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COMMUNITY HEALTH CENTERS PROVIDING DENTAL CARE TO DISPARATE POPULATIONS IN NORTH DAKOTA

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ABSTRACT. *Purpose:* Those who continue to be underserved nationally with regard to oral health care are minority groups (specifically Native American and Black), the elderly, rural residents, those who are poor, and those who are under/uninsured, or who are covered by Medicaid. Those in need of dental care are also the populations who more readily utilize community health centers (CHCs). CHCs provide health care to uninsured, underinsured, and disparate populations at a reduced-fee. This case study explored how CHCs in North Dakota provide dental care to disparate populations, while also identifying opportunities to close the access gap. *Results:* The four federally funded CHCs in North Dakota and their satellite sites were primarily located in the Eastern and Northern halves of the state, leaving a significant gap in eligible services. A majority of the counties designated as dental health professional shortage areas (HPSAs) did not have CHC services, and only one had a CHC that offered access to oral health care. The dental HPSAs were also all located in counties with rural designations. North Dakota has fewer CHC sites than neighboring states. *Conclusions:* Additional CHCs, or satellite locations, offering oral health services and more geographically dispersed in the state would provide greater access to care for North Dakota residents. There is a lack of State financial support for North Dakota CHCs compared to the national average, which exacerbates the access disparity. Many CHCs cite lack of funding as the barrier to geographic expansion and the ability to offer dental care. There is opportunity, if funding were available, to grow the dental workforce among existing CHCs that do not yet offer oral health services, and to encourage additional CHC sites in the South and Western regions of the State.

Keywords: dental; oral health; health center; access

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Introduction

Society must move beyond the idea that health of the mouth is separate from the overall health of the individual. Poor oral health results in pain, poor nutrition through an inability to chew and eat, low self-esteem, poor speech, early edentulism, lower quality of life, infection in other parts of the body, and can have an effect on other chronic diseases. (Sheiham, 2005; Petersen, 2003) Adult minorities have been found to have a lower percentage of self-reported good or better tooth, mouth, or gum condition than their Caucasian peers. (Quandt et al., 2009) In children, underserved minorities are at risk for higher prevalence of poor oral health condition, lack of preventive care, and delayed care. (Flores and Lin, 2013; Fisher-Owens et al., 2013) Despite variations in the definition of rural, those populations residing in rural areas have increased occurrences of dental caries, reduced access to preventive care, and poor oral health outcomes in general. (Ahn et al., 2011; Martin et al., 2012; Dong et al., 2015) Children in rural areas are also less likely to have sealants than their urban counterparts. (Dong et al., 2015) A dental sealant is a plastic coating applied to the chewing surfaces of back teeth to prevent tooth decay.

Aging populations experience a decrease in dental care over time. (Vujicic and Nasseh, 2014) Older populations seek dental care only when an oral health problem arises. (Arcury et al., 2012) This is understood in the literature as the "Paradox of Need" – oral health care intervention is needed, but that need is a strong predictor in a negative direction related to obtaining care. (Gilbert et al., 2003) Insurance status and poverty level are also indicators of poor oral health status with those with lower income and those either uninsured or covered by Medicaid representing the underserved. (Nasseh and Vujicic, 2014)

Synopsized, those who continue to be underserved nationally with regard to oral health care are minority groups (specifically Native American and African American), the elderly, rural residents, those who are poor, and those who are uninsured or who are covered by Medicaid. Those identified as in need of dental care are also the populations who more readily utilize community health centers (CHCs).

Community health centers (CHCs) are non-profit healthcare providers that act as safety nets to those who are uninsured or underinsured in high need areas. CHCs provide comprehensive primary healthcare services tailored to fit the needs of the community, including primary care, dental care, mental and substance abuse services, vision, and health education. (National Association of Community Health Center, 2014) CHCs are federally funded through application to the Health Resources & Services Administration's Bureau of Primary Health Care. Money has been allocated under Section 330 of the Public Health Services Act. (Keiser, 2010) Federally funded CHCs must provide services regardless of a patient's ability to pay, and they must have a sliding scale fee schedule based on patient income. Fees are calculated on a sliding scale up to 200% of the Federal Poverty Level (FPL). (Keiser, 2010) To ensure adequate funding, public programs (i.e. Medicaid) reimburse CHCs at a higher rate than other providers who are not required to serve the homeless, uninsured, and poor.

Research has found that CHCs reduce the likelihood that these populations will utilize emergency services, or costlier care at more expensive hospital settings. While this study explored general CHC health services (and not solely dental care), they concluded that if the care provided by CHCs is comprehensive enough, it will avert the use of costlier hospital care. CHCs are then necessary to reduce the increasing trend in the use of the emergency department for dental concerns. (Rothkopf et al., 2011) Between 2001 and 2008, there was a significant increase in the number of emergency department visit rates for dental issues. This trend was most prevalent among those 18 to 44, the uninsured, and Blacks. (Helen et al., 2012) In 2013, the American Dental Association's Health Policy Institute again concluded that emergency department visits for dental conditions were increasing, and that these visits were increasing overall healthcare costs. (Wall and Nasseh, 2013)

CHCs are uniquely positioned to increase access to and utilization of dental care while also improving oral health literacy in communities experiencing the worst oral health outcomes. (Jones et al., 2013) Among all federally funded CHC programs in 2010, roughly 80% were providing oral health services in at least one of their site locations. (Helen et al., 2012) Healthy People 2020 is seeking to see the national average at 83% by 2020. Increasing access will subsequently increase utilization among disparate populations, reducing their prevalence of dental problems. (Office of Disease Prevention and Health Promotion, 2016)

Given that residents in the state of North Dakota disproportionately represent those populations identified as underserved in the literature, researchers found it imperative to explore state oral health status while also identifying access to dental care among North Dakota CHCs. Research staff then

proposed a case study and review of the CHCs in North Dakota, specifically identifying oral health services offered, and care utilized.

Method

Research staff at the Center for Rural Health completed an assessment of the oral health status in North Dakota in 2014 and again in 2016. (Center for Rural Health, 2016) The results of that work, to include a discussion of those populations at greatest risk of poor oral health outcomes, were reviewed. The populations in need were then compared to the list of populations that CHCs are charged with servings, as well as with the records of care provided by North Dakota CHCs. As part of the assessment of oral health in North Dakota, Center for Rural Health research staff sought to identify: (1) populations in need of oral health services in North Dakota; (2) CHCs offering oral health services in North Dakota; and, (3) opportunities to utilize the CHC model to increase access to dental care for those in need of oral health services.

In the summer of 2016, research staff developed an interview protocol and script. Research support staff then contacted each of the CHCs in North Dakota to assess their patient base, care offered, and current dental services provided. (Center for Rural Health, 2016) After review of the interview notes, a profile for each CHC was developed, sent back to the primary contact for review, and revised as needed. Additional resources describing each of the CHCs were also utilized, to include reports provided by the regional community health association (Community Health Association of the Dakotas), and individual CHCs.

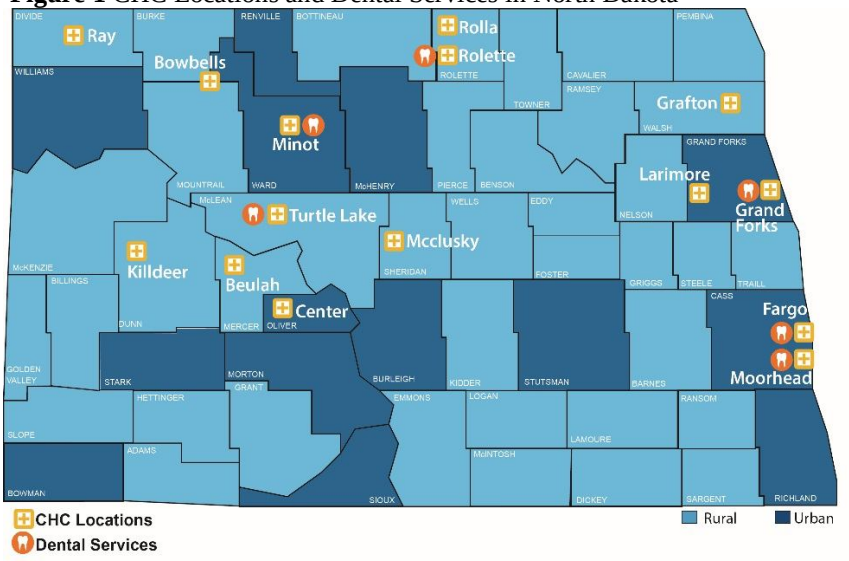
Results

As of June 2016, there were five federally funded CHCs providing care to North Dakota residents at 18 sites. (National Association of Community Health Center, 2014; Community HealthCare Association of the Dakotas, 2015) The CHCs included Coal Country Community Health, Northland Health Centers, Family Healthcare Center, Valley Community Health Center, and Community Health Service, Inc. (Community Health Service, Inc. is headquartered in Moorhead, Minnesota, but has one North Dakota site in Grafton). In North Dakota, oral health services were provided directly by three federally funded CHCs in a total of six satellite locations throughout the State, including one in a bordering city in Minnesota. Only 60% (three of the five) federal funded CHCs offered oral health services in at least one of their associated sites. This is below both the national average (80%) and the Healthy People 2020 goal (83%). (Helen et al., 2012) The six sites offering

oral health care provided dental services for 12,999 patients in 2015. (National Association of Community Health Center, 2014) The six CHC locations providing oral health services for North Dakota residents in 2016 included (see Figure 1):

Turtle Lake	Northland Health Centers
Rolette	Northland Health Centers
Minot	Northland Health Centers
Fargo	Family Healthcare Center
Moorhead, Minnesota	Family Healthcare Center
Grand Forks	Valley Community Health Centers

Figure 1 CHC Locations and Dental Services in North Dakota



Source: Community HealthCare Association of the Dakotas, 2015

In North Dakota, federal grants provided 22% of the funding for the CHCs in 2015, slightly above the national average (21%). However, Medicaid reimbursement was a much smaller source of revenue for North Dakota CHCs than for CHCs nationally, and instead, North Dakota had a larger share of revenue from private insurance and self-pay. (Henry J. Kaiser Family Foundation, 2016) This is a significant concern for the State as many Medicaid patients are in need of oral health care services, and are not readily visiting a dentist or utilizing CHCs at a rate necessary to reduce dental disparities. North Dakota was also one of only 15 states in 2012 that did not provide any funding to the State's CHCs. (National Association of Community Health Centers, 2012)

Table 1 Sources of Revenue for Federally Funded Community Health Centers

Location	Medicaid	Medicare	Other Public Insurance	Private Insurance	Self-Pay	Federal Grants	State/Local Grants	Foundation/ Private Grants	Other
U.S.	42%	6%	2%	8%	5%	21%	9%	3%	4%
ND	24%	11%	0%	23%	12%	22%	4%	1%	3%

Source: Henry J. Kaiser Family Foundation, 2016

In 2015, of the 36,016 residents accessing any health service at the four federally funded health centers headquartered in North Dakota, 329 were migrant farmers, 2,224 were homeless residents, and 1,070 were veterans. A majority of those accessing the health care services in North Dakota were poor, and either uninsured or were Medicaid/Medicare recipients. CHCs located in rural areas also served 58% of the total CHC patient population in North Dakota. (National Association of Community Health Center, 2014)

Table 2 North Dakota Community Health Centers' Population Demographics, 2014

	ND CHC Population	ND Population
Income Status		
≤100% FPL	61%	10%
<200% FPL	91%	24%
Health Insurance		
Uninsured	34%	9%
Medicaid	23%	9%
Medicare	10%	13%
Race/Ethnicity		
Hispanic	6%	3%
African American	10%	2%
Asian/Pacific Islander	5%	1%
American Indian/Alaska Native	7%	5%
White	73%	89%

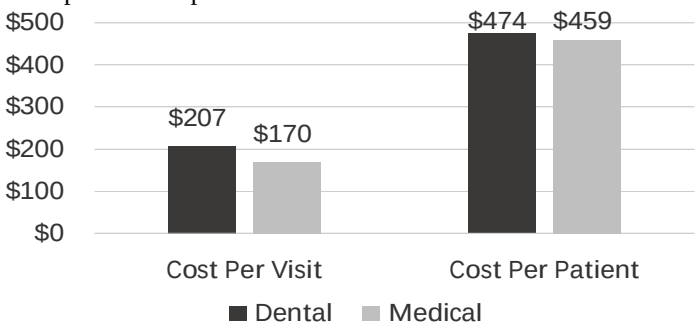
Source: National Association of Community Health Center, 2014

Oral Health Services in North Dakota CHCs

Three of the four CHCs in North Dakota had oral health professionals to provide dental care services, as of June 2016. Between the three CHCs, there were nine full-time dentists and eight full-time hygienists. In 2015, the three CHCs had 20,144 patient visits with a dentist, and 8,682 patient visits with a dental hygienist. The services provided included dental exams, cleanings, sealants, fluoride treatments, x-ray, cavity fillings, extractions, crowns, root canals, dentures, and dental emergency services. The average dental costs

per visit and per patient were greater for dental services than medical care (see Figure 2).

Figure 2 North Dakota CHC Dental vs. Medical Costs per Visit & per Patient



Source: National Association of Community Health Center, 2014

Following is a description of each of the CHCs offering dental services in North Dakota in 2016.

Northland Health Centers

Northland Health Center is located in Turtle Lake with six satellite sites located in: Minot; Rolette; Bowbells; McClusky; Ray; and Rolla. Among these sites, three were providing oral health care services: Turtle Lake, Rolette, and Minot.

Each site had one full-time dentist and one full-time hygienist, with one additional part-time dentist in Turtle Lake. Northland Health Centers had also requested for funding through the Oral Health Expansion Grant to open a new oral health clinic in Ray, North Dakota by September 2016.

According to Northland Health Center's dental administrator, Turtle Lake primarily served patients who were Caucasian (overall, 88.6% of the state's population identify as Caucasian), while a majority of those seen in Rolette were American Indian (5.5% of the State's population identify as American Indian). (United States Census Bureau, 2015) The dental administrator also indicated that Rolette and Minot patients were primarily (80%) covered through Medicaid while Turtle Lake patients had more varied coverage to include Medicaid, private insurance, and out of pocket payments.

Lack of access to dental services is particularly acute for North Dakota's elderly residents, because Medicare does not cover most dental services. Medicare Part A will only cover limited dental procedures done within a hospital setting which is considered necessary to treat a medical condition. (Medicare.gov., 2016; Centers for Medicare & Medicaid Services, 2016) In

order to mitigate some of the disparity among this population, satellite dental sites within Northland Health Center have begun to visit five different long term care facilities in the area to provide dental exams, hygiene care, and denture adjustments. They are also developing training for certified nurse's aides to provide oral care to the nursing home residents.

Family Healthcare Center

Family Healthcare Centers are located in West Fargo and Fargo, North Dakota, and Moorhead, Minnesota with oral health services provided in the latter two locations. The majority of their dental patients are also served by the medical clinic, but they occasionally receive referrals from private practices for Medicaid and uninsured patients. Both sites also receive emergency referrals from Sanford Hospital and treat those patients as walk-ins. Between the Fargo and Moorhead locations, there are four full-time dentists, one part-time dentist, and three full-time hygienists. The Fargo location provided oral health care services to 1,176 patients in 2015. Of those 1,176 patients, 57% were Caucasian, 21.3% were African American, and 7% were Asian. The Moorhead site had 2,207 dental patients where 72% were Caucasian, 12% were African American, and 3.2% were Asian. A third of the patients were school aged children (6–19) and another third were adults 30–64 years old. Approximately 30% of those who sought oral health care were 65 and over. A majority of the patients at both locations were covered by Medicaid, with others paying out of pocket or through private insurance.

Valley Community Health Centers

Valley CHCs are located in both Larimore and Grand Forks, though oral health services are only provided at the Grand Forks office. Patients from Larimore are referred to Grand Forks, with few being referred to a private dental practice in Larimore. In Grand Forks there are two full-time and two part-time dentists and two full-time and two part-time hygienists. In 2015, according to the dental director, Valley CHCs provided oral health services to 3,954 patients who accounted for 4,778 encounters. Among the 496 patients ages six through nine, 201 patients received sealants to their first molars to prevent cavities.

Conclusion

CHCs in North Dakota are serving a large portion of residents in need of care. While there are only six sites offering dental services, those providing dental care were serving poor, uninsured, minorities, and Medicaid enrollees.

Of concern is the low level of State support for CHCs, the small number of CHCs in the State overall, the low percent of CHCs offering dental services (60%), and the continued need for care among Medicaid and rural residents.

Seventeen of the 53 counties in North Dakota were designated as dental health professional shortage areas (HPSAs) in 2016. (U.S. Department of Health & Human Services, 2016) Only two of the 17 dental HPSA counties (12%) had a CHC site, and only one of those two CHC sites provided oral health services (Rolette). Ten (59%) of the dental HPSA counties had no dentist, and subsequently, no available dental care. Of the remaining seven dental HPSA counties, two had one dentist each, and five had between two and four dentists. The dental HPSAs are also all located in counties with rural designations. (University of North Dakota School of Medicine & Health Sciences & Center for Rural Health, 2015) Residents in these counties would benefit from proximal access to CHC dental services.

Recommendations

CHCs are intended to act as safety net providers, providing access to services like oral health care for the poor, rural, and under/uninsured in North Dakota. The existing CHCs that offer oral health services have provided care to a large portion of the state that would have otherwise been unable to access, or pay for, said care. In addition, the rural located CHCs providing oral health care serve a majority of CHC patients, though only three of their oral health clinics are in rural counties. Rural North Dakota residents rely on CHCs for their oral health care. In addition, population growth from migration is expected in cities like Minot, Grand Forks, and Fargo between now and 2025. (North Dakota Department of Commerce–Census Office, 2016) Thus, existing CHCs in even the urban regions may exceed their capacity to meet the growing demands for dental care. North Dakota also has fewer CHC sites than neighboring states. In South Dakota, there are five CHCs with 44 delivery sites. (Henry J. Kaiser Family Foundation, 2016) Minnesota and Montana have 16 CHCs with 76 delivery sites and 17 CHCs with 69 delivery sites, respectively. (National Association of Community Health Center, 2014; National Association of Community Health Center, 2014)

Additional CHCs, or satellite locations, offering oral health services and more geographically dispersed in the State would provide greater access to care for North Dakota residents. There is also a lack of state financial support for North Dakota CHCs compared to the national average, which makes it difficult for North Dakota CHCs to expand their service areas, or the care provided at existing sites. If funding were available, there would also be opportunity to grow the dental workforce among existing CHCs that do not yet offer oral health care services.

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