State University (NDSU) Center for Social Research (CSR) for program evaluation.

In the past, the OHP has worked closely with members of the North Dakota Oral Health Coalition to advance partnership collaborations. The coalition served as the conduit to various partnership organizations. Organized in 2005, The North Dakota Oral Health Coalition was comprised of a variety of public and private agencies, organizations, and individuals with the shared goal of improving the oral health of North Dakotans. The OHP has historically worked in various capacities with partnership organizations as part of the North Dakota Oral Health Coaliltion to leverage scarce human and financial capital to advance the shared goal of improving oral health in North Dakota. To evaluate how effectively the OHP worked with partnership organizations, in 2015, members of the Oral Health Coalition were surveyed to obtain feedback on how effectively the OHP had worked with partnership organizations to advance the goal of improving oral health in North Dakota. Findings were reported in the 2015 annual report to the CDC.

In 2016, the North Dakota Oral Health Coalition underwent substantial challenges. A long-time executive director retired and the incoming director unexpectedly died shortly after assuming the role. As a result of the loss of leadership, the Oral Health Coalition opted to restructue and reorganize. At approximately the same time, the North Dakota Dental Foundation received a substantial endowment as the result of the divestiture of a dental insurance pool. The North Dakota Dental Foundation previously served as the charitable arm of the North Dakota Dental Association making small awards to groups or communities in support of oral health. With the endowment, the North Dakota Dental Foundation was able to hire a full-time executive director and in 2017 began organizational planning. Part of the new mission of the North Dakota Dental Foundation is to be the fiscal home for the North Dakota Oral Health Coalition. North Dakota Dental Foundation membership for all practical purposes is the same membership as the North Dakota Oral Health Coalition, as they share a similar mission to promote oral health in North Dakota. Foundation organization and transition activities were onging at the time of publication.

Evaluation Methodologies

In 2015, and again in 2017, representatives from partnership organizations were surveyed to obtain feedback on OHP effectiveness working with partnership organizations to advance the goals of the OHP. Partnership organizations were identified and defined as those organizations that were part of the North Dakota Oral Health Coalition. At the time the year-four work plan for evaluation of the OHP partnership effort was developed, it was expected the Oral Health Coalition would continue to function as it had in the past and the working relationship with OHP would continue as it had historically. Considering the Oral Health Coalition was no longer a functioning organization and the ongoing restructuring of the Dental Health Foundation, the evaluation methodology was modified. In addition to an online survey of partnership organizations similar to the survey conducted in 2015, a series of interviews with representatives of key partnership organizations was undertaken. The aim of the interview was to explore how the OHP interfaces with partnership organiziations and to evaluate outcomes. Interviews with representatives of 12 partnership organizations were conducted in December of 2017 and January 2018 to obtain in-depth feedback on program strengths, weaknesses, opportunities, and challenges, and the OHP's ability to effectively leverage its resources with partnership organizations to facilitate collective impact. The interviews also provided insight into the web of relationships and collaborations the OHP has with various partnership organizations. Content analysis was conducted for the qualitative interview data. A case study details collaboration between the OHP and various partnership organizations.

In December 2017, a survey (Appendix A) similar to the one administered in 2015 was distributed to representatives of partnership organizations. The questionnaire was delivered to

52 individuals and 29 responded for a 55.8 percent response rate. Responses were analyzed using descriptive statistics. The questionnaire queried respondents about the extent to which North Dakotans' oral health needs were being met, the effectiveness of the OHP, and barriers/challenges to improving oral health in eight areas. Some questions were removed as they were no longer relevant due to organizational changes, however the remaining questions were the same as those used in the 2015. The questions used three and five-point Likert scales to examine respondents' perceptions regarding the degree to which oral health care needs were being met in the state, what oral health care needs were most pressing, and to gauge the effectiveness of the OHP and partnership organizations' efforts to address the state's oral health care needs. A 'do not know' option was also provided. In addition to reporting response frequencies, a mean average of response values, excluding responses for 'do not know' was calculated to facilitate comparisons and analysis.

Results

Results from personal interviews with representatives of stakeholder organizations, the case study of the OHP school-based sealant program, and an online survey of representatives of partnership organizations are detailed in the following sections.

Stakeholder Interviews

Program Strengths

Findings from personal interviews with representatives of partnership organizations related to strengths were organized into key themes of 'ability to collaborate', 'impartiality', and 'education and outreach'. Findings are detailed below.

Ability to Collaborate

Collaboration among stakeholder groups was cited as the state oral health community's greatest strength by nearly every stakeholder interviewed. The small size of the oral health community means people know each other and that familiarity helps to facilitate collaboration to advance common causes. Further, nearly every stakeholder reported that one of the OHP's strengths is how it collaborates effectively with all stakeholder groups. One individual commented that the program is very good at putting people with common goals together to solve problems and advance oral health care in the state. Another individual stated the OHP is very good at collaborating with agencies and partnership organizations to facilitate action. It was reported that over the course of the last five years, the OHP has expanded its partnership base, particularly with external partners. The

program has also expanded partnerships with national organizations. Across the spectrum of oral health initiatives, collaborations are interwoven among the various stakeholder organizations. One individual commented, "No organization has enough resources to accomplish goals without building partnerships and leveraging partnership organizations' resources through effective collaborations. The CDC grant is not sufficient to achieve program goals without partnerships. Partnerships are not just a strength, but a necessity and a priority."

A key collaboration of the OHP is with the North Dakota Dental Association. Several stakeholders commented that realistically the support of the Dental Association is needed to advance initiatives. One specific collaboration between the OHP and the ND Dental Association is the committee that oversees the North Dakota dental school loan repayment program. A committee made up of representatives of the OHP, the North Dakota Dental Association and the ND Primary Care Office make recommendations on who should be accepted into the loan repayment plan.

In another collaboration, the OHP was identified as a key grant writing partner for one partnership organization. The OHP provides the necessary data to support the partnership organizations grant writing activities. The partnership is mutually beneficial as the partnership organization's funded grant activities support shared goals of improving oral health in North Dakota.

The OHP also has internal partners at the North Dakota Department of Health. For example, oral health was identified as a priority in the most recent Title V Maternal and Child Health Section 5 Block grant. Recent realignments and reorganization within the North Dakota Department of Health may also offer the potential for additional collaborations across program lines. The realignment was aimed to pull programs out of individual "silos" to foster broader needs assessment and prioritization of program activities, especially in chronic disease.

Impartiality

The ability to work collaboratively and impartially with everyone in the oral health community was frequently cited as one of the OHP's strengths. The OHP's response to a controversial measure during the last North Dakota legislative session was cited as an example. During the last legislative session, a bill was proposed that would allow "dental therapists" to provide expanded services. The bill was controversial and various groups

¹ A dental therapist is a mid-level dental provider that can perform some basic preventive and restorative services. https://www.dentistry.umn.edu/degrees-programs/dental-therapy/our-division

within the oral health community were in disagreement about whether the proposal should be enacted. Ultimately the proposal failed. Several stakeholders commented on how the OHP remained neutral on the issue and did an excellent job of pulling key stakeholders together to set aside differences and focus on shared goals and objectives.

Education and Outreach

Several individuals commented on the work being done by the OHP related to oral health care among older adults. They reported that the OHP does a good job educating, informing, and elevating awareness of the importance of oral health care for older adults, especially for residents of long-term care facilities where access to oral health care can be limited. The OHP has strived to implement *Smiles For Life*, an oral health training tool for nurses and other caregivers at long-term care facilities. The screening tool helps providers recognize oral health issues during in-take screenings and incorporate oral health into patient plans of care. The program is a free online tool that meets continuing education requirements for nursing professionals. The state's public health hygienist also offers the *Smiles For Life* training on site in long-term care facilities upon request. One stakeholder commented, "Without the oral health program, the oral health community in North Dakota would not be having a conversation about how to engage long-term care providers and oral health care professionals to advance oral health and access to care for older adults".

More generally, most stakeholders commented that the OHP does a good job of consistently messaging the importance of oral health care and effectively keeping the issue in the forefront. One individual commented, "The OHP staff work patiently and persistently to engage stakeholders and partners to advance the conversation and mission of improved oral health in North Dakota".

One stakeholder commented that while the program works to educate the public and policy makers of the importance of oral health, there is room for improvement. No specific suggestions were made as to what could be done to improve education and outreach efforts. However, the stakeholder stated that it is critical to communicate the value of the OHP and how the program improves oral health in North Dakota.

Challenges and Areas of Improvement

Findings from stakeholder interviews related to challenges and areas of improvement were organized into key themes of 'data analysis and information dissemination', 'set priorities', 'lack of human resources', and 'lack of financial resources'. Findings are detailed below.

Data Analysis and Information Dissemination

Improvements to agency administrative processes were suggested. One stakeholder commented that at times agency and program bureaucracy makes approval processes slower than what would be considered optimal. Another suggested the development of a standard set of metrics to measure progress. Various stakeholders have individual metrics, for example, the ND Dental Association may have one set of indicators, dental hygienists another, and individual programs such as the school sealant program, yet another. Currently, evaluation metrics are often driven more by individual program goals and objectives than by more standardized metrics that gauge progress on larger overall oral health goals and objectives.

Dissemination of information was cited as an area where the OHP and internal partners in the North Dakota Department of Health could improve. The NDDoH has public health surveillance systems which consist of regularly occurring surveys that track health care trends in the state. In the coming year, the NDDoH is surveying ND hygienists and dentists and conducting a 3rd grade Basic Screening Survey. Surveillance systems are funded by federal grants and the data are collected by the state. Because the surveillance systems are funded by federal grants, reporting is largely driven by the terms of the grants. While findings are forwarded to the CDC per terms of the grant, most of the data are not made publicly available unless specifically requested. Data are largely used internally for grant reporting and writing. Some data are forwarded to the UND Center for Rural Health where the data are used to develop fact sheets and other outreach materials used by the Center. Additional data analysis beyond what is required under the terms of the grant targeted to local issues would represent a substantial improvement. Currently, no additional data analysis is completed. Given that state policy makers frequently request localized data, additional data analysis and dissemination of information could facilitate informed decision making. Credible data would enable stakeholders and citizens to advocate for programs that could address oral health needs in North Dakota. The OHP and internal partners appear to be challenged to analyze and disseminate information. Funding for additional staff or to hire external analysts may be necessary to improve data analysis and information dissemination.

Set Priorities

One stakeholder commented that at times the program is "long on ideas and short on follow-through". However, the same stakeholder noted that the inability to follow through on every idea or initiative was due to a lack of human and financial resources. Another stakeholder commented similarly by stating that one of the challenges facing the OHP is competing priorities. It was suggested that ideas should be prioritized to enable the

program to focus on a few key initiatives. A more strategic approach with a clear direction focusing on identified priorities could result in achieving key objectives rather than trying to do everything and accomplishing nothing. It was suggested that at times it appears the program is attempting to incorporate and address everyone's priorities which in the end dilutes all outcomes.

Volunteer Burnout

While a small network of committed individuals across various stakeholder groups with good working relationships can facilitate collaborations, individuals can be vulnerable to burnout. Because the number of individuals with shared oral health goals is relatively small, and frequently individuals within organizations are participating in multiple projects, the prevalence of burnout and strained human resources is a limiting factor. One participant described the positive and negative aspects of the state's collaborative network as one where there are multiple opportunities to work across program lines and effectively work "a mile wide and an inch deep", but limited opportunities to work "a mile deep and an inch wide" to make substantial progress in advancing oral health care in North Dakota.

Lack of Financial Resources

The lack of funding for the OHP was frequently cited as one of the biggest challenges facing the OHP and other stakeholder groups. Federal dollars from competitive grants from the Centers for Disease Control and Prevention provides funds for staffing the OHP, however lack of resources for operations limits the program's ability to expand services and programs to advance oral health in North Dakota. The state provides no funding for oral health program activities and very little funding for partnership organizations. For example, the loan repayment program and the Bismarck Ronald McDonald House Care Mobile each receive \$100,000 per biennium and during the last legislative session and it was suggested the funding be cut for the loan repayment program. The proposal to eliminate funding for the loan repayment program ultimately failed.

Recommendations

Several individuals commented that it is important to have a volunteer coalition to pull together stakeholder groups with common goals and to advance activities such as networking, education and advocacy in a strategic manner. One individual felt strongly about the need for a volunteer oral health coalition stating, "It is critical that the Oral Health Coalition be reorganized under the framework of the North Dakota Dental Foundation".

Case Study in Collaboration: NDOHP School-Based Sealant Program

To illustrate the web of collaboration among the OHP and partnership organizations, a case study of the OHP school-based sealant program, Seal!ND was conducted. The case study identifies partnership organizations and illustrates how the OHP interacts with various partnership organizations to facilitate outcomes.

The goal of the OHP School-based Sealant Program is to improve the oral health of underserved populations and improve their access to oral health care by providing screenings, sealant applications, and referrals for further treatment as needed. The program strives to find ways to expand the program by increasing the number of schools with 45 percent or more of their students enrolled in the free and reduced fee lunch program that offer a school-based sealant program. One avenue for more schools to have a school-base sealant program is for private providers to offer sealant services in schools and bill Medicaid for eligible students. Several obstacles have historically deterred private practices from providing school-based sealant programs. One of those barriers to entry is the cost of portable equipment. Another is the widely held perception that the school-based sealant business model is not financially viable.

To address the lack of equipment, the OHP has used multiple funding sources to purchase equipment and supplies. For example, the OHP spent approximately \$25,000 in 2017 on portable dental equipment. The use of the portable equipment is an incentive for private practice providers to partner with the OHP to provide school-based sealant programs. Private practice providers enter a Memorandum of Understanding (MOU) with the OHP that enables them to use the equipment. The MOU also stipulates other aspects of the program, such as data collection and reporting requirements. Private practices must collect the same screening data as the public health hygienist and provide those screening sheets to the OHP. Data collected are to track performance measures. To recruit private practices and Federally Qualified Health Centers² (FQHCs) to provide services, the OHP collaborated with several active and well-known dentists in the state. Those private practice providers working with the OHP encouraged other private practice providers to consider adding school-based services to their practices. The involvement of private dental practitioners in recruiting efforts was instrumental in recruiting and retaining private practices to offer school-based sealant programs.

Another partnership organization that was instrumental in recruiting private practices to add school-based sealant programs was the ND Medicaid office. The OHP informed and educated

² Federally Qualified Health Centers are safety net health care providers that offer a wide range of health care services that offer services to all, regardless of ability to pay. https://www.ruralhealthinfo.org/topics/federally-qualified-health-centers

private practice providers of the ability to bill Medicaid for sealants and fluoride varnish application for eligible students. The ND Medicaid office is available to assist private practice providers with any questions or concerns to ensure reimbursement requests were filed properly. It is unlikely that private practices would have implemented school-based sealant programs without the collaborative efforts of the OHP, the North Dakota Dental Foundation, the North Dakota Medicaid office, and the private providers that contacted their peers to encourage them to offer a school-based sealant program.

A collaboration between the OHP and the ND Medicaid office was instrumental in identifying a strategy to address sustainability for the OHP's school-based sealant program, Seal!ND. The partnership began when the OHP and the ND Medicaid office were awarded a grant from the Centers for Health Care Strategies aimed at improving access to care for individuals eligible for Medicaid and encouraging and increasing the number of dental providers that accept Medicaid eligible patients. Because of that effort, Medicaid approved a billing process for sealants and fluoride varnish treatment provided by the NDDoH public health hygienist in the school setting. For students that do not qualify for Medicaid, services are provided at no charge. North Dakota is one of only a few state health departments that bills Medicaid for services from a public health hygienist for the application of sealants in schools.

Not only does this approach address sustainability issues for Seal!ND, it will help to more accurately reflect Medicaid utilization for dental care, which has historically been low in North Dakota. (Even though the school-based sealant program was providing services to children eligible for Medicaid, because the program was funded by a HRSA grant, the service could not be reported.) The new billing structure is supported by the ND Board of Dental Examiners, the ND Dental Association, and the dentist that provides the standing orders for the services provided by the public health hygienists³.

Another Seal!ND partner organization is the Bismarck Ronald McDonald Care Mobile (RMCM). The RMCM is a 40-foot mobile dental clinic that provides preventive and restorative services in communities in western North Dakota. The Care Mobile, with its own dentist, dental hygienist, and dental assistant, brings dental services to children in their own communities. Bridging the Dental Gap, a 501(c) 3 community dental clinic that focuses on uninsured, Medicaid, and low-income individuals and families, is the oral health care provider for the Care Mobile. The RMCM maintains the Care Mobile and Bridging the Dental Gap staffs the RMCM and bills for services provided. The Care Mobile uses the same criteria as the North Dakota oral health school-based sealant program, Seal!ND, by targeting schools where 45 percent or more of students participate in free and reduced fee lunch programs. Seal!ND and the Care Mobile coordinate

³ Yineman, Kimberlie. 2018. Personal Conversation.

their activities to avoid duplication of services, maximize the number of schools with sealant programs, and increase the number of students that have access to screenings, fluoride varnish applications, and application of sealants. Three members of the OHP serve on the Care Mobile advisory committee.

Seal!ND is an example of a collaborative effort that involves state and federal agency partners, public schools, FQHCs, the ND Dental Association, the Ronald McDonald Care Mobile, and private practice providers. Coordination of activities avoids duplication of services and by recruiting private providers to offer dental screenings and sealant applications in schools, the program has expanded access to care to the target population. ND Medicaid was instrumental in identifying a sustainable means to support program activities by billing Medicaid for application of sealants. ND Medicaid also assists private practices to ensure Medicaid claims are filed correctly which helps to attract private practice providers to provide school-based sealant programs. The OHP continues to build and recruit private practices to offer school-based sealants and will continue as long as they have equipment available. The OHP has effectively leveraged their resources through partnership collaborations to advance the goals of improved oral health in North Dakota. The OHP has successfully collaborated with multiple stakeholder groups to facilitate expansion of the program by working with private providers and FQHCs to add a school-based sealant program to their practices. Figure 1 illustrates the network of collaborations among and between the various partnership groups and the North Dakota OHP. Some stakeholder groups illustrated in Figure 1 are related to other activities and programs of the OHP.

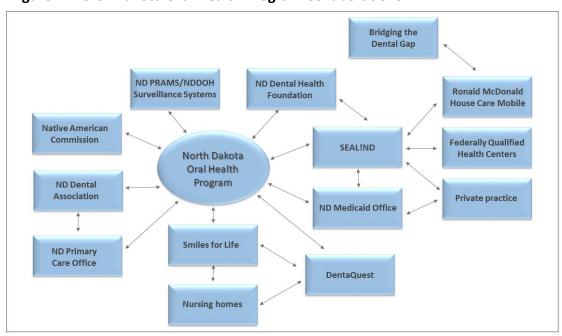


Figure 1. North Dakota Oral Health Program Collaborations

Partnership Survey Results

Result for the partnership survey are detailed in the following sections.

Oral Health Care Needs in North Dakota

Respondents were asked to rate their level of agreement on to what degree various oral health care needs were being met in North Dakota. Responses were measured using a five-point Likert scale where one is 'not at all' and five is 'extremely well', with an option for 'do not know'. An average score based on the mean response values, excluding responses for 'do not know', was calculated. Responses are detailed in Table 1 and Figure 2.

A majority of respondents indicated the state was doing 'extremely well' in meeting community water fluoridation needs. Sixty-two percent of respondents indicated oral health care needs related to 'community water fluoridation' were being met 'extremely well' with an average score of 4.50 on the five-point Likert scale. Almost four out of five respondents agreed community water fluoridation needs in North Dakota were met 'very well' or 'extremely well' (79%). Responses were similar to those observed in 2015 where the calculated average score was 4.54.

Responses were more mixed for the other oral health care needs. About half of respondents indicated oral health care needs were being met 'well' or 'extremely well' in terms of 'monitoring and surveillance of programs' and 'oral health education to professionals' with average scores of 3.67 and 3.64, respectively. Respondents' perceptions on 'monitoring and surveillance of programs' were more positive in 2017 compared to 2015. The average score for 'monitoring and surveillance of programs' increased from 2.95 in 2015 to 3.67 in 2017.

Just over one-third of respondents agreed that the state's oral health care needs were being met 'extremely well' or 'very well' in terms of 'preventive oral health services' (38%) and 'promotion of preventive oral health services' (35%) with average scores of 3.25 and 3.21, respectively.

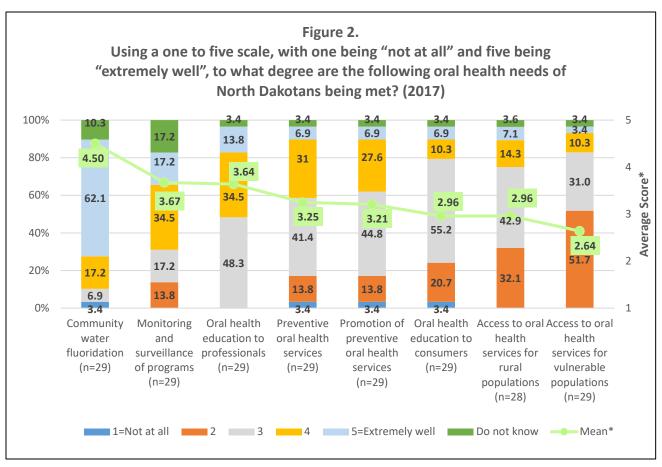
Average scores dropped below the 3.00 midpoint for 'oral health education to consumers', 'access to oral health services for rural populations', and 'access to oral health services for vulnerable populations', with average scores of 2.96, 2.96, and 2.64, respectively. While the average scores were slightly higher than those recorded in 2015, the differences are not large enough to suggest a meaningful change in perceptions. Seventeen percent of respondents indicated needs related to 'oral health education to consumers' were being met' 'extremely well' or 'very well' while 24 percent indicated needs were being met either 'not at all' or 'somewhat'. Similarly, 21 percent of respondents indicated needs related to 'access to oral

health services for rural populations' were being met 'very well' or 'extremely well' while 32 percent indicated those needs were being met 'somewhat'. Finally, 14 percent of respondents indicated the state needs related to 'access to oral health services for vulnerable populations' were being met 'very well' or 'extremely well' while 52 percent indicated those needs were being met 'somewhat'.

Table 1. Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?

weii , to what degr	ce are the	101101111		017	10003 01 140	Ten Bako	taris seriig	, mee.
ltem	1 Not at all (%)	2 (%)	3 (%)	4 (%)	5 Extremely well (%)	Do not know (%)	2017 Avg. Score* (Mean)	2015 Avg. Score* (<i>Mean</i>)
Community water fluoridation	3.4	0.0	6.9	17.2	62.1	10.3	4.50	4.54
Monitoring and surveillance of programs	0.0	13.8	17.2	34.5	17.2	17.2	3.67	2.95
Oral health education to professionals	0.0	0.0	48.3	34.5	13.8	3.4	3.64	3.63
Preventive oral health services	3.4	13.8	41.4	31.0	6.9	3.4	3.25	3.20
Promotion of preventive oral health services	3.4	13.8	44.8	27.6	6.9	3.4	3.21	2.96
Oral health education to consumers	3.4	20.7	55.2	10.3	6.9	3.4	2.96	2.85
Access to oral health services for rural populations	0.0	32.1	42.9	14.3	7.1	3.6	2.96	2.69
Access to oral health services for vulnerable populations	0.0	51.7	31.0	10.3	3.4	3.4	2.64	2.44
			(n:	=29)			(n=29)	(n=28)

^{*} Average scores are calculated based on the mean response values of 1-5 excluding "Do not know".



^{*}Average scores are calculated based on the mean response values of 1-5 excluding "Do not know".

Level of Emphasis on Various Activities

Survey participants were asked their perceptions on the level of emphasis (e.g., attention, resources) the OHP had placed on various activities. A three-point response scale where one is 'too little emphasis', two is 'just the right amount of emphasis', and three is 'too much emphasis' was used to gauge perceptions. Respondents could also indicate 'do not know'. An average score based on the mean response values, excluding responses for 'do not know', was calculated. Responses are detailed in Table 2 and Figure 3.

Respondents overall reported the OHP generally gave appropriate emphasis to the various considerations. The OHP received the highest marks for 'building partnerships' with an average score of 1.88. Perceptions related to 'building partnerships' were slightly higher in 2017 than in 2015 where the average score was 1.71. Seventy-nine percent of respondents indicated the OHP gave 'just the right amount of emphasis' to 'building partnerships'.

Sixty-six percent of respondents indicated the OHP gave 'just the right amount of emphasis' to 'interacting with stakeholders' and 'advancing the overall mission of the North Dakota OHP', while the remaining respondents indicated the OHP placed 'too little emphasis' on those same activities, with the same average scores of 1.7. Average scores were similar to scores in 2015.

Responses were similar for the following categories: 'communicating oral health needs to policy makers and the public', 'establishing and advocating for public and private policies to improve access to or the delivery of oral health services', 'implementing prevention interventions', and 'building community capacity to address oral health needs'. While about half of respondents indicated the OHP have given 'just the right amount of emphasis', 35 to 45 percent indicated the OHP had placed 'too little emphasis' for these remaining categories. Average scores ranged from 1.52 to 1.65.

For only one category did a majority of respondents indicate the OHP placed 'too little emphasis'. Fifty-five percent of respondents indicated the OHP 'placed too little emphasis' on 'educating the public about the value of good oral health and its impact on overall health'.

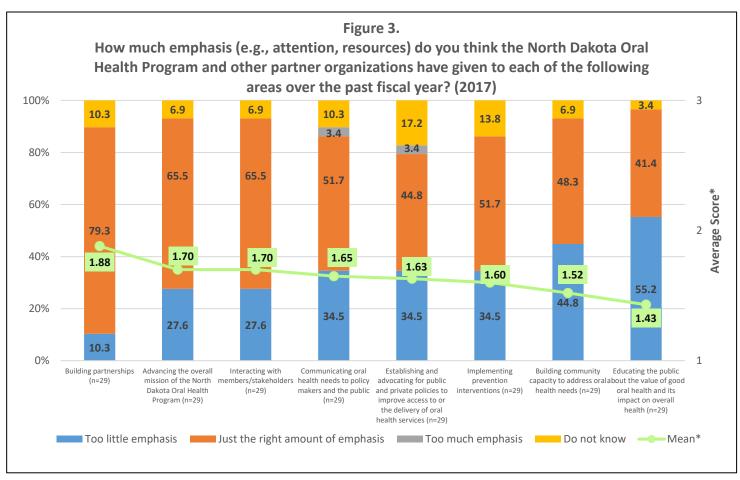
A small percentage of respondents (3%) indicated the OHP placed 'too much emphasis on 'communicating oral health needs to policy makers and the public' and 'establishing and advocating for public and private policies to improve access to or the delivery of oral health services'.

Responses across all areas of emphasis were very similar to responses recorded in 2015. Differences in average scores for each of the categories was less than two tenths of a point, suggesting perceptions overall were generally unchanged since 2015.

Table 2. How much emphasis (e.g., attention, resources) do you think the North Dakota Oral Health Program and other partner organizations have given to each of the following areas over the past fiscal year?

Item Building partnerships Advancing the overall mission of the North	1 Too little emphasis (%) 10.3	Just the right amount of emphasis (%) 79.3	3 Too much emphasis (%) 0.0	Do not know (%) 10.3	2017 Avg. Score* (<i>Mean</i>) 1.88	2015 Avg. Score* (<i>Mean</i>) 1.71
Dakota Oral Health Program Interacting with	27.6	65.5	0.0	6.9	1.70	1.65
members/stakeholders Communicating oral health needs to policy makers and the public	34.5	51.7	3.4	10.3	1.65	1.74
Establishing and advocating for public and private policies to improve access to or the delivery of oral health services	34.5	44.8	3.4	17.2	1.63	1.61
Implementing prevention interventions	34.5	51.7	0.0	13.8	1.60	1.62
Building community capacity to address oral health needs	44.8	48.3	0.0	6.9	1.52	1.50
Educating the public about the value of good oral health and its impact on overall health	55.2	41.4	0.0	3.4	1.43	1.48
		(n=29)			(n=29)	(n=26)

^{*} Average scores are calculated based on the mean response values of 1-3 excluding "Do not know".



^{*}Average scores are calculated based on the mean response values of 1-3 excluding "Do not know".

Challenges Impacting Oral Health

Respondents were also asked to rate on a one to five scale, where one is 'not at all' and five is 'a great deal', their level of agreement with various statements related to challenges that impact oral health in North Dakota. A 'do not know' option was also provided. An average score based on the mean response values, excluding responses for 'do not know', was calculated. Findings are detailed in Table 3 and Figure 4.

Respondents largely agreed that every challenge impacted oral health in North Dakota. Every challenge had an average score of at least 3.33, while three categories had average scores of 4.03 or higher. Respondents' level of agreement was the greatest when asked about 'access to affordable dental care'. Sixty-two percent of respondents indicated 'access to affordable dental care' impacted oral health 'a great deal' with an average score of 4.41.

Respondents agreed that 'availability of providers' and 'limitation in coverage for preventive oral health care services by insurers' had substantial impacts on oral health in North Dakota

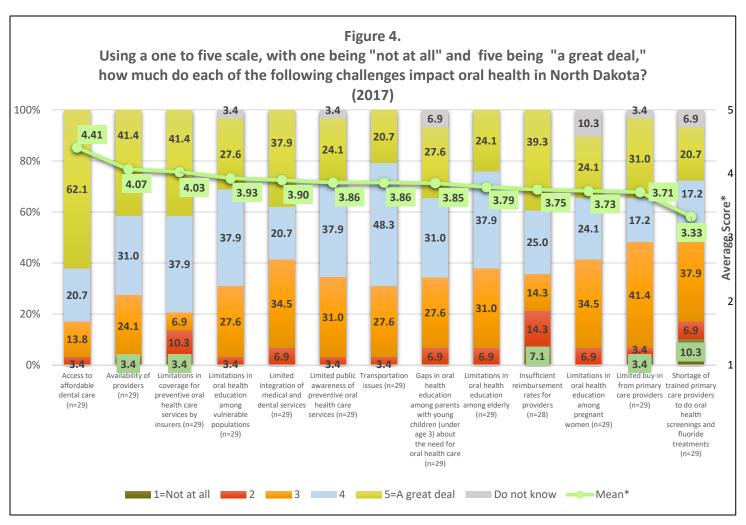
with average scores of 4.07 and 4.03, respectively. Forty-one percent of respondents indicated oral health was impacted 'a great deal' by these two categories.

The remaining categories—'limitations in oral health education among vulnerable populations', 'limited integration of medical and dental services', 'limited public awareness of preventive oral health care services', 'transportation issues', 'gaps in oral health education among parents with young children (under age 3) about the need for oral health care', 'limitations in oral health education among elderly', 'insufficient reimbursement rates for providers', 'limitations in oral health education among pregnant women', 'limited buy-in from primary care providers', and 'shortage of trained primary care providers to do oral health screenings and fluoride treatments'—had average scores ranging from 3.33 to 3.93.

'Shortage of trained primary care providers to do oral health screenings and fluoride treatments' had the lowest average score of 3.33. While respondents most frequently indicated the 'shortage of trained primary care providers to do oral health screening and fluoride treatments' impacted oral health care 'not at all', only 10 percent of respondents replied 'not at all'. Generally, very few respondents indicated the various challenges impacted oral health 'not at all'. Overall, there was little difference in respondents' perception of the level of importance of the various challenges.

Table 3. Using a one to five scale, with one being "not at all" and five being "a great deal," how much do each of the following challenges impact oral health in North Dakota?

now much do each of the follow				017				
	1 Not				5 A great	Do not	2017 Avg.	2015 Avg.
	at all	2	3	4	deal	know	Score*	Score*
Item	(%)	(%)	(%)	(%)	(%)	(%)	(Mean)	(Mean)
Access to affordable dental care	0.0	3.4	13.8	20.7	62.1	0.0	4.41	4.56
Availability of providers	3.4	0.0	24.1	31.0	41.4	0.0	4.07	4.48
Limitations in coverage for preventive oral health care services by insurers	3.4	10.3	6.9	37.9	41.4	0.0	4.03	3.88
Limitations in oral health education among vulnerable populations	0.0	3.4	27.6	37.9	27.6	3.4	3.93	4.08
Limited integration of medical and dental services	0.0	6.9	34.5	20.7	37.9	0.0	3.90	3.71
Limited public awareness of preventive oral health care services	0.0	3.4	31.0	37.9	24.1	3.4	3.86	3.83
Transportation issues	0.0	3.4	27.6	48.3	20.7	0.0	3.86	3.48
Gaps in oral health education among parents with young children (under age 3) about the need for oral health care	0.0	6.9	27.6	31.0	27.6	6.9	3.85	3.96
Limitations in oral health education among elderly	0.0	6.9	31.0	37.9	24.1	0.0	3.79	3.95
Insufficient reimbursement rates for providers	7.1	14.3	14.3	25.0	39.3	0.0	3.75	3.32
Limitations in oral health education among pregnant women	0.0	6.9	34.5	24.1	24.1	10.3	3.73	3.74
Limited buy-in from primary care providers	3.4	3.4	41.4	17.2	31.0	3.4	3.71	3.70
Shortage of trained primary care providers to do oral health screenings and fluoride treatments	10.3	6.9	37.9	17.2	20.7	6.9	3.33	3.12
			(n	=29)			(n=29)	(n=25)
* Average scores are calculated ba	sed on th	ne meai	respoi	nse valu	es of 1-5	excludin	g "Do not	know".



^{*}Average scores are calculated based on the mean response values of 1-5 excluding "Do not know".

Top Priorities

Respondents were also asked to rank the level of importance of seven oral health care priorities on a scale with one the being the highest oral health care priority and seven the lowest priority. The rankings were recoded for reporting the average score. Items with the highest average scores were ranked of greater importance than those with lower scores. Responses are detailed in Table 4 and Figure 5.

Respondents most frequently cited 'Access', 'Education', and 'Prevention' as the top priorities for the OHP with average scores of 5.70, 5.19, and 5.11, respectively. Forty-one percent of respondents indicated 'Access' is the most important and 30 percent indicated 'Education' was the most important priority for the OHP and partner organizations. 'Prevention' was a top priority for 19 percent of respondents. 'Workforce', 'Policy', and 'Advocacy' were far lower priorities for respondents with average scores of 3.89, 3.63, and 3.26, respectively. Only 3.7

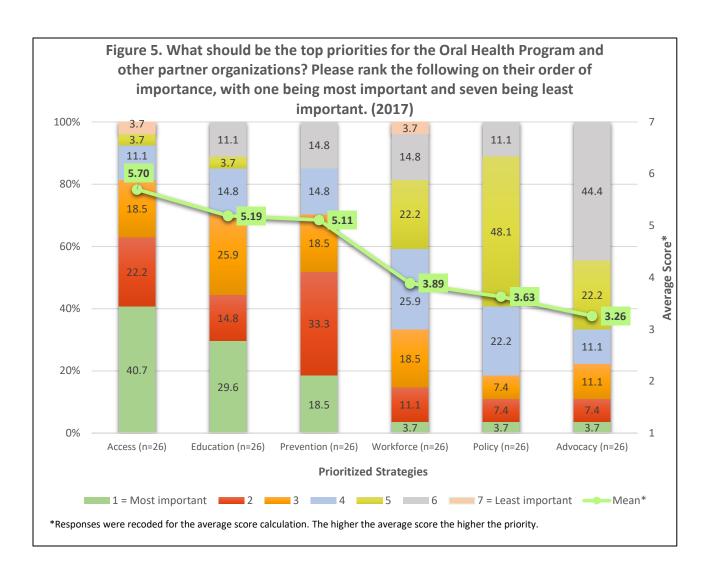
percent of respondents indicated 'Workforce', 'Policy', and 'Advocacy' should be the most important priority.

Table 4. What should be the top priorities for the Oral Health Program and other partner organizations? Please rank the following on their order of importance, with one being most important and seven being least important.

<u> </u>									
				2017					
	1						7		2015
	Most						Least	2017 Avg.	Avg.
Working	important	2	3	4	5	6	important	Score*	Score*
areas	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(Mean)	(Mean)
Access	40.7	22.2	18.5	11.1	3.7	0.0	3.7	5.70	5.41
Education	29.6	14.8	25.9	14.8	3.7	11.1	0.0	5.19	4.41
Prevention	18.5	33.3	18.5	14.8	0.0	14.8	0.0	5.11	5.21
Workforce	3.7	11.1	18.5	25.9	22.2	14.8	3.7	3.89	3.75
Policy	3.7	7.4	7.4	22.2	48.1	11.1	0.0	3.63	3.88
Advocacy	3.7	7.4	11.1	11.1	22.2	44.4	0.0	3.26	4.33
Other									
(please specify) ¹	0.0	3.7	0.0	0.0	0.0	3.7	92.6	1.22	1.86
				(n=27)				(n=27)	(n=24)

^{*}Responses were recoded for the average score calculation. The higher the average score the higher the priority.

¹ Other priorities specified: "Funding of Oral Health Programs for Children", "I feel like education and advocacy are very similar", "Establish Dental Therapy Role in the State - Through policy", "Prevention is very important but I think it can be included in education so I rated it lower."



Other Barriers or Challenges

Respondents were asked to comment on other barriers or challenges that impact improvement of oral health in North Dakota. Twelve respondents provided comments to the open-ended question. Comments were concentrated on five major areas: funding and financial resources, workforce, awareness, and recognition of the importance of oral health to overall health, practitioners accepting Medicaid patients, and communication with the ND Dental Foundation. One respondent commented about funding without providing additional details. Another expressed with resignation that funding in most cases controlled everything. Two respondents commented on specific funding issues. One said "[F]unding from the state is for the most part – not available for infrastructure (health) which would help dramatically". The other emphasized that a funded pilot project critically improved access and facilitated utilization of oral health among "low income, rural, under/uninsured, American Indian and aging populations".

Regarding workforce issues, one respondent shared concerns about the shortage of dentists, while another respondent said they did not believe there was a shortage of trained primary care providers to do oral health screenings if you include dental hygienists in the count. Another respondent indicated that mid-level providers would be able to offer better access to patients in rural areas as more treatment options were available from them. One respondent worried that the barriers created by the dental professional community hindered the improvement of the dental workforce.

Two respondents commented on the importance of oral health to overall health. They commented on the importance of integration of oral health into primary care and providing training for oral health assessment in the emergency department. Another respondent thought that medical doctors and nurses need to be aware and educate their patients on the importance of oral health and the correlation between oral health and overall health.

According to two other respondents, Medicaid patients were unwillingly accepted by most private practitioners. However, providing dental service to that population is critical to their quality of life.

One respondent commented on the historic leadership provided by the ND Oral Health Coalition and expressed concern that communications have been limited and reorganization efforts appear to be moving slowly with no meetings scheduled.

Below are respondents' comments verbatim.

"Dental professional community creates barriers to improving the workforce."

"Shortage of dentist."

"Funding."

"Funding from the state is for the most part – not available for infrastructure (health) which would help dramatically."

"Integration of oral health care into primary care, but also strong referral networks out of emergency departments – training in the ED for oral health assessments, etc. Oral health literacy – community recognition of the importance of oral health for overall health. Funding for pilot projects to improve oral health, access, and utilization among disparate populations (low income, rural, under/uninsured, American Indian, aging)."

"Just a comment on the above question — I don't believe there is a shortage of trained primary care providers to do oral health screenings if you include dental hygienists as primary care providers."

"Knowledge is power, and I don't know that enough people are aware of the associated health risks related directly to poor oral health care. This is an area where medical and dental can support each other. Medical doctors and nurses need to be aware and educate their patients about the importance of oral health care and links to their health that could be attributed to a lack of oral health care."

"Not passing mid-level providers in the dental work force that would allow better access to patients in rural areas with more options of treatment available from mid-level providers. For example, dental therapists as a master's program for dental hygienists to provide simple extractions, restorations, cleanings, sealants, education, radiographs, similar to the work of a nurse practitioner or physician assistant."

"The unwillingness* of most private practitioners to accept Medicaid patients." (Note: *this was corrected from a misspelled word in the original response.)

"The Oral Health Coalition at one time was a strong voice/advocate for oral health but has not come together in a long time. I know there are plans to integrate with the ND Dental Foundation, but communication has been limited and no meetings have been scheduled."

"The usual: rural, dentists who take Medicaid, cancellations of the Medicaid population, limited people who care enough about their own health. Catching and helping people who might qualify for Medicaid." (Note: ** repeated word was deleted from the original response.)

Respondent Affiliations

Respondents were asked about which interests their organization was most closely affiliated. Nearly half of respondents were oral health care providers and practitioners (46%), 29 percent were from state or local government, and 14 percent were affiliated with educational institutions (Table 5).

Table 5. With which of the following interests are you most closely affiliated?

	2017			
Affiliated interests	Percent (%)	Responses (n)		
Oral health care provider/practitioner	46.4	13		
State or local government	28.6	8		
Educational institution(s)	14.3	4		
Long-term care	3.6	1		
Other (please specify) ¹	7.1	2		
		(N=28)		

¹One of the respondents who is affiliated with 'other interest' specified it as "nonprofit".

[&]quot;Unfortunately, everything always seems to come down to funding."

Respondents were asked how long they or their organization has been involved with oral health care in North Dakota. Several respondents did not provide a numeric response, instead indicated "always", "longer than any other organization", and "forever". The non-responses were excluded from the mean. The average length of involvement of the remaining respondents was 13.4 years. However, years of involvement varied substantially, ranging from 3.7 years to 22.9 years.

Additional Comments

Finally, respondents were asked if they had any additional comments. Several respondents offered additional comments. Respondent comments are listed verbatim below:

"I am not real familiar with what the Oral health program does."

"I would like to see the Oral Health website be used more for education."

"The Oral Health Program does excellent work with the resources they have access to.

With more funding and support they could make a HUGE difference in a small state like North Dakota."

"The Oral Health Program is very skilled at collaboration. The key to achieving results in North Dakota!"

"Work with organizations to establish more care providers in the state and increase Medicaid reimbursement. Increase the amount of providers in cities who accept Medicaid and improve preventative programs."

"The Oral Health Coalition has too closely aligned with the ND Dental Association and thus is not neutral when it comes to passing policies in our state that would improve oral health. While many good programs have been initiated by the ND Oral Health Coalition, we are missing the opportunity to reach many more people through enhancement of the workforce and enabling legislation. Continuing to support one time Mission of Mercy and Give Kids a Smile events is not sustainable in the long term and is not reaching many populations in need."

"As a dental health provider it is unclear what the role of the oral health Dept. is. I primarily see the Dept. supporting the ND dental association mission which isn't always the best way to improve the oral health of the citizens in ND. I feel most ND dental providers do not know about this program and the resources available from the program."

Conclusions

The OHP has effectively collaborated with partnership organizations to leverage scarce resources. The ability to work effectively with various partnership organizations was frequently cited as a strength of the program. The OHP was also praised by several individuals for their efforts to continue to educate and elevate the conversation regarding the importance of oral health care for older adults.

Even though the OHP was largely viewed favorably by key stakeholders, there were some areas of improvement that were identified. Data and information dissemination were frequently identified as areas where there was opportunity for improvement. Data collected as part of the program's surveillance systems are frequently not publicly available. Often data and reporting are driven by terms of funding grants and information that could potentially drive informed decision making is not distributed. The ability to more effectively distribute data and information is largely driven by lack of capacity. Funding for additional staff or external analysis may be necessary to improve data analysis and information dissemination. The lack of human and financial resources was cited as a limitation for not only the OHP but for partnership organizations as well.

The OHP school-based sealant program, Seal!ND, offers an example of how collaborations and partnerships can effectively advance shared goals. Through both internal and external partnerships, organizations have been able to advance the objectives of the school-based sealant program and the OHP. The OHP has effectively partnered with private practices by entering an MOA and providing portable equipment to facilitate private practices offering a school-based sealant program. The OHP has worked with the ND Office of Medicaid to facilitate billing for both private practice and the public health hygienist to address issues of profitability for private practice providers and sustainability for the OHP school-based sealant program.

Respondents to a survey of individuals representing various partnership organizations indicated that in some cases the oral health care needs of North Dakota residents were being met very well, specifically in terms of community water fluoridation, monitoring and surveillance of programs, and promoting and delivering preventive oral health services. However, respondents suggested there was room for improvement in terms of oral health education for consumers, access to oral health services for rural populations, and access to oral health services for vulnerable populations. Respondents' perceptions on how well the OHP is meeting oral health care needs are relatively unchanged from the 2015 survey. In most cases, respondents indicated the level of emphasis given by the OHP to various programs was 'just the right amount of emphasis'. The OHP was given especially high marks for building partnerships, where

79 percent of respondents indicated the OHP placed the right amount of emphasis on building partnerships. Access to affordable dental care was most frequently cited as having 'a great deal' of impact on oral health in North Dakota.

Appendix A: Partnership Evaluation Survey 2017

ND Oral Health Program Partnership Evaluation Survey 2017

Thank you for taking a few minutes to complete this questionnaire. All responses will be held in strict confidence and no individual's responses will be disclosed. The questionnaire should only take about five minutes to complete.

If you have any questions regarding participation in this effort, please contact me at nancy.hodur@ndsu.edu or 701-231-8621.

Thank you in advance for your participation.

Nancy Hodur, PhD

Director, Center for Social Research

North Dakota State University

North Dakota Oral Health Program: 2017 Partnership Evaluation

1. Using a one to five scale, with one being "not at all" and five being "extremely well", to what degree are the following oral health needs of North Dakotans being met?

	1 = Not at all	2	3	4	5=Extremely well	Do not know
Community water fluoridation	0	0	0	0	0	0
Access to oral health services for rural populations	0	0	0	0	0	0
Access to oral health services for vulnerable populations	0	0	0	0	0	0
Oral health education to consumers	0	\circ	\circ	\circ	0	0
Oral health education to professionals	0	\circ	\circ	\circ	\circ	\circ
Promotion of preventive oral health services	0	0	0	\circ	0	0
Preventive oral health services	0	\circ	\circ	\circ	\circ	\circ
Monitoring and surveillance of programs	0	0	0	0	0	0

2. How much emphasis (e.g., attention, resources) do you think the North Dakota Oral Health Program and other partner organizations have given to each of the following areas over the past fiscal year?

	Too little emphasis	Just the right amount of emphasis	Too much emphasis	Do not know
Building partnerships	0	\circ	\circ	\circ
Educating the public about the value of good oral health and its impact on overall health	0	0	0	0
Building community capacity to address oral health needs	0	0	0	0
Communicating oral health needs to policy makers and the public	0	0	0	0
Establishing and advocating for public and private policies to improve access to or the delivery of oral health services	0	0	0	0
Implementing prevention interventions	0	\circ	\circ	0
Interacting with members/stakeholders	0	\circ	\circ	\circ
Advancing the overall mission of the North Dakota Oral Health Program	0	0	0	0

3. Using a one to five scale, with one being "not at all" and five being "a great deal", how much does each of the following impact oral health in North Dakota?

	1=Not at All	2	3	4	5=A great deal	Do not know
Access to affordable dental care	0	\circ	\circ	0	\circ	0
Availability to providers	0	\circ	\circ	0	\circ	\circ
Limited public awareness of preventive oral health care services	0	\circ	\circ	0	\circ	\circ
Limitations in coverage for preventive oral health care services by insurers	0	\circ	0	\circ	\circ	\circ
Transportation issues	0	\circ	\bigcirc	\circ	\circ	\circ
Insufficient reimbursement rates for providers	0	\circ	\circ	0	\circ	0
Limited integration of medical and dental services	0	\circ	\circ	0	\circ	\circ
Limited buy-in from primary care providers	0	\circ	\bigcirc	\circ	\circ	\circ
Shortage of trained primary care providers to do oral health screenings and fluoride treatments	0	\circ	0	\circ	0	\circ
Gaps in oral health education among parents with young children (under age 3) about the need for oral health care	0	0	\circ	0	0	\circ
Limitations in oral health education among elderly	0	\circ	\bigcirc	\circ	\circ	\circ
Limitations in oral health education among vulnerable populations	0	\circ	\circ	\circ	\circ	\circ
Limitations in oral health education among pregnant women	0	\circ	\circ	\circ	\circ	\circ

Are there other barriers or challenges that impact improvement of oral health in North Dakota?

4. What should be the top priorities for the Oral Health Program and other partner organizations? Please rank the following on their order of importance, with 1 = most important and 7 = least important. Drag and drop to order.
Education
Prevention
Access
Workforce
Policy
Advocacy
Other (please specify)
5. With which of the following interests are you most closely affiliated?
Educational institution(s)
State or local government
Oral health care provider/practitioner
O Long-term care
Other (please specify)

6. How long have you or your organization been involved with oral health care in North Dakota?

7. Do you have any additional comments, observations, or considerations regarding oral health or the Oral Health Program?

Thank you for your input and participation in this evaluation of the North Dakota Oral Health Program.
Click "Next" to exit the survey.