TITLE: The Evolution of Classifying and Grouping COVID-19 In the US and its Impact on Quality Health Data

Introduction

Accurate COVID-19 data reporting is needed to support clinical care, organizational management, public health reporting, population health management, and scientific research. However, this has proven difficult in the United States (US) as the International Classification, 10th Revision, Clinical Modification (ICD-10-CM) codes, their associated coding guidance, and DRG grouping has evolved several times since February 2020.

Methods

An evaluation was undertaken of the COVID-19 ICD-10-CM codes and their coding guidelines starting with the interim COVID-19 coding advice published in February 2020 to April 1, 2022. In addition, the Medicare-Severity – Diagnosis Related Group (MS-DRG) changes made because of the code and guideline revisions were also reviewed. All updates to the ICD-10-CM codes and the ICD-10-CM Official Guidelines for Coding and Reporting announced by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS) and the MS-DRG revisions published by the Centers for Medicare and Medicaid Services (CMS) were assessed. Changes were noted with their effective date. An analysis of the impact on data quality because of the evolving ICD-10-CM codes, guidelines and DRG changes was completed.

Results

Preliminary results show variability in the administrative data spanning the full course of the timeframe. For example, while other parts of the world had Chapter XXII, Codes for special purpose, available via the World Health Organization (WHO) ICD and various country ICD modifications, the US had no such chapter in ICD-10-CM. Thus, when the WHO activated emergency code U07.1 for 2019-nCoV acute respiratory disease in February 2020, this code was not an option for use in reporting COVID-19 in the US. The NCHS guidance at the time was to use B97.29, Other coronavirus as the cause of diseases classified elsewhere. Subsequently, on April 1, 2020, chapter 22, Codes for special purpose (U00-U85), section Provisional assignment of new diseases of uncertain etiology or emergency use (U00-U49), category U07 Emergency use, and U07.1, COVID-19, was added by NCHS to ICD-10-CM. Coding guidance for COVID-19 infections included using U07.1 for only confirmed cases, which was defined as those documented by the provider, documentation of a positive COVID-19 test result, or a presumptive positive COVID-19 test result. Further guidance stated if an individual had tested positive for the virus at a local or state level, but it had not yet been confirmed by the CDC, the presumptive positive COVID-19 test result had been meant. These guidelines were in effect from April 1, 2020 to September 3, 2020. Furthermore, WHO ICD-10 U07.2, COVID-19, virus not identified used when COVID-19 is diagnosed clinically or epidemiologically but laboratory testing is inconclusive or not available has never been adopted by the US for inclusion in ICD-10-CM.

Additional results will be explained along with the analysis of the impact on data quality because of the evolving ICD-10-CM codes, guidelines and DRG changes.

Conclusions

Knowing the COVID-19 coding and data reporting changes from February 2020 to April 2022 are key to understanding the quality of the health data reported for clinical care, public health reporting, population health management, and scientific research.