

Nebraska

State Oral Health

**Hospital Emergency Department Use for Non-Traumatic
Dental Conditions Report, 2009 - 2016**

EMERGENCY →



NEBRASKA

Good Life. Great Mission.

DEPT. OF HEALTH AND HUMAN SERVICES

— **2019** —



Prepared by: Rajvi J. Wani, MS, PhD - Oral Health Epidemiologist

Charles F. Craft DDS - State Dental Health Director

Table of Contents

| | |
|--------------------------|-------|
| Abbreviations..... | 2 |
| Introduction..... | 3 |
| Nebraska Background..... | 3 |
| Objectives..... | 5 |
| Methods..... | 5 |
| Results..... | 7 |
| Conclusions..... | 8 |
| Recommendations..... | 9-10 |
| References..... | 11 |
| Table 1..... | 12 |
| Map 1..... | 13 |
| Map 2..... | 14 |
| Map 3..... | 15 |
| ED Informatics..... | 16 |
| Appendix 1..... | 17-23 |

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number T12HP30315 and Grants to States to Support Oral Health Workforce Activities for \$500,000.00. This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government

List of Abbreviations

| | |
|---------|--|
| ASTDD | Association of State and Territorial Dental Directors |
| BSS | Basic Screening Survey |
| BRFSS | Behavioral Risk Factor Surveillance System |
| CDC | Centers for Disease Control and Prevention |
| CHIP | Children's Health Insurance Program |
| CMS-416 | Centers for Medicare and Medicaid Services Form Number 416 |
| CSTE | Council of State and Territorial Epidemiologists |
| EPSDT | Early and Periodic Screening, Diagnostic, and Treatment |
| FQHCs | Federally Qualified Health Center |
| HCAN | Health Care Association Nebraska |
| HDD | Hospital Discharge Data |
| HPTS | Health Professionals Tracking Services |
| HRSA | Health Resources and Services Administration |
| MCAH | Maternal Child Adolescent Health |
| MCNA | Managed Care of North America, Inc. |
| NADS | Nebraska Adult Tobacco Survey |
| NDA | Nebraska Dental Association |
| NCR | Nebraska Cancer Registry |
| NDE | Nebraska Department of Education |
| NE-OHSS | Nebraska Oral Health Surveillance System |
| NMP | Nebraska Medicaid Program |
| NOHSS | National Oral Health Surveillance System |
| NOHWS | Nebraska Oral Health Workforce Surveys |
| NSCH | National Survey of Children's Health |
| OOHD | Office of Oral Health and Dentistry |
| WFRS | Water Fluoridation Reporting System |

Introduction

Hospital emergency department (ED) use for non-traumatic dental conditions (NTDCs) has dramatically increased across the United States over the past decade. Previous nationwide studies¹⁻³ have shown a constant rise in the ED use among adults aged between 18 to 44 years, uninsured, and low-income individuals. Among all medical conditions, the proportion of ED visits for NTDCs has also been increasing. Many Americans with acute dental pain and chronic oral infections are not accessing definitive treatment at traditional dental offices but are now seeking urgent care at hospital EDs, which is an ineffective and very expensive, last resort way to address their needs. By law, EDs are required to see patients even if they are unable to pay. In a 2014 Action for Dental Health Report,⁴ the American Dental Association estimated that there were more than 2.1 million NTDC ED visits in the U.S. costing our health care system and tax payers more than 2.7 billion USD. Very few emergency departments have dentists on their staff, therefore ED dental patients rarely receive actual long-term corrective care for the cause of their pain. Usually they get medication, such as pain relievers and antibiotics that provide only temporary relief. Many of these dental patients then return to the ED multiple times, when their symptoms begin to reappear.

Nebraska Background

The DHHS Office of Oral Health and Dentistry identified this same disturbing trend in Nebraska and documented it within the 2016 State Oral Health Assessment Report.⁵ Tracking ten years of dental data from public and private hospitals through the Nebraska Hospital Association, the report found that yearly dental ED visits dramatically rose to 81% from 2003-2013 and costs for these visits increased more than four times.

A more in depth study published in 2016,⁶ looked at Nebraska ED charges for 9,943 dental visits from 2011 to 2013. Adult, female, age 25-44, low-income and uninsured were identified as high-risk for ED visits. Two-thirds of the visits occurred during the weekdays. Dental caries and pulpal lesions were the conditions most frequently identified followed by periodontal disease. The mean ED charge per dental visit was \$934 (compared to the average U.S. dental office visit of \$180 to \$211) and the total ED charges were \$9.3 million USD.

The 2015-2016 Nebraska Oral Health Basic Screening Survey of Young Children⁷ found that 64% of Third Grade children had already experienced dental disease compared to 52% of U.S. Third Grade children. Decay experience was more pronounced for rural children (81.4%) than urban children (54.6%). Also, urban children had more access to preventive services (60.3%) compared to rural (48.6%) mostly due to large preventive programs started by the dental colleges with OPS and LPS Schools.

The 2012-2016 Nebraska Behavioral Risk Surveillance Survey⁸ found that 47.3% of adults age 45-64 had at least one tooth extracted due to tooth decay or gum disease. That ratio was higher for rural adults (53.5%) compared to urban adults (43.8%), and more rural adults aged 65 and older had lost all of their teeth (17.7%) compared to urban elders at 11.9%). Also, 71.0% of urban adults had their teeth cleaned in the past year compared to 59.8% of rural adults.

Most dental disease conditions are preventable, but patients often avoid the dentist due to cost barriers or limited insurance coverage. It is important to understand that regularly accessing educational, preventive and corrective dental care is critical to

reducing acute dental conditions and thus lowering the rates of ED dental visits and revisits. The American Dental Association recommends people visit their dentist at least twice a year. The CDC Healthy People 2020 national oral health objective #7 is to “increase the proportion of children, adolescents, and adults who used the oral health care system in the past year.”⁹ In 2007, only 44.5% of U.S. people aged 2 years and over had a single dental visit in the past year. By 2014, this percent had dropped to 43.2% indicating the vital need for individuals to establish permanent dental homes to access regular dental care to prevent and treat disease.¹⁰ This care includes receiving continual preventive, corrective and (if needed) emergency services from their dentist and their dental team on an on-going basis. When people do not see a regular dental provider, they do not get the early diagnosis and interventions that can halt or slow the progress of most oral diseases. Maintaining optimal oral health through regular dental care is one of the keys to reducing the need for more invasive urgent dental treatment and to lowering the high costs associated with Emergency Department visits for NTDCs.

Objectives

The objective of this new 2019 report is two-fold. First, we will provide patient – related characteristics of hospital NTDC ED visits in Nebraska for the years 2009-2016. Second, we will map the number of dental-related ED visits with the distribution of dentists’ practice locations in Nebraska and ED facilities by county. The findings from this study will have important implications for dental public health programs and dental care providers. We anticipate that these results would help implement more community based preventive oral health programs and increase access to corrective care services among underserved Nebraskans.

Methods

Data source

Nebraska Hospital Discharge Data¹¹ was used to query for non-traumatic dental conditions between 2009 and 2016. Nebraska Hospital Discharge Data was procured from the Nebraska Hospital Association as it contains patient and hospital-related variables including age, sex, insurance coverage, disposition status, patient location, and charges. Dentists' practice locations and ED facility sites were obtained from the Health Professionals Tracking Services, College of Public Health, University of Nebraska Medical Center and the Office of Rural Health, Nebraska Department of Health and Human Services.

Measures

All hospital-based Nebraska ED visits by patients with NTDCs between 2009 and 2016 were selected based on the ICD-9 and ICD-10 diagnostic codes (see Appendix 1 for list of diagnoses). Previously dental ED data was tracked through ICD-9 coding, but as of October 2015**, the Association of State and Territorial Dental Directors (ASTDD) recommended ICD-10 codes be used, which are slightly different and can lower ED visit numbers and limit comparability. Patient demographic characteristics such as age, sex, insurance status, patient location, and charges were also examined.

Outcomes

The primary outcome is the number of dental-related ED visits per 10,000 population. Also, hospital charges refer to the charges that the hospital levied to patients and not the cost of care provided to patients or the amount of reimbursement for services rendered.

Analytical strategy

The Nebraska Office of Oral Health followed the directive of 2017 ASTDD Guidance on Assessing Emergency Department Data for Non-Traumatic Dental Conditions.¹² This manual developed a standardized framework that should be used by states to examine their EDs visits for NTDCs. An individual ED visit was used as the unit of analysis and descriptive statistics were used to summarize the data.

Results

Patient characteristics

The number of ED visits for NTDCs per year increased by 27% from 6,870 in 2009 to 8,751 in 2014 whereas the number of unique patients increased by 30% from 4,055 in 2009 to 5,263 in 2013 (see Table 1). Due to the adoption of ICD-10 diagnoses starting October 2015, the number of ED visits in 2015 and 2016 have limited comparability with those between 2009 and 2014.

Most of the ED visits were made by those between 26 to 45 year old (average 45%), followed by those between 18 to 25 years of age (20%). Between 2011 and 2016, the proportion of ED visits for those 65 years and older increased substantially from 4.3% to 7.3%. ED visits made by children were found to be around 15%. About 55% of ED visits were made by females. Approximately 64% of the total ED visits for NTDCs were made by urban residents in Nebraska where the majority of the EDs and dental providers are located.

Medicaid enrollees visiting the ED for NTDC increased significantly from 13.3% in 2015 to 34.5% in 2016. However, ED visits by those enrolled in private insurance went down from 56.5% in 2015 to 31.1%. The mean ED charges increased substantially

from \$695 in 2009 to \$1,375. Also, the total ED charges increased from \$4.7 million in 2009 to \$10 million in 2016.

The ED problem can get much worse in more populated states. In 2018, Texas also surveyed their 2016 Hospital Discharge Data for NTDCs and found they are facing an emerging crisis with over 122,000 ED dental visits at an average charge of \$1,853/visit for a total cost to their health care system of \$226 million USD.¹³

Geographic analysis

The distribution of population-based estimates of dental ED visits by county in Nebraska are found in Map 1. Map 2 shows the ED facilities and dentists in Nebraska by county. **Map 1** indicates that there are certain central counties (McPherson, Wheeler, Knox and Saline) that had very high ED visits (greater than 100 visits per 10,000 population) for dental conditions. Similarly, other central and western counties (such as Box Butte, Lincoln, Keya Paha, Rock, Adams, Gage and Dodge) also had higher ED rates (51-100 visits per 10,000 population). Those counties (such as Cedar, Dixon, Arthur, Loup, Garfield, Grant, Hooker, Frontier etc.) that had the lowest ED rates (less than 25 visits per 10,000 population) are often found in counties with no ED facilities.

As seen in **Map 2**, most of the practicing dentists are located within cities, predominantly on the eastern part of the state. Additionally, most of the ED facilities are also located in the eastern part of the state, thereby, rendering the rural residents from counties such as McPherson, Rock, Wheeler and Knox to travel long distances to use ED for NTDCs. Despite lack of EDs in rural counties, one-third of the total statewide ED visits are made by rural residents.

Conclusion

This report has confirmed that Nebraska is experiencing the same rapid trend increase in the use of EDs for NTDCs as the rest of the nation. Expenses are also escalating, up to 10 million USD in 2016. The 2009-2016 report found patients who were between 26 and 45 years of age, Caucasian, female, Medicaid enrollees, uninsured, and urban residents made the highest proportions of ED visits for dental conditions in Nebraska. However, because there are fewer primary-level dental clinics in rural areas, rural patients had higher proportion of ED visits for preventable and NTDCs.

As with other medical conditions, those that live in rural communities often have a much harder time accessing providers than other groups of Americans. In 2017, Nebraska listed 52 of 93 counties (56%) as general dentist shortage areas and 20 counties had no full-time dental services¹⁴....see **Map 3**. In 2016, the majority (62.5%) of active general dentists with a primary practice location in Nebraska (1,081) were located in urban areas (Douglas, Lancaster and Sarpy counties), while only 37.5% practiced in rural areas¹⁵. Dentists have a disproportionate presence in suburbs where those who most need access to care are often found in inner cities and rural communities.

Recommendations

Convene a stakeholders meeting to have an open discussion addressing the need to reduce ED NTDC use in Nebraska. Invite representatives from the Nebraska Dental Association, the Nebraska Dental Hygiene Association, the Nebraska Hospital Association, the Nebraska Medicaid program, the Nebraska DHHS Office of Oral Health, the UNMC College of Dentistry, the Creighton University School of Dentistry, the DHHS Dental Advisory Committee and others to discuss potential partnership solutions.

Consider a statewide awareness campaign that would educate the general population and communities about the relationship between dental health and total health. Emphasize the importance of establishing permanent dental homes and accessing regular preventive care. Inform high risk counties and hospitals about the need to establish ED dental care coordination and referral programs within their communities to connect people to existing local dental resources.

If only 43.2% of Americans visit their dentist each year, then the majority are not accessing the traditional dental health care system that has been designed to provide them with early interventions to control dental disease. Therefore, we need to integrate more of these preventive and educational dental services into non-traditional settings within their communities, for example children's centers, school sites and older adult facilities. There is an urgent need to increase funding to develop more community-based dental public health programs, like "Oral Health Access for Young Children" and "Nebraska Teeth Forever" that can reduce dental disease by 25-50%⁵ with fluoride varnish, dental sealants, and silver diamine fluoride. Increase utilization of all of our existing oral health workforce to include public health hygienists and community health workers and continue efforts to expand community water fluoridation in Nebraska.

Increase access to restorative services that focus on vulnerable populations to reduce these ED visits. Work with Medicaid programs to increase adult benefits, reimbursement rates, reduce administrative barriers, expand preventive services and increase dental provider participants. Increase the utilization of community dental screenings to connect people to proper local dental resources. And support community health centers and the free and charitable clinics that offer care to the underserved.

References

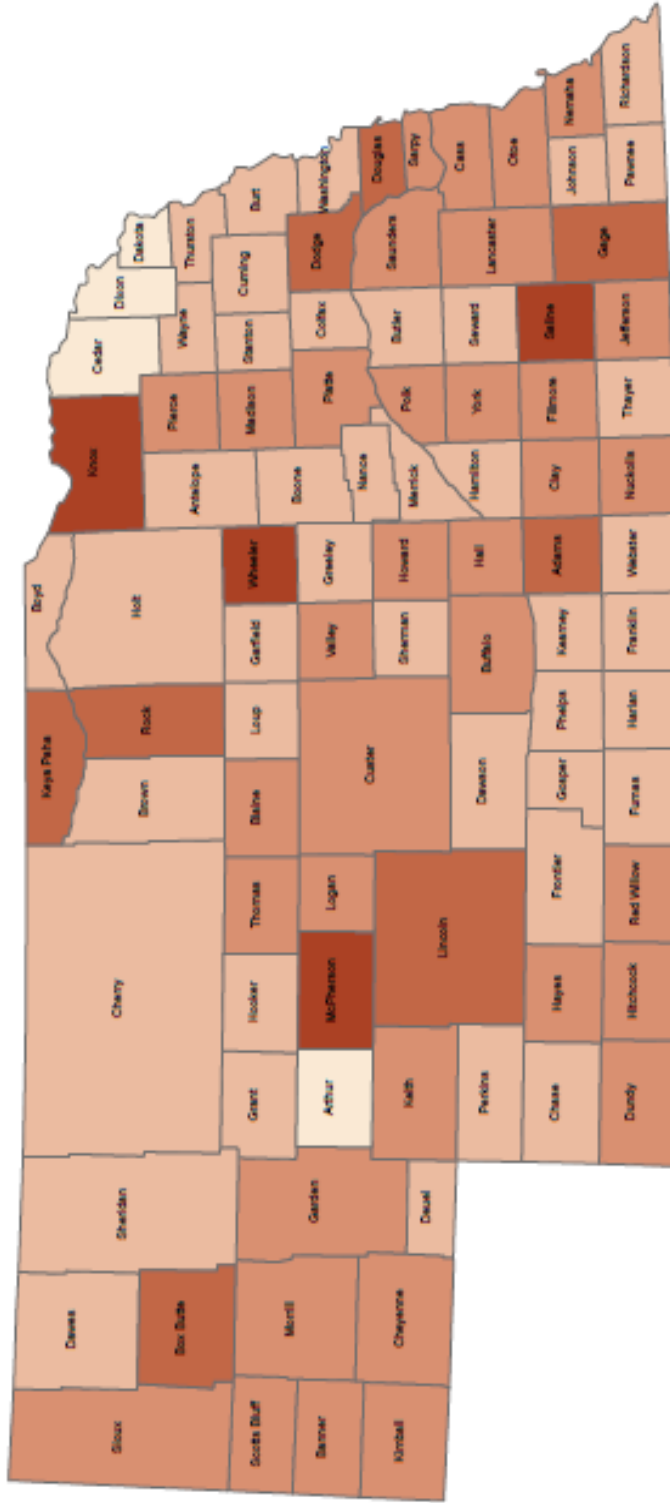
1. Wall T. Recent trends in dental emergency department visits in the United States – 1997/1998 to 2007/2008. *J Public Health Dent* 2012;72(3):216-20.
2. Lee HH, Lewis CW, Saltzman B, Starks H. Visiting the emergency department for dental Problems: trends in utilization, 2001 to 2008. *Res Pract* 2012;102(11):e77-83.
3. Wall T, Nasseh K. (2013) Dental Related Emergency Department Visits on the Increase in the United States. American Dental Association Research Brief. Available at: https://www.ada.org/en/~/media/ADA/Science%20and%20Research/Files/HPRCBrief_0513_1
4. American Dental Association, Action for Dental Health, Year One 2014 Report to Congress. Available at: http://www.ada.org/~/media/ADA/Public%20Programs/Files/Report_to_Congress_ADA-Action-for-Dental-Health-1.aspx Accessed March 08 2019.
5. Nebraska Department of Health and Human Services (DHHS) Office of Oral Health and Dentistry (OOHD). 2016 Nebraska State Oral Health Assessment Report. Available at: <http://dhhs.ne.gov/dental>.
6. Rampa, S., Wilson, F. A., Wani, R., & Allareddy, V. Emergency Department Utilization related to dental conditions and distribution of Dentists, Nebraska 2011-2013. *Journal of Evidence Based Dental Practice*, 2017;17(2), 83-91.
7. Nebraska Oral Health Survey of Young Children 2015- 2016. Available at <http://dhhs.ne.gov/dental>.
8. Nebraska DHHS Behavioral Risk Factor Surveillance Survey Data for 2014-2016 Available at: http://dhhs.ne.gov/publichealth/Pages/brfss_index.aspx.
9. CDC National Healthy People 2020 Oral Health Objectives. Available at <https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health/objectives?topicId=32>
10. Sanders B. Dental Crisis in America. The Need to Expand Access; 2012. Available at: <http://www.sanders.senate.gov/imo/media/doc/DENTALCRISIS.REPORT.pdf> Accessed October 6, 2016
11. Nebraska Hospital Association ICD-9 & ICD 10 Discharge Data. Available at: <http://dhhs.ne.gov/publichealth/DataCenter/Pages/HospitalDischargeData.aspx>
12. Association of State and Territorial Dental Directors; 2017. Guidance On Assessing Emergency Department Data For Non-Traumatic Dental Conditions July 2017 (Updated September 2017).
13. https://www.texashealthinstitute.org/uploads/1/3/5/3/13535548/emergency_department_and_inpatient_hospitalization_for_dental_conditions_in_texas.pdf 2018
14. Nebraska Department of Health and Human Services Office of Rural Health State of Nebraska: Guidelines for Designation of General Dentistry Shortage Areas; June 2017.
15. Health Professional Tracking Service, University of Nebraska College of Public Health Available at: <https://www.unmc.edu/publichealth/hpts/>

Table 1: Non-Traumatic Dental-related ED visits in Nebraska stratified by patient characteristics, 2009-2016.

| YEAR | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015** | 2016** |
|----------------------------------|----------------|-----------------|------------------|------------------|-----------------|------------------|-----------------|-----------------|
| # of Visits | 6870 | 7421 | 8420 | 8205 | 8687 | 8751 | 8213 | 7290 |
| # of Patients | 4055 | 4358 | 4747 | 5055 | 5263 | 4983 | 4275 | 4198 |
| Age, years–N (%) | | | | | | | | |
| 0-17 | 1235 (17.98) | 1329 (17.91) | 1266 (15.04) | 1132 (13.8) | 1010 (11.63) | 1108 (12.66) | 1191 (14.5) | 1159 (15.9) |
| 18-25 | 1532 (22.3) | 1564 (21.08) | 1832 (21.76) | 1765 (21.51) | 1722 (19.82) | 1590 (18.17) | 1387 (16.89) | 1159 (15.9) |
| 26-45 | 2836 (41.28) | 3105 (41.84) | 3784 (44.94) | 3746 (45.66) | 4184 (48.16) | 4262 (48.7) | 3736 (45.49) | 3169 (43.47) |
| 46-64 | 922 (13.42) | 1039 (14) | 1177 (13.98) | 1208 (14.72) | 1312 (15.1) | 1300 (14.86) | 1344 (16.36) | 1273 (17.46) |
| 65+ | 345 (5.02) | 384 (5.17) | 361 (4.29) | 354 (4.31) | 459 (5.28) | 491 (5.61) | 555 (6.76) | 530 (7.27) |
| Mean | 31 | 31 | 31 | 32 | 33 | 34 | 35 | 34 |
| Median | 28 | 29 | 29 | 29 | 30 | 31 | 32 | 32 |
| Gender– N (%) | | | | | | | | |
| Female | 3781 (55.04) | 4025 (54.24) | 4583 (54.5) | 4526 (55.16) | 4770 (54.93) | 4887 (55.88) | 4641 (56.54) | 4211 (57.78) |
| Male | 3087 (44.93) | 3395 (45.75) | 3826 (45.5) | 3679 (44.84) | 3913 (45.07) | 3858 (44.11) | 3567 (43.46) | 3077 (42.22) |
| Charge of Visits | | | | | | | | |
| Mean (SD) | \$694.93 | \$761.84 | \$870.86 | \$914.94 | \$1,047.77 | \$1,098.67 | \$1,209.88 | \$1,375.15 |
| (Min, Max) | 14.2 -16680.4 | 15.35 - 23927.6 | 57.22 - 25427.11 | 60.08 - 25622.93 | 82.5 - 35592.19 | 50797 - 76166.89 | 87 – 67400.45 | 87 – 42980.3 |
| Median | \$372.05 | \$385.36 | \$419.00 | \$430.03 | \$463.60 | \$485.00 | \$504.44 | \$558.65 |
| Total | \$4,774,151.32 | \$5,653,603.47 | \$7,332,673.90 | \$7,507,099.25 | \$9,101,968.94 | \$9,614,452.65 | \$10,304,635.53 | \$10,024,870.61 |
| Residency– N(%) | | | | | | | | |
| Urban | 4258 (61.98) | 4620 (62.26) | 5548 (65.89) | 5377 (65.53) | 5828 (67.09) | 5766 (65.89) | 5461 (66.49) | 4577 (62.78) |
| Rural | 2612 (38.02) | 2801 (37.74) | 2872 (34.11) | 2828 (34.47) | 2859 (32.91) | 2985 (34.11) | 2752 (33.51) | 2713 (37.22) |
| Primary Payer – N (%) | | | | | | | | |
| Blue Cross Blue Shield | 857 (12.47) | 881 (11.87) | 909 (10.8) | 819 (9.98) | 844 (9.72) | 954 (10.9) | 1082 (13.17) | 1009 (13.84) |
| Medicare | 641 (9.33) | 718 (9.68) | 743 (8.82) | 777 (9.47) | 924 (10.64) | 992 (11.34) | 1054 (12.83) | 999 (13.7) |
| Commercial Insurance | 1553 (22.61) | 1703 (22.95) | 2149 (25.52) | 2314 (28.2) | 3161 (36.39) | 3347 (38.25) | 3555 (43.29) | 1255 (17.22) |
| Medicaid | 1743 (25.37) | 1777 (23.95) | 1560 (18.53) | 1360 (16.58) | 1218 (14.02) | 963 (11) | 1094 (13.32) | 2516 (34.51) |
| Worker's Compensation | 6 (0.09) | 6 (0.08) | 13 (0.15) | 15 (0.18) | 15 (0.17) | 18 (0.21) | 8 (0.1) | 16 (0.22) |
| Champus/Champva | 123 (1.79) | 150 (2.02) | 156 (1.85) | 175 (2.13) | 144 (1.66) | 167 (1.91) | 170 (2.07) | 141 (1.93) |
| Other Federal and State Programs | 16 (0.23) | 3 (0.04) | 11 (0.13) | 4 (0.05) | 14 (0.16) | 13 (0.15) | 27 (0.33) | 9 (0.12) |
| Uninsured | 1931 (28.11) | 2183 (29.42) | 2878 (34.18) | 2741 (33.41) | 2367 (27.25) | 2297 (26.25) | 1223 (14.89) | 664 (9.11) |
| Other | NA | NA | NA | NA | NA | NA | NA | 681 (9.34) |

** The use of ICD-10 Codes started in 2015.

Emergency Department (ED) Visits for Non-Traumatic Dental Conditions by County (2009-2016)



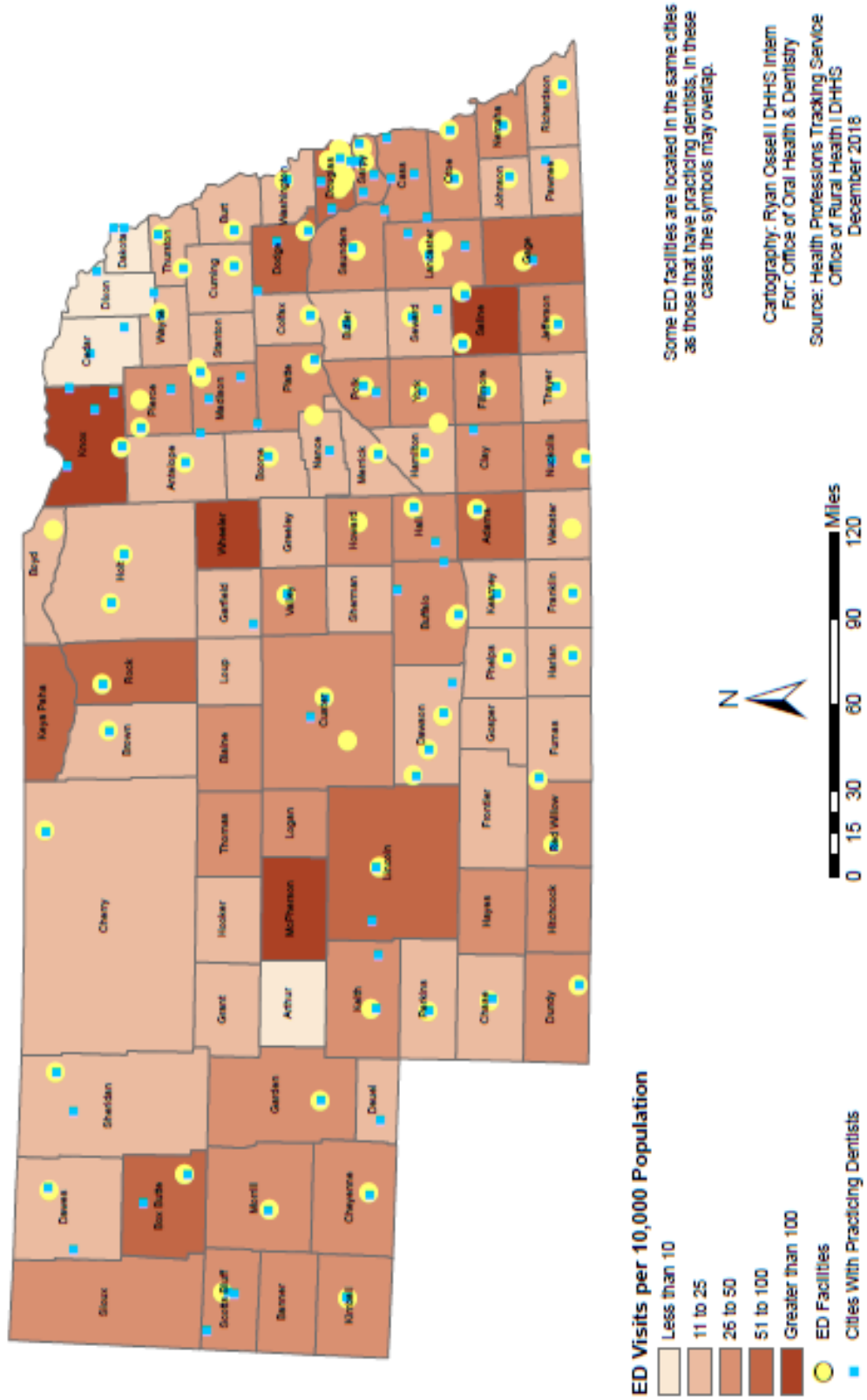
ED Visits per 10,000 Population

- Less than 10
- 11 to 25
- 26 to 50
- 51 to 100
- Greater than 100



Cartography: Ryan Osseil | DHHS Intern
 For: Office of Oral Health & Dentistry
 Source: Health Professions Tracking Service
 Office of Rural Health | DHHS
 December 2018

Emergency Department (ED) Visits for Non-Traumatic Dental Conditions and Cities With Practicing Dentists (2009-2016)



Average **7,982** visits/year

Average **4,617** patients/year

Number of emergency room visits have dramatically increased over time, for example, **4,829** in 2003** to **8,213** in 2015.

EMERGENCY ROOM



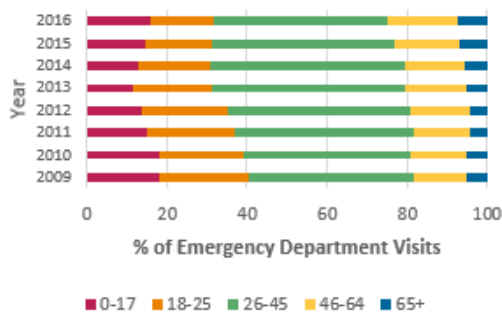
In 2014, only 43.2% of Americans visited their dentists at least once a year!

-CDC HP 2020 OH-7

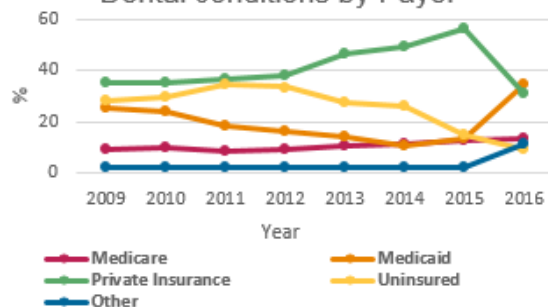
Total costs of emergency room visits for dental conditions were about **\$10 Million** in 2016 which is much higher than **\$1.4 Million** in 2003**

Average cost per emergency room visit for dental conditions was **\$712** in 2012** which has significantly risen to **\$1,375** in 2016

Emergency Department Visits for Dental Conditions by Age



Emergency Department Visits for Dental conditions by Payer



*Quarter 4 of 2015 and 2016 data uses diagnoses by ICD-10 that may limit comparability with ICD-9 diagnoses for previous years.



55% of emergency department visits were made by females



45% of emergency department visits were made by 26-45 year olds



15% of emergency department visits were made by children



32 of 105 emergency departments are located in rural Nebraska

Average number of emergency room visits made by rural residents was **2,803** per year

Source: Hospital Discharge Data, Nebraska Hospital Association, 2009-2016; ** 2016 Nebraska State Oral Health Assessment Report using ICD-9 codes

Appendix 1: The ICD-9 and ICD-10 Codes for Defining Non-Traumatic Dental Condition

| ICD- 9 Description | ICD-9 Code | ICD-10 Code | ICD-10 Description (if different) |
|--|------------|-------------|--|
| Anodontia | 5200 | K000 | |
| Supernumerary teeth | 5201 | K001 | |
| Abnormalities of size and form of teeth | 5202 | K002 | |
| Mottled teeth | 5203 | K003 | |
| Disturbances of tooth formation | 5204 | K004 | |
| Hereditary disturbances in tooth structure, not elsewhere classified | 5205 | K005 | |
| Disturbances in tooth eruption | 5206 | K006 | Disturbances in tooth eruption |
| Disturbances in tooth eruption | 5206 | K010 | Embedded teeth |
| Disturbances in tooth eruption | 5206 | K011 | Impacted teeth |
| Teething syndrome | 5207 | K007 | Teething syndrome |
| Other specified disorders of tooth development and eruption | 5208 | K008 | Other specified disorders of tooth development |
| Unspecified disorder of tooth development and eruption | 5209 | K009 | Disorder of tooth development, unspecified |
| Dental caries, unspecified | 52100 | K029 | Dental caries, unspecified |
| Dental caries limited to enamel | 52101 | K0261 | Dental caries on smooth surface limited to enamel |
| Dental caries extending into dentine | 52102 | K0262 | Dental caries on smooth surface penetrating into dentine |
| Dental caries extending into pulp | 52103 | K0263 | Dental caries on smooth surface penetrating into pulp |
| Arrested dental caries | 52104 | K023 | Arrested dental caries |
| Odontoclasia | 52105 | K0389 | Other specified diseases of hard tissues of teeth |
| Dental caries pit and fissure | 52106 | K0251 | Dental caries pit and fissure surface limited to enamel |
| Dental caries of smooth surface | 52107 | K0261 | Dental caries on smooth surface limited to enamel |
| Dental caries of smooth surface | 52107 | K0262 | Dental caries on smooth surface penetrating into dentine |
| Dental caries of smooth surface | 52107 | K0263 | Dental caries on smooth surface penetrating into pulp |
| Dental caries of root surface | 52108 | K027 | Dental root caries |
| Other dental caries | 52109 | K029 | Dental caries, unspecified |
| Excessive dental attrition, unspecified | 52110 | K030 | Excessive attrition of teeth |
| Excessive attrition, limited to enamel | 52111 | K030 | Excessive attrition of teeth |
| Excessive attrition, extending into dentine | 52112 | K030 | Excessive attrition of teeth |
| Excessive attrition, extending into pulp | 52113 | K030 | Excessive attrition of teeth |
| Excessive attrition, localized | 52114 | K030 | Excessive attrition of teeth |
| Excessive attrition, generalized | 52115 | K030 | Excessive attrition of teeth |
| Abrasion of teeth, unspecified | 52120 | K031 | Abrasion of teeth |
| Abrasion, limited to enamel | 52121 | K031 | Abrasion of teeth |
| Abrasion, extending into dentine | 52122 | K031 | Abrasion of teeth |
| Abrasion, extending into pulp | 52123 | K031 | Abrasion of teeth |
| Abrasion, localized | 52124 | K031 | Abrasion of teeth |
| Abrasion, generalized | 52125 | K031 | Abrasion of teeth |
| Erosion, unspecified | 52130 | K032 | Erosion of teeth |
| Erosion, limited to enamel | 52131 | K032 | Erosion of teeth |
| Erosion, extending into dentine | 52132 | K032 | Erosion of teeth |

| | | | |
|---|-------|-------|---|
| Erosion, extending into pulp | 52133 | K032 | Erosion of teeth |
| Erosion, localized | 52134 | K032 | Erosion of teeth |
| Erosion, generalized | 52135 | K032 | Erosion of teeth |
| Pathological resorption, unspecified | 52140 | K033 | Pathological resorption of teeth |
| Pathological resorption, internal | 52141 | K033 | Pathological resorption of teeth |
| Pathological resorption, external | 52142 | K033 | Pathological resorption of teeth |
| Other pathological resorption | 52149 | K033 | Pathological resorption of teeth |
| Hypercementosis | 5215 | K034 | |
| Ankylosis of teeth | 5216 | K035 | |
| Intrinsic posteruptive color changes of teeth | 5217 | K037 | Intrinsic posteruptive color changes of hard tissues of teeth |
| Cracked tooth | 52181 | K0381 | |
| Other specific diseases of hard tissues of teeth | 52189 | K0389 | |
| Unspecified disease of hard tissues of teeth | 5219 | K039 | Disease of hard tissues of teeth, unspecified |
| Pulpitis | 5220 | K040 | |
| Necrosis of the pulp | 5221 | K041 | |
| Pulp degeneration | 5222 | K042 | |
| Abnormal hard tissue formation in pulp | 5223 | K043 | |
| Acute apical periodontitis of pulpal origin | 5224 | K044 | |
| Periapical abscess without sinus | 5225 | K047 | |
| Chronic apical periodontitis | 5226 | K045 | |
| Periapical abscess with sinus | 5227 | K046 | |
| Radicular cyst | 5228 | K048 | |
| Other and unspecified diseases of pulp and periapical tissues | 5229 | K0490 | Unspecified diseases of pulp and periapical tissues |
| Other and unspecified diseases of pulp and periapical tissues | 5229 | K0499 | Other diseases of pulp and periapical tissues |
| Acute gingivitis, plaque induced | 52300 | K0500 | |
| Acute gingivitis, non-plaque induced | 52301 | K0501 | |
| Chronic gingivitis, plaque induced | 52310 | K0510 | |
| Chronic gingivitis, non-plaque induced | 52311 | K0511 | |
| Gingival recession, unspecified | 52320 | K060 | Gingival recession |
| Gingival recession, minimal | 52321 | K060 | Gingival recession |
| Gingival recession, moderate | 52322 | K060 | Gingival recession |
| Gingival recession, severe | 52323 | K060 | Gingival recession |
| Gingival recession, localized | 52324 | K060 | Gingival recession |
| Gingival recession, generalized | 52325 | K060 | Gingival recession |
| Aggressive periodontitis, unspecified | 52330 | K0520 | |
| Aggressive periodontitis, localized | 52331 | K0521 | |
| Aggressive periodontitis, generalized | 52332 | K0522 | |
| Acute periodontitis | 52333 | K0520 | |
| Chronic periodontitis, unspecified | 52340 | K0530 | |
| Chronic periodontitis, localized | 52341 | K0531 | |
| Chronic periodontitis, generalized | 52342 | K0532 | |
| Periodontosis | 5235 | K0540 | |
| Accretions on teeth | 5236 | K036 | Deposits (accretions) on teeth |
| Other specified periodontal diseases | 5238 | K055 | Other periodontal diseases |
| Other specified periodontal diseases | 5238 | K061 | Gingival enlargement |
| Unspecified gingival and periodontal disease | 5239 | K056 | Periodontal disease, unspecified |
| Major anomalies of jaw size, unspecified anomaly | 52400 | M2600 | Unspecified anomaly of jaw size |

| | | | |
|---|-------|------------|---|
| Major anomalies of jaw size, maxillary hyperplasia | 52401 | M2601 | Maxillary hyperplasia |
| Major anomalies of jaw size, | 52402 | M2603 | Mandibular hyperplasia |
| Major anomalies of jaw size, maxillary hypoplasia | 52403 | M2602 | Maxillary hypoplasia |
| Major anomalies of jaw size, mandibular hypoplasia | 52404 | M2604 | Mandibular hypoplasia |
| Major anomalies of jaw size, macrogenia | 52405 | M2605 | Macrogenia |
| Major anomalies of jaw size, microgenia | 52406 | M2606 | Microgenia |
| Excessive tuberosity of jaw | 52407 | M2607 | |
| Major anomalies of jaw size, other specified anomaly | 52409 | M2609 | Other specified anomalies of jaw size |
| Anomalies of relationship of jaw to cranial base, unspecified anomaly | 52410 | M2610 | Unspecified anomaly of relationship of jaw-cranial base relationship |
| Anomalies of relationship of jaw to cranial base, maxillary asymmetry | 52411 | M2611 | Maxillary asymmetry |
| Anomalies of relationship of jaw to cranial base, other jaw asymmetry | 52412 | M2612 | Other jaw asymmetry |
| Anomalies of relationship of jaw to cranial base, other specified anomaly | 52419 | M2619 | Other specified anomalies of jaw-cranial base relationship |
| Unspecified anomaly of dental arch relationship | 52420 | M2620 | |
| Malocclusion, Angle's class I | 52421 | M2621 1 | |
| Malocclusion, Angle's class II | 52422 | M2621 2 | |
| Malocclusion, Angle's class III | 52423 | M2621 3 | |
| Open anterior occlusal relationship | 52424 | M2622 0 | |
| Open posterior occlusal relationship | 52425 | M2622 1 | |
| Excessive horizontal overlap | 52426 | M2623 | |
| Reverse articulation | 52427 | M2624 | |
| Anomalies of interarch distance | 52428 | M2625 | |
| Other anomalies of dental arch relationship | 52429 | M2629 | |
| Unspecified anomaly of tooth position of fully erupted teeth | 52430 | M2630 | Unspecified anomaly of tooth position of fully erupted tooth or teeth |
| Crowding of teeth | 52431 | M2631 | Crowding of fully erupted teeth |
| Excessive spacing of teeth | 52432 | M2632 | Excessive spacing of fully erupted teeth |
| Horizontal displacement of teeth | 52433 | M2633 | Horizontal displacement of fully erupted tooth or teeth |
| Vertical displacement of teeth | 52434 | M2634 | Vertical displacement of fully erupted tooth or teeth |
| Rotation of tooth/teeth | 52435 | M2635 | Rotation of fully erupted tooth or teeth |
| Insufficient interocclusal distance of teeth (ridge) | 52436 | M2636 | Insufficient interocclusal distance of fully erupted teeth (ridge) |
| Excessive interocclusal distance of teeth | 52437 | M2637 | Excessive interocclusal distance of fully erupted teeth |
| Other anomalies of tooth position | 52439 | M2639 | Other anomalies of tooth position of fully erupted tooth or teeth |
| Malocclusion, unspecified | 5244 | M264 | |

| | | | |
|---|-------|--------|---|
| Dentofacial functional abnormality, unspecified | 52450 | M2650 | Dentofacial functional abnormalities, unspecified |
| Abnormal jaw closure | 52451 | M2651 | |
| Limited mandibular range of motion | 52452 | M2652 | |
| Deviation in opening and closing of the mandible | 52453 | M2653 | |
| Insufficient anterior guidance | 52454 | M2654 | |
| Centric occlusion maximum intercuspation discrepancy | 52455 | M2655 | |
| Non-working side interference | 52456 | M2656 | |
| Lack of posterior occlusal support | 52457 | M2657 | |
| Other dentofacial functional abnormalities | 52459 | M2659 | |
| Temporomandibular joint disorders, unspecified | 52460 | M2660 | Temporomandibular joint disorder, unspecified |
| Temporomandibular joint disorders, unspecified | 52460 | M2669 | Other specified disorders of temporomandibular joint |
| Temporomandibular joint disorders, adhesions and ankylosis (bony or fibrous) | 52461 | M2661 | Adhesions and ankylosis of temporomandibular joint |
| Temporomandibular joint disorders, arthralgia of temporomandibular joint | 52462 | M2662 | Arthralgia of temporomandibular joint |
| Temporomandibular joint disorders, articular disc disorder (reducing or non-reducing) | 52463 | M2663 | Articular disc disorder of temporomandibular joint |
| Temporomandibular joint sounds on opening and/or closing the jaw | 52464 | M2669 | Other specified disorders of temporomandibular joint |
| Other specified temporomandibular joint disorders | 52469 | M2669 | Other specified disorders of temporomandibular joint |
| Dental alveolar anomalies, unspecified alveolar anomaly | 52470 | M2670 | Unspecified alveolar anomaly |
| Alveolar maxillary hyperplasia | 52471 | M2671 | |
| Alveolar mandibular hyperplasia | 52472 | M2672 | |
| Alveolar maxillary hypoplasia | 52473 | M2673 | |
| Alveolar mandibular hypoplasia | 52474 | M2674 | |
| Vertical displacement of alveolus and teeth | 52475 | M2679 | Other specified alveolar anomaly |
| Occlusal plane deviation | 52476 | M2679 | Other specified alveolar anomaly |
| Other specified alveolar anomaly | 52479 | M2679 | Other specified alveolar anomaly |
| Anterior soft tissue impingement | 52481 | M2681 | |
| Posterior soft tissue impingement | 52482 | M2682 | |
| Other specified dentofacial anomalies | 52489 | M264 | Malocclusion, unspecified |
| Other specified dentofacial anomalies | 52489 | M2689 | Other dentofacial anomalies |
| Unspecified dentofacial anomalies | 5249 | M269 | Dentofacial anomaly, unspecified |
| Exfoliation of teeth due to systemic causes | 5250 | K080 | |
| Acquired absence of teeth, unspecified | 52510 | K08109 | Complete loss of teeth, unspecified cause, unspecified class |
| Loss of teeth due to periodontal disease | 52512 | K08429 | Partial loss of teeth due to periodontal diseases, unspecified class |
| Loss of teeth due to caries | 52513 | K08439 | Partial loss of teeth due to caries unspecified class |
| Other loss of teeth | 52519 | K08499 | Partial loss of teeth due to other unspecified cause, unspecified class |
| Unspecified atrophy of edentulous alveolar ridge | 52520 | K0820 | |

| | | | |
|---|-------|--------|--|
| Minimal atrophy of the mandible | 52521 | K0821 | |
| Moderate atrophy of the mandible | 52522 | K0822 | |
| Severe atrophy of the mandible | 52523 | K0823 | |
| Minimal atrophy of the maxilla | 52524 | K0824 | |
| Moderate atrophy of the maxilla | 52525 | K0825 | |
| Severe atrophy of the maxilla | 52526 | K0826 | |
| Retained dental root | 5253 | K083 | |
| Complete edentulism, unspecified | 52540 | K08109 | Complete loss of teeth, unspecified cause, unspecified class |
| Complete edentulism, class I | 52541 | K08101 | Complete loss of teeth, unspecified cause, class I |
| Complete edentulism, class II | 52542 | K08102 | Complete loss of teeth, unspecified cause, class II |
| Complete edentulism, class III | 52543 | K08103 | Complete loss of teeth, unspecified cause, class III |
| Complete edentulism, class IV | 52544 | K08104 | Complete loss of teeth, unspecified cause, class IV |
| Partial edentulism, unspecified | 52550 | K08409 | Partial loss of teeth, unspecified cause, unspecified class |
| Partial edentulism, class I | 52551 | K08401 | Partial loss of teeth, unspecified cause, class I |
| Partial edentulism, class II | 52552 | K08402 | Partial loss of teeth, unspecified cause, class II |
| Partial edentulism, class III | 52553 | K08403 | Partial loss of teeth, unspecified cause, class III |
| Partial edentulism, class IV | 52554 | K08404 | Partial loss of teeth, unspecified cause, class IV |
| Unspecified unsatisfactory restoration of tooth | 52560 | K0850 | Unsatisfactory restoration of tooth, unspecified |
| Open restoration margins | 52561 | K0851 | Open restoration margins of tooth |
| Unrepairable overhanging of dental restorative materials | 52562 | K0852 | |
| Fractured dental restorative material without loss of material | 52563 | K08530 | |
| Fractured dental restorative material with loss of material | 52564 | K08531 | |
| Contour of existing restoration of tooth biologically incompatible with oral health | 52565 | K0854 | |
| Allergy to existing dental restorative material | 52566 | K0855 | |
| Poor aesthetics of existing restoration | 52567 | K0856 | Poor aesthetic of existing restoration of tooth |
| Other unsatisfactory restoration of existing tooth | 52569 | K0859 | Other unsatisfactory restoration of tooth |
| Osseointegration failure of dental implant | 52571 | M2761 | |
| Post-osseointegration biological failure of dental implant | 52572 | M2762 | |
| Post-osseointegration mechanical failure of dental implant | 52573 | M2763 | |
| Other endosseous dental implant failure | 52579 | M2769 | |
| Other specified disorders of the teeth and supporting structures | 5258 | K088 | Other specified disorders of teeth and supporting structures |
| Other specified disorders of the teeth and supporting structures | | M2679 | Other specified alveolar anomalies |

| | | | |
|---|-------|-------|---|
| Unspecified disorder of the teeth and supporting structures | 5259 | K089 | Disorder of teeth and supporting structures, unspecified |
| Developmental odontogenic cysts | 5260 | K090 | |
| Fissural cysts of jaw | 5261 | K091 | Developmental (nonodontogenic) cysts of oral region |
| Other cysts of jaws | 5262 | M2749 | |
| Central giant cell (reparative) granuloma | 5263 | M271 | Giant cell granuloma, central |
| Inflammatory conditions of jaw | 5264 | M272 | |
| Alveolitis of jaw | 5265 | M273 | |
| Perforation of root canal space | 52661 | M2751 | Perforation of root canal space due to endodontic treatment |
| Endodontic overfill | 52662 | M2752 | |
| Endodontic underfill | 52663 | M2753 | |
| Other periradicular pathology associated with previous endodontic treatment | 52669 | M2759 | |
| Exostosis of jaw | 52681 | M278 | Other specified diseases of jaws |
| Other specified diseases of the jaws | 52689 | M278 | Other specified diseases of jaws |
| Unspecified disease of the jaws | 5269 | M279 | Disease of the jaws, unspecified |
| Atrophy of salivary gland | 5270 | K110 | |
| Hypertrophy of salivary gland | 5271 | K111 | |
| Sialoadenitis | 5272 | K1120 | Sialoadenitis, unspecified |
| Abscess of salivary gland | 5273 | K113 | |
| Fistula of salivary gland | 5274 | K114 | |
| Sialolithiasis | 5275 | K115 | |
| Mucocele of salivary gland | 5276 | K116 | |
| Disturbance of salivary secretion | 5277 | K117 | Disturbances of salivary secretion |
| Disturbance of salivary secretion | 5277 | R682 | Dry mouth, unspecified |
| Other specified diseases of the salivary glands | 5278 | K118 | Other diseases of salivary glands |
| Unspecified disease of the salivary glands | 5279 | K119 | Disease of the salivary glands, unspecified |
| Stomatitis and mucositis, unspecified | 52800 | K122 | Cellulitis and abscess of mouth |
| Stomatitis and mucositis, unspecified | 52800 | K1230 | Oral mucositis (ulcerative), unspecified |
| Mucositis (ulcerative) due to antineoplastic therapy | 52801 | K1231 | Oral mucositis (ulcerative) due to antineoplastic therapy |
| Mucositis (ulcerative) due to antineoplastic therapy | 52801 | K1233 | Oral mucositis (ulcerative) due to radiation |
| Mucositis (ulcerative) due to other drugs | 52802 | K1232 | Oral mucositis (ulcerative) due to other drugs |
| Other stomatitis and mucositis (ulcerative) | 52809 | K121 | Other forms of stomatitis |
| Other stomatitis and mucositis (ulcerative) | 52809 | K1239 | Other oral mucositis (ulcerative) |
| Cancrum oris | 5281 | A690 | Necrotizing ulcerative stomatitis |
| Oral aphthae | 5282 | K120 | Recurrent oral aphthae |
| Cellulitis and abscess of oral soft tissues | 5283 | K122 | Cellulitis and abscess of mouth |
| Cysts of oral soft tissues | 5284 | K098 | Other cysts of oral region, not elsewhere classified |
| Diseases of lips | 5285 | K130 | |
| Leukoplakia of oral mucosa, including tongue | 5286 | K1321 | |
| Minimal keratinized residual ridge mucosa | 52871 | K1322 | |

| | | | |
|---|-------|-------|--|
| Excessive keratinized residual ridge mucosa | 52872 | K1323 | |
| Other disturbances of oral epithelium, including tongue | 52879 | K1329 | |
| Oral submucosal fibrosis, including of tongue | 5288 | K135 | Oral submucosal fibrosis |
| Other and unspecified diseases of the oral soft tissues | 5289 | K1370 | Unspecified lesions of oral mucosa |
| Other and unspecified diseases of the oral soft tissues | 5289 | K1379 | Other lesions of oral mucosa |
| Glossitis | 5290 | K140 | |
| Geographic tongue | 5291 | K141 | |
| Median rhomboid glossitis | 5292 | K142 | |
| Hypertrophy of tongue papillae | 5293 | K143 | |
| Atrophy of tongue papillae | 5294 | K144 | |
| Plicated tongue | 5295 | K145 | |
| Glossodynia | 5296 | K146 | |
| Other specified conditions of the tongue | 5298 | K148 | Other diseases of the tongue |
| Unspecified condition of the tongue | 5299 | K149 | Disease of tongue, unspecified |
| Jaw pain | 78492 | R6884 | |
| Nonspecific abnormal findings in saliva | 7924 | R859 | Unspecified abnormal finding in specimens from digestive organs and abdominal cavity |
| Fitting and adjustment of dental prosthetic device | V523 | Z463 | Encounter for fitting and adjustment of dental prosthetic device |
| Fitting and adjustment of orthodontic devices | V534 | Z464 | Encounter for fitting and adjustment of orthodontic device |
| Orthodontics aftercare | V585 | Z464 | Encounter for fitting and adjustment of orthodontic device |
| Dental examination | V722 | Z0120 | Encounter for dental examination and cleaning without abnormal findings |
| Dental examination | V723 | Z0121 | Encounter for dental examination and cleaning with abnormal findings |