The Primary Diagnosis is an outdated term in outpatient settings. The term was changed to First-listed Diagnosis some years ago, and it is the main condition treated or investigated during the relevant episode of outpatient (ambulatory) health care. Where there is no definitive diagnosis, the main symptom or sign, abnormal findings, or problem is reported as the first-listed diagnosis. The first-listed diagnosis is reported by physician offices, ambulatory care centers, outpatient hospital settings, and so on.

In an inpatient setting, the term “Primary Diagnosis” is still used to reference the condition that was the most serious and/or resource intensive during that hospitalization.

The “Principal Diagnosis” (PDX) for inpatient care is defined as that condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital for care. An important part of the definition above is the phrase “after study,” which directs coders to review all patient record documentation associated with an inpatient hospitalization to determine the definitive clinical condition that was the documented reason for the admission. For example, rather than listing the symptom or differential diagnoses available before the work up, the PDX should be what the studies determined was the cause of the symptom. For example the symptom of chest pain that could be either due to pneumonia or due to a heart attack would not be assigned as the PDX unless what caused the chest pain could not be determined prior to discharge. If it were determined to be caused by a heart attack, then that would be the PDX.

Another example of the difference between Primary and Principal diagnoses in inpatient coding is a patient admitted to the hospital for a surgical procedure such as gallbladder surgery and then, in the post operative period, suffers a heart attack: The primary diagnosis would be the heart attack because it will require more services, more consultations, more medications, etc., and a longer hospital confinement and is also more serious than the gallbladder. However, the principal diagnosis would be the problem with the gallbladder since that is what originally brought the patient into the hospital for care and the heart attack would be listed as a relevant secondary diagnosis.

Different health care insurers (including Medicare in the US) use the Principal Diagnosis designation along with the secondary diagnoses (that have bearing on the care during the hospitalization) and the significant surgical procedures performed to create a grouping called a DRG (Diagnosis Related Group). The DRG can be used in prospective payment systems (PPS) to establish reimbursement. In this use, the principal diagnosis is critical to the assignment of the appropriate DRG, and therefore to proper payment and reporting.

The definitions and guidelines used to arrive at the proper principal diagnosis (PDX) and DRG have been established by CMS (Centers for Medicare and Medicaid Services). The Uniform Hospital Discharge Data Set (UHDDS) defines the selection and use of the elements such as the PDX in the establishment of a DRG. This is to allow standardized reporting, as well as for use in reimbursement contracting.

There are also codes for codifying each diagnosis and procedure, called ICD-9-CM or ICD-10-CM codes (International Classification of Diseases, 9th or 10th revision, Clinical Modification) that are based on the World Health Organization's official ICD-9 classification of morbidity and mortality reporting codes. An ICD diagnosis code is assigned to each of the diagnoses related to an episode of care and to each procedure. It is the combination of these codes that are grouped to make a DRG with the principal diagnosis driving the DRG (although sometimes it can be driven by the procedure).