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Dental Diagnosis Coding: The State of the Art

By Joanne Fontana

Diagnosis coding is an integral part of health care. The diagnosis codes on a patient's health record provide critical information to clinicians, insurers, government payers and quality managers alike. Prior to 1966, medical care did not have a standard procedure or diagnosis coding standard, making it difficult to track treatment and diseases. Effective diagnosis coding informs patient treatment plans, claims payment, development of clinical best practices, and population risk assessment and adjustment. While the practice of coding medical diagnoses and the related nomenclature have been established for decades, no such standard has existed for dental care. Work is underway to change this, so that the dental care industry can reap the benefits from clear and consistent diagnosis coding practices. As actuaries, we should be aware of the continuing progress being made with respect to dental diagnosis coding and consider how we can begin collecting and using the information to better manage our business.

HISTORY AND USES OF MEDICAL CODING

At their core, diagnosis codes represent a standardized system by which diseases, disorders, injuries and other medical problems may be classified. In fact, they were initially developed in England during the 1600s to classify mortality rates by cause. Over time, the level of sophistication of coding improved and the uses of diagnosis codes expanded from assessing the cause of death to also tracking clinical diagnoses, eventually leading to an internationally utilized classification system: the *International Statistical Classification of Diseases, Injuries, and Causes of Death*, or *ICD*, maintained by the World Health Organization.[1] The ICD is periodically updated; the 10th revision, ICD-10, is largely in use today, with ICD-11 slated to be released in 2018.[2] In the United States, the National Center for Health Statistics developed an adaptation of the ICD-10 codes called ICD-10-CM, where CM stands for "clinical modification" to indicate the codes' focus on morbidity rather than mortality. ICD-10-CM is, therefore, different from the international ICD-10, and is the code set currently in use in the United States, having replaced ICD-9-CM effective Oct. 1, 2015.[3]

Current Procedural Technology or *CPT* codes were developed by the American Medical Association (AMA) in 1966 to better document professional procedures performed on patients in their medical records. CPT codes later became the standard basis for claims payment when they were designated by the Centers for Medicare & Medicaid Services (CMS) as a requirement for Medicare billing, and today they are widely used in the health insurance industry as a determinant for claims payment.

A companion code set are the Current Dental Terminology or CDT codes, which the American Dental Association (ADA) maintains as of 2010. Prior to that, CDT codes were part of the CMS Health Care Common Procedure Coding System D-codes, known as HCPCS and pronounced "hic pics," which began use in 1978.

Under the Health Insurance Portability and Accountability Act of 1996 (HIPAA), designed in part to protect individuals' health information and provide protections for group health plan participants,[4] CMS mandated a standard code set that included ICD, CPT and HCPCS codes,[5] further solidifying the near-universal use of both code sets in health care diagnosis and treatment in the United States.

Procedure codes such as CPT, HCPCS and CDT codes indicate the services performed on a patient, while ICD codes indicate the symptoms or diagnoses associated with the services; together they provide a more complete picture of each claim. With the information available from ICD and procedure codes, health claims may be studied in many different ways, providing critical knowledge to improve the quality of care, the cost of care, and overall population health.

- Medical coding allows for a *standard documentation nomenclature* across the medical community. Patients' information coded during a visit with a particular provider as a component of their electronic health records may be easily understood and interpreted by different doctors, improving care efficiency and appropriateness.

- By analyzing procedure and diagnosis codes across a large population, health agencies and governments can *track and better understand health trends, epidemics or other broad health issues*.

- Medical providers may use downstream information to understand how health problems or diseases are treated, and the outcomes associated with treatment, in order to *develop best practices* to improve the efficiency, efficacy and quality of treatment.

- Insurers use the information to *determine medical necessity, whether a service should be covered, and to pay providers the appropriate contracted amount* for the service. Providers who do not completely or accurately code services risk not being paid by insurers.

- *Risk adjustment* mechanisms used to adjust payment to entities such as accountable care organizations (ACOs) and Medicare Advantage plans utilize diagnosis codes along with other factors to assess the morbidity of the population served, normalizing payments accordingly.

- Insurers or provider groups can monitor and improve outcomes for high-need groups of people (e.g., those with diabetes, heart disease) via *disease management* programs by properly identifying those plan members using diagnosis codes.

CODING DENTAL CLAIMS

The Code on Dental Procedures and Nomenclature (CDT), developed and maintained by the ADA, represents the standard vocabulary for dental procedure coding. The codes are similar to CPT codes and were designed to "achieve uniformity, consistency, and specificity in accurately documenting dental treatment."[6] Like CPT, CDT is listed as a HIPAA standard code set and is required for HIPAA-compliant electronic claims submission.[7]

While CDT codes describing what dental services have been provided are commonplace, codes indicating dental diagnoses are not frequently used today. Several newer CDT codes include an indication of diagnosis within them. For example, the 2017 version of CDT includes code D4346, "scaling *in the presence of generalized moderate or severe gingival inflammation*—full mouth, after oral evaluation."[8] While these additions are somewhat useful they are not a substitute for a comprehensive diagnosis coding system.

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ICD codes include a comprehensive set of dental as well as medical diagnoses, but dental providers do not commonly record the ICD codes. There are, however, a few exceptions. Several state Medicaid programs require ICD codes on dental claim forms under certain circumstances. This requirement varies by state. However, most of these programs collect diagnoses on dental claims for the purpose of validating that the recipient falls into a group receiving enhanced benefits (e.g., pregnant or disabled individuals)[9] or has a chronic condition (e.g., diabetes) that requires services such as dental cleanings. As of 2015, only Nevada required ICD codes to be populated on every Medicaid dental claim submitted.[10] In addition, when commercial dental plans allow for differentiated benefits based on a member's medical condition—extra periodontal treatments for a patient with diabetes, for example—those plans may also require the dentist to submit the ICD code to be reimbursed.[11]

While ICD is being used in pockets of the dental industry, another dental diagnosis coding system is also gaining traction. The Systemized Nomenclature of Dentistry, or SNODENT, is owned and maintained by the ADA. A coexisting academically oriented dental coding system, DDS (known previously as EZ codes), has been synchronized with SNODENT. This means that SNODENT now represents the full code set while DDS, which is being renamed SNO-DDS to reflect adherence with SNODENT, will be used in provider interfaces, producing a coordinated, unified standard for dental diagnosis coding.[12]

ICD and SNODENT diagnosis codes may be mapped to each other, but as of today there is not a single source for such a map; in order for dental diagnosis coding to become more universally understood, the two code sets must be coordinated or a single standard code set must be promulgated. The federal Department of Health and Human Services had been considering the relative qualities of ICD and SNODENT with the goal of choosing one standard dental code set. However, it is unclear

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if that work will be prioritized by the new administration or whether the effort will lose traction.

DENTAL CODING: THE POSSIBILITIES

More consistent, widespread coding of dental diagnoses at the point of care could transform the way dental care is delivered, dental claims are paid, and dental disease is managed and mitigated. Across the industry, leading-edge dental organizations are already promoting the capture and use of diagnosis codes to improve dental care. For example, at the DentaQuest Oral Health Center in Westborough, Massachusetts, diagnosis codes are part of a transition to a disease management culture, allowing for better treatment of patients and clearer communication among clinicians. Diagnoses are captured in the electronic dental record and are used to create a risk-based treatment plan to control a patient's tooth decay and reduce the risk of future disease. In addition to analyzing disease at the patient level, the information also allows for population-level analyses; clinical outcomes and disease prevalence can also be tracked and monitored over time.[13]

The Dental Quality Alliance (DQA), established by the ADA to develop performance measures for oral health, is currently testing a "starter set" of quality measures for adult dental treatment. Included are such services as periodontal oral evaluations and periodontal services for adults with a history of treated periodontitis, topical fluoride for adults with elevated risk for caries, and dental emergency room visits and follow-ups.[14] However, advancements in quality measurement in dentistry are curbed in part because of a "lack of an organized system relating disease risk to diagnostic measures," and understanding oral health outcomes is limited "partly because dentistry does not have a tradition of formally reporting specific diagnoses or associating such diagnoses with specific services, especially through the claims process."[15] Clear, consistently used diagnosis codes would enable easy identification of target populations such as adults with high risk of tooth decay or periodontal disease and allow for outcomes measurement of treatments focused on those patients.

In addition to improving quality via evidence-based patient treatment plans, better tracking and managing a population's oral health, and better outcomes measurement, diagnosis codes could be used to develop risk adjustment methodologies and provider performance management criteria. Providers' scores on quality and outcome measures are dependent on the underlying populations they serve; adjusting providers' performances for case mix allows for comparability of outcomes across providers with disparate patient characteristics. Meaningful outcomes measurement and development of provider reimbursement or reward mechanisms based on clinical quality measures require an understanding of, and adjustment for, the underlying disease profile of patients. In a report for DQA, Dr. Jill Boylston Herndon writes that, in considering implementing risk adjustment protocols for dental, "the single, largest current limitation in dental clinical data is the lack of consistent, standardized, and widespread reporting of dental diagnoses."[16] While medical claims data contains the necessary detail to implement risk adjustment practices, dental claims data is not yet at that point.

MOVING FORWARD

Much of the dental industry recognizes the importance of diagnosis codes to promote progress in oral health, but it will take time for coding of diagnoses to become widespread and for the uses of the new information to be fully explored and implemented. DentaQuest Oral Health Center indicates that, in its experience, moving to a diagnosis-oriented disease management approach to dentistry requires significant commitment, resources, training and time, but it is a critical component of improving quality and delivering evidence-based care.[17] Changes to the industry will be challenging: Information systems will need to be enhanced to allow providers to easily

and accurately capture diagnoses; providers will have to be educated and brought on board regarding the importance of diagnosis information; and claims payment systems may need to be revamped to consider diagnoses as part of the adjudication process. Requirements by dental payers to include diagnosis codes on claims submissions could speed up the implementation process system-wide. Massive opportunity exists for payers to utilize the additional information gleaned from diagnosis codes to improve clinical outcomes, plan costs and provider reimbursement. Potential uses range from streamlining claims adjudication, implementing and monitoring disease management programs, developing new dental plan designs and new dental premium rating methodologies, examining alternative provider reimbursement mechanisms based on outcomes rather than just services performed, and rating provider quality.[18]

Diagnosis coding for dental claims will ultimately lead to transformative changes in dental benefits, claims payment and provider reimbursement, clinical practices, and outcomes and performance measurement, as those elements become standard as they have already in the health care industry. Entities within each component of the dental care system—providers, payers, government agencies, quality managers—who take the leap to adopt diagnosis coding and begin to discover the benefits of doing so will help the industry move farther and faster down the path of improvement. Actuaries working within the dental industry should track this effort and determine whether and how to integrate diagnosis data into their analytical and decision-making processes. ■

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ENDNOTES

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