



## Dental Pain Management in Dental Clinics, Emergency Rooms, and Primary Care Settings in North Dakota

The North Dakota Department of Health Oral Health Program (OHP), funded by the Health Resources and Services Administration, surveyed dentists and reviewed emergency room data in order to better understand dental pain management, dentists' screening practices, and risk factors associated with and predictive of opioid prescribing behavior.

### Dental Survey

The OHP worked with the North Dakota Dental Association to survey dentists on screening and opioid prescribing. A total of 242 dentists completed the 2018 survey. More than half (58%) had been practicing 11 or more years, and a majority (85%) practiced in general dentistry.

Roughly 79% of respondents reported prescribing opioids between 2016 and 2018, and 91% were registered with the North Dakota Prescription Drug Monitoring Program (PDMP). However, only 52% had taken continuing education on addictive disease/pain management, opioids, and narcotics. Dentists who were practicing in oral and maxillofacial surgery and in general dentistry were more likely to report prescribing opioids compared to other areas of practice.

**Dentists practicing in completely rural areas were six times more likely to report prescribing opioids compared with mostly rural and mostly urban areas (p<.05).**

The top five reasons for prescribing opioids were:

1. Complex extractions (77%)
2. Dental surgery (48%)
3. Wisdom teeth extraction (37%)
4. Root canal (34%)
5. Patient presents in pain (32%)

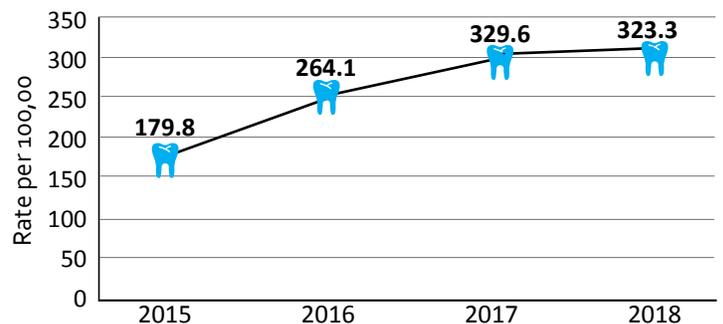
### Syndromic Surveillance

The OHP also explored data to understand where residents go when experiencing tooth pain. Data were collected between 2015 and 2018 and were pulled from ND ESSENCE. ND ESSENCE is an electronic surveillance system that consists of

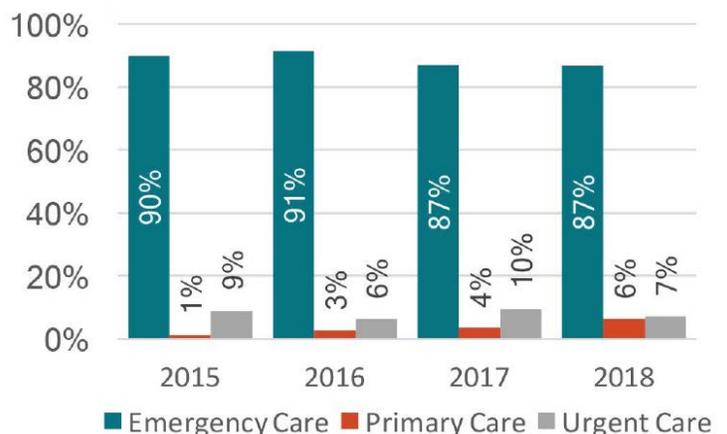
emergency department, urgent care, and walk-in clinic visit information. There are significant limitations to the data. For example, the numbers do not reflect true visits but are based on queried keywords from only those hospitals that participate in data reporting. Regardless, it is the only means of beginning to understand current practice.

The rate of tooth pain visits in North Dakota have increased between 2015 and 2018 (See Figure 1). However, much of this increase may be attributed to an increase in reporting. A majority of tooth pain visits between 2015 and 2018 were visits to emergency care (see Figure 2).

**Figure 1. Tooth Pain Related Visits per 100,000 in North Dakota, by Year**



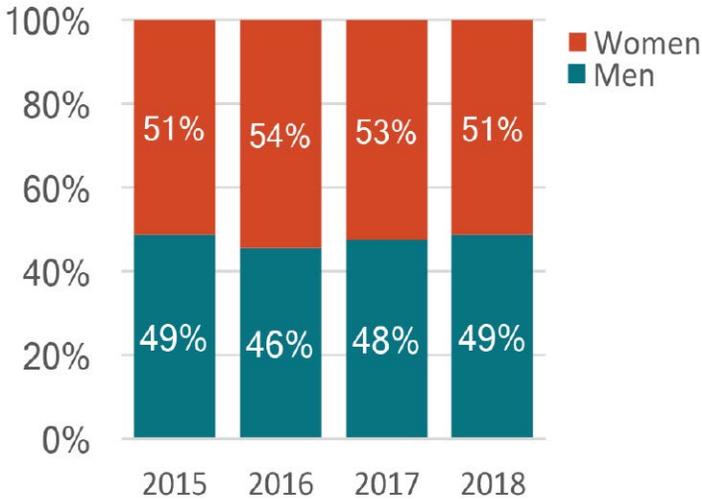
**Figure 2. Tooth Pain Related Visits Setting, by Year**



## Tooth Pain Related Visits by Race, Sex

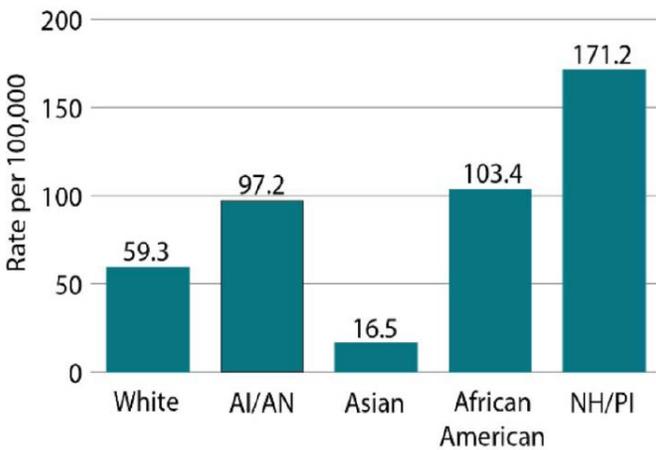
A greater proportion of those seeking care for dental pain were women (see Figure 3). However, men had a higher percentage of visits to emergency care related to tooth pain than did women between 2016-2018.

**Figure 3. Percent of Tooth Pain Visits by Sex, Year**



Other racial groups reported higher rates of tooth pain related visits than white during the four-year period. Highest rates were among Native Hawaiian/Pacific Islanders (NH/PI). See Figure 4.

**Figure 4. Tooth Pain Related Visits in North Dakota, by Race, 2015-2018 Combined**



AI/AN = American Indian/Alaska Native  
NH/PI = Native Hawaiian/Other Pacific Islander

## Conclusions

A majority of dentists were registered with PDMP yet only 52% had taken continuing education on addictive disease/pain management between 2016 and 2018. Dentists practicing in completely rural areas were more likely to prescribe opioids

than their peers. The number and rates of tooth pain visits have increased for all racial groups and genders. However, AI/AN, African American, and NH/PI reported higher dental pain visit rates per 100,000 than white individuals. A large majority of tooth pain visits occurred in emergency care.

## Oral Health Program Response

The OHP has proposed an emergency room diversion program and will begin work with Quality Healthcare Associates in 2020. This work will include completing an environmental scan in two North Dakota communities and implementing an emergency department diversion program in partnership with dental providers throughout the state. An additional goal relates to increasing support for continuing education on addictive disease/pain management and utilization of the ND PDMP among dental providers.



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### For More Information

Visit the North Dakota Oral Health Program webpage at [oral.health.nd.gov](http://oral.health.nd.gov)

Visit the Center for Rural health webpage at [ruralhealth.und.edu/what-we-do/oral-health](http://ruralhealth.und.edu/what-we-do/oral-health)

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