ICD-10 Reimbursement Mappings: New Mappings from CMS Help Organizations in the Transition to ICD-10

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Starting October 1, 2013, healthcare claims will be submitted to payers using ICD-10-CM diagnosis codes and ICD-10-PCS procedure codes. Some payers such as the Centers for Medicare and Medicaid Services (CMS) are converting their reimbursement systems to use ICD-10 codes directly. However, some payers and other organizations that use coded data in financial applications may still be dependent on ICD-9-CM–based legacy systems until their legacy system conversion or replacement is complete.

For this reason, CMS has released the ICD-10 Reimbursement Mappings to help prepare reimbursement systems for the transition and to support the phase-out of ICD-9-CM–based systems after the transition.

The reimbursement mappings provide a temporary mechanism for converting records containing ICD-10 diagnosis and procedure codes into "reimbursement equivalent" records containing ICD-9-CM diagnosis and procedure codes, so that the records may continue to be processed by legacy systems expecting ICD-9-CM.

For the purpose of this article, "ICD-10" is used to refer to both ICD-10-CM and ICD-10-PCS.

What Are the Reimbursement Mappings?

Unlike the General Equivalence Mappings (GEMs), which include all plausible translation alternatives for each code in a system, the reimbursement mappings offer a single recommended mapping of each ICD-10 code to a single ICD-9-CM alternative. Each ICD-10-CM diagnosis code is mapped to ICD-9-CM Volume 1 and each ICD-10-PCS procedure code is mapped to ICD-9-CM Volume 3.

Submitted ICD-10-CM diagnosis codes are translated into ICD-9-CM diagnosis codes, and submitted ICD-10-PCS procedure codes are translated into ICD-9-CM procedure codes. (CPT/HCPCS codes are left alone.) The claim is then processed as if it had been submitted with ICD-9-CM codes. An ICD-10–based claim using the reimbursement mappings may be processed as shown in the diagram below.

Reimbursement Mapping of Dominant ICD-9-CM Code Alternative

When the GEM offered more than one ICD-9-CM translation for an ICD-10 code, these reference data sources were queried to find the most frequently coded of the ICD-9-CM alternatives.

ICD-10-CM Code	ICD-9-CM Code Alternatives in the GEM	MedPAR Records	MedPAR %	Calif. Records	Calif. %	Reimbursement Mapping
J45.22, Mild intermittent asthma with status asthmaticus	493.01, Extrinsic asthma with status asthmaticus 493.11, Intrinsic asthma with status asthmaticus	384 49	88% 11%	3604 32	99% 0%	X

Reimbursement Mapping of ICD-9-CM Code Alternative Based on Clinical Judgment

When there were too few cases in either reference data set by itself, the two data sets were combined to achieve a higher frequency. Rule-based selection criteria and clinical judgment were used to select a mapping for the approximately 300 diagnosis and 120 procedure codes.

ICD-10-PCS Code	ICD-9-CM Code Alternatives in the GEM	MedPAR Records	MedPAR %	Calif. Records	Calif. %	Reimbursement Mapping
3E0B7KZ, Introduction of other diagnostic substance into ear, via natural or artificial opening	20.72, Injection into inner ear 20.94, Injection of tympanum	1 3	25% 75%	0 1	0% 100%	X

ICD-9-CM Code Clusters in the ICD-10 Reimbursement Mapping

The group of ICD-9-CM codes required to convey the ICD-10 code's meaning are collectively referred to as an "ICD-9-CM code cluster. ICD-9-CM code clusters are included in both the diagnosis and procedure reimbursement mappings to ensure that potentially reimbursable components included in the meaning of an ICD-10 code are conveyed to the ICD-9-CM translation.

Code Set	Mapped to Single ICD-9-CM Code	Mapped to Two-Code Cluster	Mapped to Three-Code Cluster	Mapped to Four-Code Cluster	Mapped to Five-Code Cluster	Total ICD-10 codes
ICD-10-CM (diagnosis)	63,497	4,574	27	5	0	68,103
ICD-10-PCS (procedure)	70,738	844	514	458	24	72,578

How the Reimbursement Mappings Were Derived

The construction of the reimbursement mappings started with the two ICD-10 to ICD-9-CM GEM files. More than 65,000 of the more than 68,000 ICD-10 diagnosis codes (95 percent) translate to a single ICD-9-CM code in the diagnosis GEM, so no further decision making was necessary for these codes. Rules for choosing among ICD-9-CM diagnosis code alternatives were necessary for the remaining 3,000 ICD-10 diagnosis codes.

Similarly, nearly 69,000 of the more than 72,500 ICD-10 procedure codes (also 95 percent) are equivalent in the procedure GEM to a single ICD-9-CM code, leaving approximately 3,500 ICD-10 procedure codes requiring rules for choosing among ICD-9-CM code alternatives.

Two reference data sources were used to help select a single ICD-9-CM code among the translation alternatives. Medicare data were used in the form of approximately 11 million MedPAR records. All-payer data were represented by approximately four million inpatient hospital records available from the California Office of Statewide Health Planning and Development.

Because both data sets come from hospital admission data, choosing between ICD-9-CM alternatives may reflect frequencies more characteristic of inpatient than outpatient data when the two differ. A clear example of this can be found in the obstetrics codes specifying complications of pregnancy.

Because ICD-10 does not specify encounter information (i.e., whether the patient delivered during the encounter), the reimbursement mapping must choose between two ICD-9-CM alternatives, one that specifies antepartum encounter, the other a delivery. For inpatient hospital data, the ICD-9-CM codes specifying delivery are far more frequent, while in outpatient and physician data, one would expect the ICD-9-CM codes specifying antepartum encounter to dominate.

When the GEM offered more than one ICD-9-CM translation for an ICD-10 code, these reference data sources were queried to find the most frequently coded of the ICD-9-CM alternatives. For all but about 300 of the 3,000 diagnosis codes and 120 of the 3,500 procedure codes, one ICD-9-CM alternative was clearly dominant—often more than twice as frequent as any of the other alternatives. The dominant ICD-9-CM alternative was then chosen as the ICD-9-CM code for the reimbursement mapping.

When the Medicare reference data set and the all-payer reference data set disagreed, the code with the highest Medicare frequency was chosen for nonobstetric, non-newborn diagnoses and procedures. For obstetric and newborn diagnoses and procedures, the all-payer data set was given precedence.

When there were too few cases in either reference data set by itself, the two data sets were combined to achieve a higher frequency. Rule-based selection criteria and clinical judgment were used to select a mapping for the approximately 300 diagnosis and 120 procedure codes, which were so rarely recorded that the reference data sets were unable to identify a clearly best alternative. The reimbursement mapping files were completed using this process.

Code Clusters

Each mapping file contains one entry for each valid ICD-10 code. However, an ICD-10 mapping entry can contain from one to five ICD-9-CM codes. This is because it may require more than one ICD-9-CM code to translate the complete meaning of one ICD-10 code.

The group of ICD-9-CM codes required to convey the ICD-10 code's meaning are collectively referred to as an "ICD-9-CM code cluster," shown above. ICD-9-CM code clusters are included in both the diagnosis and procedure reimbursement mappings to ensure that potentially reimbursable components included in the meaning of an ICD-10 code are conveyed to the ICD-9-CM translation.

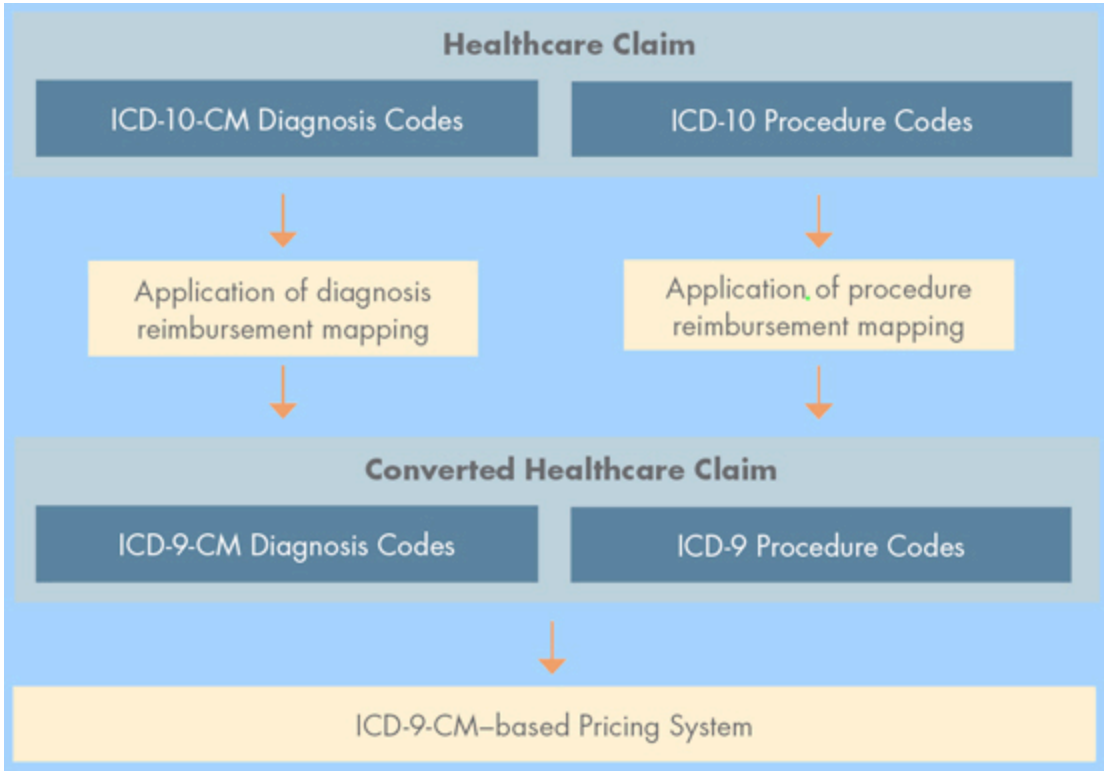
For example, ICD-10-PCS procedure code 02733ZZ, Dilation of coronary artery, four or more sites, percutaneous approach, requires two ICD-9-CM codes on the claim to be correctly represented in ICD-9-CM: 00.66, Percutaneous transluminal coronary angioplasty (PTCA) or coronary atherectomy, and the "adjunct" code 00.43, Procedure on four or more vessels.

Reimbursement systems may depend on the additional meaning provided by adjunct ICD-9-CM codes for correct pricing. A reimbursement system that pays more for a procedure performed on four or more vessels would pay incorrectly if the procedure code 02733ZZ were translated as 00.66 only.

Processing an ICD-10–based Claim Using the Reimbursement Mappings

Submitted ICD-10-CM diagnosis codes are translated into ICD-9-CM diagnosis codes, and ICD-10-PCS procedure codes are translated into ICD-9-CM procedure codes. The claim is then processed as if it had been

submitted with ICD-9-CM codes.



Using the Reimbursement Mapping Files

The reimbursement mappings are available online at www.cms.hhs.gov/ICD10 in two text files (one for diagnosis codes, one for procedure codes) and are arranged by ICD-10 code. Users are advised to download the files and load them into a database, table structure, or applicable analysis and mapping tool that allows efficient look up of the mapping entries.

The reimbursement mappings contain an entry for every ICD-10 code. However, it stands to reason that not every ICD-9-CM code will be represented in the mapping files. Certain ICD-9-CM codes use outmoded terminology or an axis of classification that has been replaced by something more clinically relevant in the ICD-10 code set.

As a result, the reimbursement mappings pair the ICD-10 code with the closest clinically relevant alternative ICD-9-CM code or the most frequently used ICD-9-CM code, as described above. The inevitable result of a process that chooses a single ICD-9-CM code among alternatives is that the other ICD-9-CM alternatives are not included in the mapping.

Users may want to sort the mapping entries by ICD-9-CM code and determine if any particular ICD-9-CM codes flagged by their legacy systems for carve-outs or other special treatment are not included in the file. If such ICD-9-CM codes are essential to the legacy system, then the user's copy of the reimbursement mapping may be modified to include them.

The reimbursement mappings can be adapted to a legacy system using the specific recommendations contained in the user's guide, posted on the CMS Web site along with the mapping files. It advises users how to customize the mapping if needed; how to look up, track, and record the results of each record translated for the legacy ICD-9-CM system; and reminds users of special cases that the legacy system must be prepared for, such as ICD-10 codes for which there is no acceptable ICD-9-CM equivalent, and ICD-10 codes that translate to ICD-9-CM code clusters.

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Download the mappings and user's guide at www.cms.hhs.gov/ICD10.

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