Navigating MS-DRG Through the ICD-10 Transition

By Elizabeth Snavely and Max Templeton

In an effort to understand the potential financial impacts of moving to the ICD-10 MS-DRG grouper, Regence, a multi-state Blue Cross and Blue Shield licensee and the largest payer in the Pacific Northwest/Mountain States region, partnered with General Dynamics Information Technology (IT) on a significant business intelligence initiative.

Using General Dynamic IT's NAV-10 Code Translation Suite, Erik Segren, a senior actuarial analyst on Regence's provider contract analysis team, and John Doyle of General Dynamics IT performed a sophisticated analysis of MS-DRG assignment to determine the upper and lower bounds as well as the most likely financial results of the grouping of inpatient claims for ICD-10. Their approach could be leveraged by any provider or payer looking to understand the potential neutrality impacts in DRG-based inpatient pricing.

Defining and Addressing Financial Neutrality

Regence's objective was to identify inpatient outliers, which are defined as claim situations that create the potential of significant reimbursement differences under MS-DRG processing—depending on which of the viable ICD-10 coding options are used by a provider.

The reports generated by the financial analysis functionality of NAV-10 used Regence claims data to compare the current MS-DRG assignment for claims with information expressed in ICD-9 codes to the MS-DRG assignment for the same claims when the information is expressed by the "best match" ICD-10 codes.

"Best match" ICD-10 codes were obtained by considering not only the source ICD-9 code, but other pertinent claim information such as co-diagnosis codes, ICD and CPT/ HCPCS codes, modifiers, age, and gender. This approach allowed Regence to predict the most likely financial result of the grouping of inpatient claims processed by the ICD-10 MS-DRG grouper. The team also realized the value of comparing the DRG assignment for ICD-9 claims to the DRG assignment for the same claims coded in ICD-10 where the ICD-10 codes selected mapped to the lowest or highest weight DRG. This additional reporting allowed Regence to identify claim situations where there was a significant difference between the possible minimum and maximum weight MS-DRG assignment for claims submitted with ICD-10 diagnosis and procedure codes.

Examining the Data

Extensive analysis was required to provide reports detailing the possible minimum and maximum weight MS-DRG assignment under ICD-10. For each source ICD-9 diagnosis and procedure code, it was necessary to determine which of the possible valid ICD-10 target codes was associated with the highest weight MS-DRG possible, and which of the possible valid ICD-10 target codes was associated with the lowest weight MS-DRG possible.

The result of this analysis was the development of two new mapping files for ICD-9 diagnosis codes and two new mapping files for ICD-9 procedure codes—one comprised of mappings from each ICD-9 code to the target ICD-10 code(s) associated with the lowest weight MS-DRG possible (the MIN file), and one comprised of the mappings from each ICD-9 code to the target ICD-10 code(s) associated with the highest weight MS-DRG possible (the MAX file).

These new files, together with significant enhancements to the financial analysis functionality already present in NAV-10, allow evaluation of claims situations where reimbursement changes are possible or likely due to assignment to different weight MS-DRGs. The reporting produced by the financial analysis processing using the MIN and MAX files shows the range of financial outcomes possible because of the ICD-9 to ICD-10 transition.

Regence personnel now have the ability to produce MIN/MAX reports on their entire inventory of claims information or on claims for specific entities such as providers or facilities. The same reporting can also be used to identify specialty areas where reimbursement changes are most likely. Regence's investigation has pointed to pregnancy and childbirth as one of the areas where reimbursement changes are possible, related specifically to major diagnostic categories 14 and 15 and to shifts from an assignment to DRG 792 to one where previously assigned to DRG 795. This research has been complicated by the fact that some definitions have changed between ICD versions.

Leveraging Financial Analysis Reports to Identify Outliers and Concerns

Regence anticipates future work to identify the highest and lowest possible reimbursement changes, as well as the most likely reimbursement change, for different areas and entities. The information obtained may also be used to develop comparison reporting and processing triggers for post-ICD-10 implementation review that will run on an ongoing basis. These post-ICD-10 implementation reports and processing triggers would prompt evaluation and possible action when reimbursement changes seen in a particular area or from a particular business partner were greater or less than anticipated. Such reporting and triggered processing could be general or specific to a certain entity.

While most hospitals stayed within the normal range of operation, up to 10 percent fell outside the normal range and will require additional research and analysis to determine the root cause. While there is still much analysis and research to be done, preliminary findings point to shifts with pregnancy and newborn DRGs.

As new versions of the ICD-10 MS-DRG grouper are published, Regence plans to rerun and reevaluate the resulting financial analysis reporting to determine any additional changes likely to ensue from the updated grouping software. In addition to providing the reporting already described (most likely, highest, and lowest weight assignments), NAV-10 financial analysis reporting can also be used to determine differences seen in MS-DRG assignment when the same set of claims are processed by two different versions of the ICD-10 MS-DRG grouper software. Knowledge of any changes seen as a result of updated grouper logic will allow Regence to adjust its risk mitigation strategies appropriately. Finally, as ICD-10 implementation approaches, Regence plans to run financial analysis reporting on a regular basis using its most recent data to identify any new trends or areas of interest.

Preparation Now Will Reduce Risk and Unexpected Changes from the ICD-10 Transition

The financial implications of ICD-10 are not generally well understood within the healthcare industry, which means the risks associated with changing reimbursement patterns can be estimated but not distinctly identified. Regence is better able to identify where reimbursement patterns may shift based on the new business intelligence created by their reports run through the financial aspect of NAV-10.

Research based on such reporting will drive planning and developing processes to identify and mitigate the potential financial impact through the use of sophisticated and focused logic that will help to discover and analyze the exact cause for the shift in DRGs and mitigate the risk to payments. This became apparent when Segren identified that the use of certain ICD-10 diagnosis codes related to the normal inoculation of newborns caused an unexpected shift of MS-DRG assignment from a normal newborn MS-DRG to a different MS-DRG. Regence shared its findings in this area with CMS, resulting in changes in that area of MS-DRG assignment in the latest version of the ICD-10 MS-DRG grouper software.

Efforts to plan and mitigate financial risk associated with ICD-10 will be an ongoing effort. As CMS continues to develop ICD-10 groupers through the ICD-10 MS-DRG Conversion Project, changes will stabilize, allowing for more definitive mitigation strategies. For now, research and forecasting of the kind described here will enable payers and providers to identify contingencies that limit projected financial and organizational impacts of the ICD-10 transition.

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