

Putting the ICD-10-CM/PCS GEMs into Practice. Appendix A: Examples of Complexity in Applied Mappings

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Myocardial Infarction

The ICD-9-CM codes for myocardial infarction (MI) classify the diagnosis according to whether it is the patient's initial or subsequent visit for treatment of a particular MI. This information is not contained in the ICD-10-CM codes.

To determine the correct ICD-9-CM choice in the ICD-10-CM to ICD-9-CM GEM, the user needs information from the patient's health record. If the record is not available or the mapping application is intended to establish general rules for translation rather than deciding on a case-by-case basis, then a consistent method for resolving the disparity in classification between the two code sets must be derived and documented.

Depending on the specific application, the user may want to equate all ICD-10-CM MI codes with the ICD-9-CM codes indicating initial episode of care and not include the other ICD-9-CM codes as alternatives in the applied mapping. However, this approach may not be useful for every application.

Repair of Aneurysm

The ICD-9-CM code for repair of aneurysm is not easily mapped to or from ICD-10-PCS. The ICD-9-CM code does not clearly describe the method, nor does it identify the approach or site.

In ICD-10-PCS, the method is described by the root operation, and the approach and site are described in the approach and body part characters respectively. The ICD-9-CM code does identify the diagnosis of aneurysm, but diagnostic information is not included in ICD-10-PCS codes.

However, if an applied mapping for medical necessity is being used to map claims coded in ICD-10-CM/PCS back to ICD-9-CM and the information that the procedure was performed for repair of aneurysm is needed to produce correct results in the legacy medical necessity application, then diagnostic information would be available on the claim to confirm the reason for the repair.

A mapping rule could be established that would only select the ICD-9-CM code for repair of aneurysm as the appropriate option in the backward GEM when the claim contains an aneurysm diagnosis code. This would result in a correct applied mapping. Another mapping application that does not have access to diagnostic information would need to use a different mapping rule.

Coronary Angioplasty

As illustrated below, the ICD-10-PCS code for dilation of coronary artery, four or more sites, percutaneous approach, with drug-eluting intraluminal device, maps to the ICD-9-CM code for percutaneous transluminal coronary angioplasty in combination with three ICD-9-CM adjunct codes: one specifying the number of vessels treated, one specifying the number of stents placed, and one specifying that drug-eluting stent(s) were involved in the procedure.

PTCA Mapping in ICD-10-PCS to ICD-9-CM GEM

ICD-10-PCS			ICD-9-CM	

027334Z	Dilation of coronary artery, four sites using drug-eluting intraluminal device, percutaneous approach	Links to	00.66	PTCA or coronary atherectomy
			<i>and</i> 00.43	Procedure on four or more vessels
			<i>and</i> 00.48	Insertion of four or more vascular stents
			<i>and</i> 36.07	Insertion of drug-eluting coronary artery stent(s)

This is an example of an ICD-9-CM cluster: all four of the codes, the primary procedure code and the three adjunct codes, are required to replicate the meaning of one ICD-10-PCS code. Depending on the application, mapping from a source system code to a target system code may not be technically feasible, especially if the link between all the codes in the cluster must be retained for secondary uses of the coded data.

An applied mapping that maps the ICD-10-PCS code to one ICD-9-CM code of the four is the simple solution but is not a complete and accurate mapping. Depending on the application, the user may need to ignore the ICD-9-CM adjunct codes and only map the ICD-10-PCS code to the primary ICD-9-CM PTCA code if it is not a critical differentiator in the ICD-9-CM–based application (e.g., if reimbursement is calculated based only on the PTCA code, and all the adjunct codes all do not affect payment).

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