The recruitment and retention of oral health care professionals is a challenge in North Dakota. The state has no dental school and no reciprocity agreements with neighboring universities to encourage student enrollment. Recognizing the need to address oral health workforce shortages and barriers to recruiting new dental professionals, the North Dakota Department of Health Oral Health Program (OHP) wrote for, and secured, a four-year grant from the Health Resources and Services Administration under the Grants to States to Support Oral Health Workforce program. One of the four proposed goals includes placing dental students in Federally Qualified Health Centers (FQHCs) in North Dakota.

The OHP supported two, five-week dental rotations in late fall of 2018 and 2019 at Spectra Health. The North Dakota Area Health Education Center supported one additional Iowa student in 2018 and two additional in 2019. Although the University of Iowa students were not supported by the OHP, the objective of the rotation was the same: to promote recruitment of newly graduated dentists to return to work in public health in North Dakota and to increase students’ exposure to FQHCs. Accordingly, all dental students who completed a rotation at Spectra Health in 2018 and 2019 were included in the evaluation.

Spectra Health

Spectra Health is an FQHC in Grand Forks, North Dakota that has been in operation since 2004 and strives to ensure that high-quality and affordable services are available to everyone in the community. It recognizes the importance of integrated care where behavioral health, oral health, and primary care team members work together with the patient.

Dental Services Provided at Spectra Health

- Cleanings
- Extractions
- Restorative crowns
- Bite guards and night guards
- Fillings
- Composites
- Partial dentures
- Child-safe nitrous gas
- Sealants
- Urgent dental care
- Selective root canals

Dental Students and Clinical Services Provided

In both years, students most frequently performed restorative dental procedures. See Table 1. In 2019, 62% of procedures were restorative compared to only 57% in 2018. Conversely, in 2018 roughly 22% of services were extractions compared to only 12% of dental care in 2019. See Figure 1.

Table 1. Number of Dental Clinical Procedures by Year and School of Dentistry

<table>
<thead>
<tr>
<th>Year</th>
<th>School</th>
<th>Number of Students</th>
<th>Restorative</th>
<th>Exams</th>
<th>Preventive</th>
<th>Endo</th>
<th>Extractions</th>
<th>Number of MA Patients</th>
<th>MA $ Billed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>MN</td>
<td>2</td>
<td>75</td>
<td>14</td>
<td>13</td>
<td>3</td>
<td>32</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>Iowa</td>
<td>1</td>
<td>53</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>17</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>2019</td>
<td>MN</td>
<td>2</td>
<td>141</td>
<td>22</td>
<td>23</td>
<td>2</td>
<td>23</td>
<td>157</td>
<td>$26,266</td>
</tr>
<tr>
<td></td>
<td>Iowa</td>
<td>2</td>
<td>217</td>
<td>64</td>
<td>39</td>
<td>1</td>
<td>45</td>
<td>237</td>
<td>$34,769</td>
</tr>
</tbody>
</table>

* Specific data point not collected for that year.
MA: Medical Assistance (to include Medicare and Medicaid).
Student Experiences Before and After the Rotation

Students all stated they selected this rotation because of its geographic location (North Dakota), and two of the four pursued this opportunity because an upperclassman “highly recommended it!” When asked what was different about completing a dental rotation in an FQHC than in private practice, the students shared similar experiences. Students identified that in an FQHC setting:

- The patient base is very different than in private practice. Patients will arrive with complex social concerns beyond the scope of dental care and with a broader spectrum of service needs.
- The patients are generally low-income, on public insurance, and have lower health literacy than in private practice. However, students also noted that the patients they see at an FQHC are grateful for the care received and are very personable.
- You can treat the patients without concern for the “bottom line” or reimbursement rates. You can treat the patient without worrying about your business model.
- You need to work with the patient to determine the “best” care plan and you have to recognize that the ideal clinical treatment may not be feasible or practical for the patient. This may mean pulling a tooth that you would not have pulled had the patient presented with private dental insurance in a traditional practice setting.
- There is flexibility and a better work-life balance than experienced in a private practice setting.
- You can see more patients in a day than you would in private practice and the case presentations are more complex. For example, patients present with more advanced dental disease and concerns in an FQHC setting.

Although salary was a leading factor in future practice location and type, following their experiences, all students expressed a level of interest practicing in an FQHC. After the rotation, students had gained a better understanding of the loan repayment program and were appreciative of the information shared. However, all four students stressed that the current loan repayment programs do not offer enough financial incentive to encourage practice in an FQHC, rural, or North Dakota setting. None of the students had a negative experience to share, and all spoke highly of the program, the staff, the patients, and their experiences. Students consistently identified the benefits of the high daily case load, the amazing experience working with these specific providers, the excellent mentorship, and the positive working environment and team-based model of care.

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**Figure 1. Percentage of Procedures Performed by Dental Students by Procedure Type and Year**

![Bar chart showing percentage of procedures performed by dental students by type and year.](chart)

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>2018 (n = 223)</th>
<th>2019 (n = 577)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restorative</td>
<td>57%</td>
<td>62%</td>
</tr>
<tr>
<td>Exams</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Preventive</td>
<td>9%</td>
<td>11%</td>
</tr>
<tr>
<td>Endo</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Extractions</td>
<td>22%</td>
<td>12%</td>
</tr>
</tbody>
</table>

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“**It is the BEST rotation, and the people are wonderful, and I could not recommend them more highly to any student.**”

“This program should be recognized. . . . I don’t think anything we have here at our school can compare to this experience.”

“I get goosebumps it was so wonderful!”

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Experience of the FQHC Dental Team

Spectra Health has four dentists on staff, two of whom are authorized to oversee dental students through adjunct faculty status at the participating colleges. The two dental team members interviewed stressed how important it is that dental students experience working in an FQHC setting (or in a look-alike). Both highlighted how important it was that students leave the experience understanding the mission of the FQHC and the need for serving this particular patient base, as opposed to gaining clinical skill. It was also important that students who experience an integrated care model recognize that working in an FQHC can provide them the lifestyle they may be desiring without the stress of managing a business. Both of those interviewed enjoyed hosting the dental students and were eager to continue providing dental rotations. The experience was not what both expected, and instead, it was even better than anticipated.

“Even if they don’t want to come back to North Dakota or to Spectra, they now understand interworking of an FQHC and that is priceless!”

Experience of the North Dakota Oral Health Program

According to the state oral health program director, the purpose of hosting two dental students in an FQHC setting was to provide an experience for North Dakota residents to complete their dental rotations in their home state and in an integrated community health setting. The expectations of the grant were met. However, the program director would like to be able to grow the program and host additional students in diverse community settings in the future. Although the original grant proposed outreach and work with additional dental clinic sites each year, the OHP continues to contract with Spectra Health. Spectra continues to host dental students because they are engaged, the OHP has a positive relationship with the dental director at Spectra, and because it has been a challenge engaging additional locations and providers.

Ideas for sustainability focus on engaging additional clinic locations, working with communities to support hosting students financially, and engaging the state dental association and foundation to consider financial support. There is also interest to work to ensure students can gain community dental health experience through the school-based sealant program or mobile dental clinics.

Summary and Recommendations

This program has been highly successful. The dental students have provided clinical care and have gained experience working in an integrated care model, and the dental team has enjoyed working with the students. However, hosting dental students is expensive and can be time consuming. To encourage dental student rotations in other FQHC settings, and to support the current FQHC hosting dental students, following are few recommendations for consideration:

1. The OHP should explore additional opportunities to financially support dental student rotations in FQHC settings throughout North Dakota. Opportunities include asks of foundations, associations, community-based banks, and additional federal and state granting agencies. Although this is not a sustainable option, it helps ease the financial pressure of the participating FQHCs and can incentivize participation among these clinical settings.

2. The OHP should work with the primary care office to discuss the possibility of increasing the rate of the student loan repayment program. Students consistently stressed that the current loan repayment programs do not offer enough of an incentive to practice in a rural, underserved, or FQHC setting.

3. The state of North Dakota should work with neighboring dental schools to develop reciprocity agreements. North Dakota residents who attend dental school accrue more debt than the average dental student because they have no in-state option and no reciprocity agreements in place with neighboring states. The University of Minnesota School of Dentistry accepts the largest percentage of North Dakota residents and produces the largest number of practicing dentists in the state.

4. The ND DoH OHP should identify additional dental student rotation sites in underserved, rural, and FQHC settings. However, recognizing that there are barriers to serving as a host site, it would be beneficial if the OHP developed a toolkit on how to become a host site specifically identifying steps and forms for the facility and the individual dentists who would supervise student care.
5. Host sites would benefit from a better skill assessment of dental students prior to the rotation. A better understanding of student skill sets could increase the caseload earlier in the rotation.

6. Dental students benefit from experiencing an integrated care model. This experience reconnects them to primary care and helps primary care settings reintegrate the mouth into overall health.

Citations
a. North Dakota Department of Health Oral Health Program, oral.health.nd.gov/
b. Health Resources and Services Administration, U.S. Department of Health and Human Services, hrsa.gov/about/index.html
c. Grants to Stats to Support Oral Health Workforce Activities, HRSA, hrsa.gov/grants/find-funding/hrsa-18-014
d. North Dakota Area Health Education Center, ndahec.org/
e. Spectra Health Center, https://spectrahealth.org/

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For More Information
Visit the North Dakota Oral Health Program webpage at https://oral.health.nd.gov.
Visit the Center for Rural Health webpage at ruralhealth.und.edu/what-we-do/oral-health.