



INDUSTRY INSIGHT

Industry Insight No. 13

May 1998

ALL PAYER SEVERITY-ADJUSTED DRGs (APS-DRGs®)

Diagnosis-related Groups (DRGs) and their variations have been used internationally to categorize hospital inpatients into classes of patients that are similar in cost and clinical meaning. DRGs are used by Medicare, some Medicaid programs and a number of third-party payers as the basis for hospital reimbursement.

One of the major criticisms of the DRGs has been their failure to adequately account for differences in severity of illness. Measuring risk or severity within DRGs has become increasingly important because of the growing need to compare outcomes across providers, clinical conditions and time. A good patient classification and severity adjustment system improves the ability to compare financial and clinical outcomes across markets, hospitals and providers. It also helps to target areas for continuous quality improvement since sources of variation that are attributable to differences in patient severity are taken into account.

In response to the above concerns, the Health Care Financing Administration (HCFA) developed a DRG-based severity system. Although HCFA never implemented this system, HSS, Inc. has adopted and expanded upon their research, creating the **All Payer Severity-adjusted DRGs (APS-DRGs®)**. The APS-DRGs® have quickly gained substantial market acceptance. They are now used by two state data organizations (West Virginia and Maryland), as well as numerous providers, payers and consultants.

The APS-DRGs® are designed explicitly to provide severity-adjustment within the well-known HCFA DRG structure. Closely related HCFA DRGs (i.e., HCFA DRGs distinguished by the presence or absence of complicating conditions) are combined into sets of Consolidated DRGs (CDRGs). These CDRGs are then subdivided by type of complication or comorbidity (CC) into three severity levels: no CC, CC and Major CC.

By severity-adjusting DRGs, it is possible to quantify the impact of severity on length of stay and charges. Consider, for example, Consolidated DRG (CDRG) 88, Chronic Obstructive Pulmonary Disease. As illustrated below, lengths of stay (LOS) and charges increase as severity levels become more complicated.

CDRG 88: Chronic Obstructive Pulmonary Disease		
	<u>Average LOS</u>	<u>Average Total Charge</u>
Without CC	4.8	7,352
With CC	6.1	9,549
With Major CC	8.5	13,861

Update Process

The APS-DRGs[®] are updated annually to remain materially compliant with the HCFA DRGs and to incorporate new research into problems specific to the non-Medicare population. In addition, annual updates handle all new and deleted ICD-9-CM diagnosis and procedure codes. CC and Major CC determinations are updated annually. The current version of the APS-DRGs[®] is Version 15.0. For Version 15.0, major changes include increased specificity for orthopedic back, neck, and knee procedures. There are currently 1082 APS-DRGs[®].

APS-DRGs[®] Weights

HSS has developed and continues to update a set of normalized APS-DRGs[®] weights which make it possible to compare severity-adjusted performance within and across CDRGs. These weights are developed from a nationally-representative database of short-term, general, non-federal U.S. hospitals. APS-DRGs[®] weights account for wage differences and outliers.

APS-DRGs[®] Research and Development

HSS, Inc. is continually striving to improve the clinical cohesiveness and predictive ability of APS-DRGs[®]. A major area of new development is the classification of newborns. This area has not been of particular interest to Medicare because there are few newborns in the Medicare population. The APS-DRGs[®] have a unique neonatal model developed using all-payer (i.e., all age group) discharge data. Similarly, the classification of trauma patients is being evaluated since Medicare data reflect only a limited picture of trauma discharges. HSS will continue to evaluate possible refinements to APS-DRGs[®] and will introduce enhancements wherever they improve the performance of the system without altering its conceptual foundations and basic structure. The APS-DRGs[®] have been compared to other DRG-based severity measures and their performance has proven to be comparable or better. Research findings are available upon request.

Conclusion

The APS-DRGs[®] have proven to be statistically and clinically relevant for analyzing inpatient hospital encounters. The system is easy to implement since the methodology uses commonly available data. The APS-DRGs[®] are a logical extension to the HCFA DRG system, with several significant enhancements:

- The APS-DRGs[®] structure is simple, explicit and easily understood;
- Unlike the HCFA DRGs, the APS-DRGs[®] are an “all patient” system;
- The APS-DRGs[®] provide a unique neonatal model;
- The APS-DRGs[®] recognize Major CCs and Major CC exclusion logic; and
- The APS-DRGs[®] use a uniform clinical structure to represent levels of severity.

If you have questions about the All Payer Severity-adjusted DRGs (**APS-DRGs[®]**), please call Client Services at 1-800-999-3747(DRGS), or contact us via the Internet at support@hss-info.com.