Rarer Than a Blue Moon

The use of a diagnostic code for the metabolic syndrome in the U.S.

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The metabolic syndrome is a constellation of anthropometric, physiologic, and biochemical abnormalities that occur together more frequently than expected by chance and are thought to increase the risk for developing cardiovascular disease or diabetes. The syndrome is highly prevalent among U.S. adults (1), and national surveys showed that its prevalence increased between 1988–1994 and 1999–2000 (2). People with hypertension (3) or diabetes (4), two conditions that are likely to result in frequent medical visits, are particularly likely to have the metabolic syndrome.

Although the concept of a metabolic syndrome has existed for some time, the development of an operational definition by the National Cholesterol Education Program in 2001 brought new attention and life to this syndrome (5). But how firmly this syndrome has been embraced by the medical community and is being diagnosed and treated by health care professionals remains unknown. Through the efforts of the American Association of Clinical Endocrinologists, a new ICD-9-CM code (277.7) for the dysmetabolic syndrome X was created and became available for use starting on 1 October 2001 (6). The purpose of this report is to examine the uptake of the code for the metabolic syndrome in the U.S. To do so, the author explored two national datasets: the National Hospital Discharge Surveys (NHDSs) from 2002 and 2003, and the National Ambulatory Medical Care Survey (NAMCS) from 2002.

RESEARCH DESIGN AND METHODS — The NAMCS was designed to provide information about patient office visits to physicians (7). Using a three-stage selection design, the survey included a national probability sample of physicians selected from master files of the American Medical Association and the American Osteopathic Association. Only physicians who were office based, principally engaged in patient care activities, employed in the nonfederal sector, and not specialists in anesthesiology, pathology, and radiology were eligible for selection. The basic sampling unit is the patient encounter or visit. Physicians or their staffs were asked to complete two data collection forms for 20–100% of patients during a 1-week interval, depending on the size of the physician’s practice. Up to three physicians’ diagnoses using ICD-9-CM codes could be recorded by the physicians or their staff.

Since 1965, the NHDS has been conducted annually (8). Data from a national sample of discharges from noninstitutional, nonfederal, short-stay hospitals were abstracted. The sampling design consists of three stages of selection: hospitals or geographic areas, additional hospitals within the geographic areas, and discharges (systematic random sampling). For ~59% of the hospitals, data were abstracted manually by the hospitals’ medical records staff or personnel of the U.S. Bureau of the Census. For the remaining hospitals, computerized data files were purchased. Up to seven diagnostic codes using ICD-9-CM were recorded.

RESULTS — The 2002 and 2003 NHDS datasets included 327,254 and 319,530 records, respectively. In 2002, 16 records listed the ICD-9 code 277.7: 3 as the third-listed diagnosis, 2 as both the fourth- and fifth-listed diagnoses, 6 as the sixth-listed diagnosis, and 3 as the seventh-listed diagnosis. In 2003, only 11 records listed ICD-9 code 277.7 (1 as the first-listed diagnosis, 0 as the second-listed diagnosis, and 2 each as diagnoses three through seven).

In 2002, NAMCS contained 28,738 records. Only two records listed ICD-9 code 277.7, one each as the first and second diagnoses.

CONCLUSIONS — Since the release of the National Cholesterol Education Program definition of the metabolic syndrome, this syndrome has received a great deal of attention. A growing number of publications have addressed myriad issues related to this syndrome, and numerous professional meetings have included symposia or other sessions about the metabolic syndrome. Nevertheless, during the 2 years following the creation of ICD-9-CM code 277.7 for the dysmetabolic syndrome, the code was rarely recorded on hospital discharge records. Also, for office visits during 2002, the ICD-9-CM code was rarely recorded. Thus, the data from two national surveys on hospitalizations and outpatient visits raise serious questions about how successful the translation of recommendations about the metabolic syndrome has proceeded from guidelines to clinical practice. Anecdotal information had suggested that health care professionals may have been overlooking the metabolic syndrome in many of their patients (9).

If, as the data from the NAMCS and NHDS suggest, the metabolic syndrome is being underdiagnosed, the reasons for
this are unclear. Health care professionals may not be actively looking for the metabolic syndrome in their patients, or they may not be recording the diagnosis. Perhaps many may still be unaware of the existence of a diagnostic code for this syndrome. Some health care professionals may not think that the metabolic syndrome is a meaningful concept. Furthermore, if third-party payers are not providing reimbursement for the metabolic syndrome, the use of this ICD-9-CM code may be discouraged.

Clearly, a huge gap exists between the number of U.S. adults who have the metabolic syndrome and the number of hospitalizations or physician visits for which the code for the metabolic syndrome is recorded. Learning the reasons why physicians may not be using this diagnostic code is necessary to any successful efforts to promote the use of this code. By using all available communication channels, health care professionals may be encouraged to diagnose the metabolic syndrome and record its presence in medical records through the use of ICD-9-CM code 277.7. An additional ramification of the findings of this study is that data sources such as the NAMCS and the NHDS are unlikely to be useful in conducting surveillance of the metabolic syndrome for some time to come.

References