



GENERAL EQUIVALENCE MAPPINGS FAQs



International Classification of Diseases, 10th Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS) was implemented on October 1, 2015, for all Health Insurance Portability and Accountability Act (HIPAA)-covered entities.

Learn about these General Equivalence Mappings (GEMs) topics:

- Use of external cause and unspecified codes in ICD-10-CM
- Background
- Frequently Asked Questions
- Resources



USE OF EXTERNAL CAUSE AND UNSPECIFIED CODES IN ICD-10-CM

Similar to International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), there is no national requirement for mandatory ICD-10-CM external cause code reporting. Unless you are subject to a State-based external cause code reporting mandate or these codes are required by a particular payer, you are not required to report ICD-10-CM codes found in Chapter 20 of the ICD-10-CM, External Causes of Morbidity. If you have not been reporting ICD-9-CM external cause codes, you will not be required to report ICD-10-CM codes found in Chapter 20 unless a new State or payer-based requirement on the reporting of these codes is instituted. If such a requirement is instituted, it would be independent of ICD-10-CM implementation. In the absence of a mandatory reporting requirement, you are encouraged to voluntarily report external cause codes, as they provide valuable data for injury research and evaluation of injury prevention strategies.

In both ICD-9-CM and ICD-10-CM, sign/symptom and unspecified codes have acceptable, even necessary, uses. While you should report specific diagnosis codes when they are supported by available medical record documentation and clinical knowledge of the patient's health condition, in some instances signs/symptoms or unspecified codes are the best choice to accurately reflect the health care encounter. You should code each health care encounter to the level of certainty known for that encounter.

If a definitive diagnosis has not been established by the end of the encounter, it is appropriate to report codes for sign(s) and/or symptom(s) in lieu of a definitive diagnosis. When sufficient clinical information is not known or available about a particular health condition to assign a more specific code, it is acceptable to report the appropriate unspecified code (for example, a diagnosis of pneumonia has been determined but the specific type has not been determined). In fact, you should report unspecified codes when such codes most accurately reflect what is known about the patient's condition at the time of that particular encounter. It is inappropriate to select a specific code that is not supported by the medical record documentation or to conduct medically unnecessary diagnostic testing to determine a more specific code.

BACKGROUND

The Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC) created the GEMs as a tool for the conversion of data from ICD-9-CM to ICD-10-CM and ICD-10-PCS and vice versa.

The GEMs:

- Assist with the conversion of ICD-9-CM codes to ICD-10-CM/PCS codes
- Assist with the conversion of ICD-10-CM/PCS codes back to ICD-9-CM
- Ensure that consistency in national data is maintained

CMS and CDC made a commitment to update the GEMs annually along with the updates to ICD-10-CM/PCS during the transition period prior to ICD-10 implementation. The GEMs will be maintained for 3 years beyond the October 1, 2015, ICD-10-CM/PCS implementation date for all HIPAA-covered entities.

The GEMs are not a substitute for learning how to use ICD-10-CM and ICD-10-PCS. Providers' coding staff will assign codes describing patients' encounters from the ICD-10-CM and ICD-10-PCS code books or encoder systems. The GEMs are not used to code patient encounters.

FREQUENTLY ASKED QUESTIONS



What are the GEMs?

The GEMs are a tool that you can use to convert data from ICD-9-CM to ICD-10-CM and ICD-10-PCS and vice versa. The GEMs are also known as crosswalks as they provide important information linking codes of one system with codes in the other system. The GEMs are a comprehensive translation dictionary that can be used to accurately and effectively translate any ICD-9-CM-based data, including data for:

- Tracking quality
- Recording morbidity/mortality
- Calculating reimbursement
- Converting any ICD-9-CM-based application to ICD-10-CM/PCS, such as:
 - Payment systems
 - Payment and coverage edits
 - Risk adjustment logic
 - Quality measures
 - A variety of research applications involving trend data

Mapping from ICD-10-CM and ICD-10-PCS codes back to ICD-9-CM codes is known as backward mapping. Mapping from ICD-9-CM codes to ICD-10-CM and ICD-10-PCS codes is known as forward mapping. The GEMs are complete in their description of all the mapping possibilities as well as when there are new concepts in ICD-10 that are not found in ICD-9-CM. **All** ICD-9-CM codes and **all** ICD-10-CM/PCS codes are included in the collective GEMs:

- All ICD-10-CM codes are in the ICD-10-CM to ICD-9-CM GEMs
- All ICD-9-CM diagnosis codes are in the ICD-9-CM to ICD-10-CM GEMs
- All ICD-10-PCS codes are in the ICD-10-PCS to ICD-9-CM GEMs
- All ICD-9-CM procedure codes are in the ICD-9-CM to ICD-10-PCS GEMs



Who can use the GEMs? Were the GEMs designed for use by all providers and payers or was the focus on use with Medicare data?

The GEMs were designed as a general purpose translation tool that can be used by anyone who wants to convert coded data. Possible users of the GEMs include:

- All payers
- All providers
- Medical researchers
- Informatics professionals
- Coding professionals—to convert large data sets
- Software vendors—to use within their own products
- Organizations—to make mappings that suit their internal purposes or that are based on their own historical data
- Any other individuals who use coded data

The translations are based on the meaning of the code as contained in the tabular instruction, index entries, and applicable Coding Clinic advice. They were developed independently without reference to Medicare data.



What process was used to develop the GEMs? Did CMS and CDC seek input from organizations, such as the American Hospital Association (AHA) and the American Health Information Management Association (AHIMA), on the development of the GEMs? Did development of the GEMs involve both clinical and coding evaluations?

The GEMs were developed over a period of 3 years by CMS and CDC, with input from both AHA and AHIMA. The GEMs development and maintenance team includes clinicians, coding experts, representatives of the Cooperating Parties (CMS, CDC, AHA, and AHIMA), and the team that developed and maintains ICD-10-PCS. The Cooperating Parties collaboratively write the “Documentation and User’s Guides,” which are updated and posted annually along with the other ICD-10-CM, ICD-10-PCS, and GEMs files.

Are the GEMs a substitute for learning to use ICD-10-CM and ICD-10-PCS?

The GEMs are not a substitute for learning how to use ICD-10-CM and ICD-10-PCS. Providers' coding staff assign codes describing patients' encounters from the ICD-10-CM and ICD-10-PCS code books or encoder systems. In coding individual claims, it is more efficient and accurate to work from the medical record documentation and then select the appropriate code(s) from the coding book or encoder system. The GEMs are a tool to assist with converting larger ICD-9-CM databases to ICD-10-CM and ICD-10-PCS.



How have the GEMs been used to date?

To date, the GEMs have been used to:

- Translate ICD-9-CM codes in the “Official ICD-9-CM Coding Guidelines” to aid in producing the “ICD-10-CM Official Guidelines for Coding and Reporting”
- Convert Medicare Severity Diagnosis-Related Groups (MS-DRGs) from an ICD-9-CM-based application to an ICD-10-CM/PCS-based application
- Convert the Medicare Code Editor to a native ICD-10-CM/PCS-based application



The information in the introductions to the GEMs points out that, in some cases, there is a clear one-to-one match between an ICD-9-CM code and an ICD-10-CM or ICD-10-PCS code. However, one ICD-9-CM code often translates to several ICD-10-CM or ICD-10-PCS codes because of the nature of going from the more general ICD-9-CM to the more specific ICD-10. Please describe the methodology that was used to create the GEMs.

To both create and maintain the GEMs, all reasonable code translation alternatives are included in its respective GEM, based on the complete meaning of the code being looked up. For example, for the ICD-9-CM to ICD-10-CM GEMs, we look up an ICD-9-CM code and include all reasonable translation alternatives in that GEM based on the complete meaning of the ICD-9-CM code. The complete meaning of a code includes:

- Tabular instruction
- Index entries
- Guidelines
- Applicable Coding Clinic advice

There may be multiple translation alternatives for a source system code (the code being looked up), all of which are equally plausible. This is true of both the ICD-10 to ICD-9-CM GEMs and the ICD-9-CM to ICD-10 GEMs. When there is only one alternative in a GEM, we can say that we have a one-to-one translation. This is common in the ICD-10 to ICD-9-CM GEMs and does not necessarily mean the two codes are identical.



Are there any instances where there is no translation between an ICD-9-CM code and an ICD-10 code? How do the GEMs handle this situation?

Yes, there are instances where there is no translation between an ICD-9-CM code and an ICD-10 code. The “No Map” flag indicates that there is no plausible translation from a code in one system to **any** code in the other system. For example, these codes are marked with the “No Map” flag:

- ICD-10-CM code **Y71.3 – Surgical instruments, materials and cardiovascular devices (including sutures) associated with adverse incidents**, which has no reasonable translation in ICD-9-CM
- ICD-9-CM procedure code **89.8 – Autopsy**, which has no reasonable translation in ICD-10-PCS



Why do the GEMs go in both directions (from ICD-9-CM to ICD-10 and from ICD-10 back to ICD-9-CM)?

The GEMs are designed to be used like a bi-directional translation dictionary. They go in both directions so that you can look up a code to find out what it means according to the concepts and structure used by the other coding system. The bi-directionality is similar to how Spanish-English and English-Spanish dictionaries are designed. Neither the two dictionaries nor the GEMs are a mirror image of each other. Because the translation alternatives are **based on the meaning of the code you are looking up** (which includes tabular instruction, index entries, guidelines, and applicable Coding Clinic advice), the ICD-10-PCS to ICD-9-CM GEMs are not a mirror image of the ICD-9-CM to ICD-10-PCS GEMs.

The GEMs were designed to convert current ICD-9-CM codes to applicable ICD-10 codes. You can use a reverse lookup of the backward mappings (ICD-10-CM/PCS to ICD-9-CM GEMs, looked up by ICD-9-CM code) to convert payment logic or coverage decisions from ICD-9-CM codes to ICD-10 codes. You could also use this mapping (ICD-10-CM/PCS to ICD-9-CM GEMs) to examine trend data over multiple years, spanning the implementation of ICD-10. For example, you can compare how frequencies changed for a specific condition using an ICD-10 code compared to prior years using ICD-9-CM codes. You can use the forward mapping (ICD-9-CM to ICD-10-CM/PCS GEMs) to convert ICD-9-CM-based edits. You can also use the forward mapping for any analysis or conversion project that needs to examine ICD-10 codes and to determine the ICD-9-CM code(s) that previously captured this diagnosis or procedure.



We were told that validation of the GEMs is occurring as part of the conversion of the current ICD-9-CM-based MS-DRGs to ICD-10-based MS-DRGs. How does this process identify any potential updates that might be needed to the GEMs? Will the GEMs be updated to correct any inaccuracies discovered in this process?

Because the process of MS-DRG conversion began with an initial translation using the ICD-10 to ICD-9-CM GEMs and then used the ICD-9-CM to ICD-10 GEMs to identify any additional conversion issues, all four GEMs were tested in the initial conversion process. Any inaccuracies discovered in the process were immediately noted so that changes were made to the affected GEMs and included in the next annual update. The public reviews the annual GEMs updates and provides comments for additional updates. CMS will produce GEMs updates for 3 years after the implementation of ICD-10 to assist users in analyzing trend data.



What methodology was used in the MS-DRG ICD-10 conversion?

The goal of MS-DRG ICD-10 conversion was to **replicate the current MS-DRG logic**. A record coded in ICD-10-CM/PCS and processed according to the converted ICD-10-based MS-DRGs will be assigned to the same MS-DRG as the same record coded in ICD-9-CM and processed according to the current MS-DRG logic. We accomplished this goal by translating the lists of ICD-9-CM codes that comprise the MS-DRGs (approximately 500 code lists) to comparable lists of ICD-10-CM/PCS codes **without changing the underlying MS-DRG logic**. This method of replacing lists of ICD-9-CM codes with lists of ICD-10 codes was partially automated using the GEMs. The FY 2016 MS-DRGs and subsequent updates are addressed in the Inpatient Prospective Payment System proposed and final rules. You can find these annual proposed and final rules as well as MS-DRG Definitions Manuals describing Grouper logic at <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/index.html>.



**Are there instances when it is not necessary to use the GEMs?**

It may not be necessary to use the GEMs when you are converting a small number of ICD-9-CM codes to ICD-10-CM and ICD-10-PCS codes. It may be quicker, easier, and more accurate to simply look up the codes in an ICD-10-CM or ICD-10-PCS code book.

Coders use coding books or encoder systems to code rather than using the GEMs.

RESOURCES

For More Information About...	Resource
ICD-10-CM/PCS	https://www.cms.gov/Medicare/Coding/ICD10/index.html
ICD-10-CM Official Guidelines for Coding and Reporting FY 2018	https://www.cms.gov/Medicare/Coding/ICD10/Downloads/2018-ICD-10-CM-Coding-Guidelines.pdf
ICD-10-PCS Official Guidelines for Coding and Reporting 2018	https://www.cms.gov/Medicare/Coding/ICD10/Downloads/2018-PCS-Guidelines.pdf
2018 ICD-10-CM and GEMs	https://www.cms.gov/Medicare/Coding/ICD10/2018-ICD-10-CM-and-GEMs.html
2018 ICD-10-PCS and GEMs	https://www.cms.gov/Medicare/Coding/ICD10/2018-ICD-10-PCS-and-GEMs.html
ICD-10-CM/PCS Information for Medicare Fee-for-Service Providers	https://www.cms.gov/Medicare/Coding/ICD10/Medicare-Fee-For-Service-Provider-Resources.html
ICD-10-CM/PCS Provider Resources	https://www.cms.gov/Medicare/Coding/ICD10/ProviderResources.html
ICD-10-CM/PCS Statute and Regulations	https://www.cms.gov/Medicare/Coding/ICD10/Statute_Regulations.html
MLN Catalog	http://go.cms.gov/mln-catalog
Medicare Information for Patients	https://www.medicare.gov

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