Clinicians and Coders are Different: Examples of Disparities in Primary Care Coding

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Abstract: There are many sources of bias in administrative databases. Coding professionals have traditionally assigned ICD-9-CM codes for patient encounters yet there are increasing numbers of physicians assigning codes to primary care visits. Four cases were coded by a physician and a professional coder with zero percent agreement in the absolute codes assigned. This presentation will compare the codes used for these cases, discuss causes of differences between them, and discuss research implications.

Introduction: International Classification of Disease, Ninth Revision, Clinical Modification (ICD-9-CM) codes are used for many purposes but there is limited knowledge about the quality of coded data in large health care data sets. Coded data supports numerous critical functions within our nation’s health care system. Administrative data is used to identify adverse drug events (ADEs) and adverse patient events (APEs)1,2, to define cohorts for performance measures4,5, and can be used for health care fraud prevention and detection6 as well as for biosurveillance7,8. The integrity of all of these processes can be reduced by measurement error related to inaccurate coding. Although coding professionals are largely responsible for assigning diagnosis codes in inpatient and ambulatory care, increasingly, many health care providers assign the codes for ambulatory patient encounters. Because of differences in training as well as different priorities in assigning diagnosis codes, we hypothesized that physicians and coders observing the same patient encounter would exhibit substantial differences in the coding of patient encounters.

Methods: A coding professional visited a primary care practice and, after verbal consent was provided by the patient, was present in the examination room during a patient visit. She was present for the history of present illness, the review of systems and the concluding discussion with the patient. She left during the exam and then returned to discuss the case with the physician after the patient left and code the record. The physician also coded the same cases. After the cases were coded independently the codes assignments were discussed and potential cases for differences in assignment enumerated.

Results: A total of four cases were coded with agreement in none of the cases when all appropriate digits were considered. There was 50% agreement when the first 3 digits of the codes were used in the comparison. Based on a discussion of the cases, the reasons for the differences were found to be: coder lack of knowledge of the patient’s complete history and patient-physician discussion during the examination, physician lack of knowledge in the range of codes available, coding, and billing rules, differing interpretation of ambiguous symptoms and documentation, and greater coder attention to conditions that consumed physician discussion and follow-up time but were chronic stable conditions (for example status-post colostomy) that the physician did not consider worth coding every visit.

Discussion: The gold standard of accurate code assignment for a coding professional is the use of official coding guidelines. In contrast, physicians bring other issues to bear on using codes such as medical presence of disease, billing requirements, concern for premature labeling of patients, concern about the perceptions of the wording of codes that printout on patient bills, and other factors. These various factors result in differences in the way that codes are applied. Two readily apparent significant differences that between clinicians and coders are disparity in training in application of coding guidelines (coders have a lot and clinicians very little) and the primary focus of work. Physicians diagnose and treat patients and coders review records and assign codes. Coders cannot diagnose a condition and thus guidelines have been developed to assist code assignment. The aim of guidelines being to assign codes in a consistent way so that when they are retrieved, the definition of what they represent is understood. In contrast, clinicians can diagnosis and this ability may influence what they code rather than depending on guidelines. Subsequently codes are assigned in an inconsistent way between the two professions.

Conclusions: Based on this preliminary exploration of code assignment between coders and physicians. There appear to be differences in the way codes are assigned. The quantification of these differences as well as the resulting effect this may have on large-scale databases should be further researched.