Higher-Weighted DRG Review Sampling Strategy

Livanta, as the national Medicare Claim Review Services contractor under the Beneficiary and Family Centered Care – Quality Improvement Organization (BFCC-QIO), provides support to the Centers for Medicare & Medicaid Services (CMS) with their strategic goal of protecting the Medicare Trust Fund. Working toward decreasing Medicare’s paid claims error rate, Livanta developed an Improper Payment Reduction Strategy (IPRS) as a tool to accomplish this important objective. The IPRS includes a strategy for selecting Higher-Weighted Diagnosis-Related Group (HWDRG) claims for review such that the scope of the reviewed claims is sufficiently representative to justifiably extrapolate improper payment findings nationally. Approved by CMS, the IPRS outlines the strategy that Livanta uses to sample HWDRG claims. As a living document, the IPRS is updated at least annually.

Note: The term “weighted” refers to a reimbursement multiplier that is DRG-specific and is used to determine claim payment amounts.

Starting with a Question to Sample HWDRGs

In *The Tao of Statistics*, Livanta’s Chief Statistician, Dr. Dana Keller wrote, “The world of statistics starts with a question.” To accomplish the objectives cited above, Livanta’s data team implements the sampling strategy outlined in the IPRS that addresses the central question: How might HWDRG claims be optimally selected such that those claims that are more likely to be paid in error are also more likely to be sampled and reviewed?

BFCC-QIO Authority to Conduct Claim Review

A hospital reimbursed under the Inpatient Prospective Payment System (IPPS) may request HWDRG payment when the hospital determines that the clinical circumstances of the case warrant a claim correction that results in payment of a higher-weighted Medicare Severity DRG (MS-DRG), which increases the reimbursement to the hospital. For this reason, HWDRGs are adjusted claims through which the hospital is seeking a higher payment amount for a claim than was previously submitted. Post-payment review of these HWDRG adjustments is mandated under statute and CMS instruction as quoted in the CMS QIO Manual: Perform DRG validation on PPS cases (including hospital-requested higher-weighted DRG assignments), as appropriate (see §1866(a)(1)(F) of the Act and 42 CFR 476.71(a)(4)).


Livanta devised a flexible approach to sampling that could accommodate monthly fluctuations in HWDRG claims for potential selection and review, as is outlined in the CMS-approved IPRS. The goal of this approach is to sample and review HWDRG claims in a manner that is more likely to uncover errors than would a purely random sample while still being able to reconstruct justifiable regional and national improper payment amounts for all paid HWDRG claims.

What is Sampling?

The eligible population of hospital-requested HWDRG claims for the life of the contract consists of the accumulating monthly downloaded claims that were adjusted for higher-weighted DRG payments. A subset of claims from this larger population is called a sample. The process of creating a sample is called sampling.
According to Dr. Keller, “Sampling is a statistical response to limited resources.” Given that reviewing every claim is not always feasible, Livanta’s approach is to select a statistically valid and representative subset of claims to review, while still focusing on the goal of selecting claims more likely to have been improper payments. This approach gives the team the ability to extrapolate, which is the process wherein a sample’s results are used to estimate what the population’s results would likely have been if every claim had been reviewed. A random sample would not optimally find errors associated with improperly paid HWDRGs. For this reason, Livanta created a weighting system to select potential improper payments from the eligible population of claims more frequently than a simple random sample would.

**Note:** Extrapolations are only conducted at the CMS regional and national levels and not at the hospital level.


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**Sampling Prioritization Scores**

Following its IPRS, Livanta applies a three-part prioritization scoring methodology to HWDRG claims, given that a sufficient number of eligible claims are available for any given month to conduct sampling. The three components that are individually scored are cost, frequency, and risk of improper payment for each HWDRG. The individual scores are added together to assign a risk weight for each HWDRG claim eligible for sampling. Claims with higher computed risk scores are sampled at a higher rate than lower risk-score claims. The ongoing review outcomes inform subsequent risk weighting and sampling such that empirical results are used to reset the weights.
How is the Strategic Sampling Accomplished?

Livanta downloads all eligible HWDRG adjustments from the CMS claims database each month for sampling. Each claim is prioritized for sampling according to its cost, representative frequency, and clinical perception of the likelihood of an improper payment. This prioritization process forms an improper payment risk score that is used during sample selection.

All samples are assessed at the stratum (risk score) level to assure their statistical independence, along with their representativeness for both information content and typical values. This sample validation process, using statistically valid quality assurance tests, firmly establishes both the reliability and the validity of the results found from the samples.


Sample and Extrapolation Adjustments

When the total monthly universe of eligible claims (the population) does not allow for sampling at the predetermined level for each stratum, additional claims are selected from higher weighted strata, carrying out the goals of the IPRS.
Technical denials are issued when a medical record has not been received for review in a timely manner. Technical denials are counted in the regional and national estimates as if the claims were reviewed and found to be improperly paid. Although the subsequent submission of the needed documentation may reverse the technical denial, these denials can be avoided by submitting the supporting documentation upon request.

**Individualized Hospital Results**

When a hospital has had at least 30 claims sampled and reviewed in a monthly sample, those claims are aggregated to form a hospital-specific report that is sent to the hospital. The report is a summary of information the hospital has already received during the course of the monthly claims review process and includes identified areas for educational intervention where findings warrant. For subsequent hospital reports, only aggregates of at least 30 newer claims will be used and presented such that information about errors is allowed to age out of each hospital-based report.

**Demystifying Extrapolation**
Extrapolation is the process of estimating an improper payment amount (or rate) from the results of reviews based on submitted Medicare medical records in support of sampled claims. Medicare HWDRG extrapolated outcomes are reported as national and regional improper payment amounts and rates according to Medicare policy requirements. Individual provider extrapolations are not calculated.

Due to the fact that Livanta employs random selection within strata whenever sampling is needed, the method for extrapolation is computationally straightforward. For each stratum each month, the amount found improperly paid in the sample is divided by the number of claims that were reviewed, and that amount is multiplied by the number of claims in the eligible population stratum. The resulting value is the extrapolated amount improperly paid for that stratum that month. The extrapolated amounts are then added across strata and/or months to find national improper payment amounts by month, year, stratum, or whatever the policy-perspective requires.

Notes:
Funds are recovered for the amounts found in error during claims review and not for extrapolated amounts.

Consistent with the method employed by the Office of the Inspector General (OIG) in their freely supplied sampling and extrapolation software, RAT-STATS (https://oig.hhs.gov/compliance/rat-stats/)

What Can Hospitals Expect?

Hospitals can expect to receive medical record requests by fax or mail for sampled HWDRG claims around the third week of each month. These sampled claims will undergo DRG coding and clinical validation and medical necessity reviews. The larger the volume of claims a hospital adjusts to a higher-weighted DRG, the more likely it is that some of these claims will be sampled and reviewed.

These medical record requests will be addressed to the medical record contact designated by the hospital in its Memorandum of Agreement (MOA) effectuated with Livanta. If a hospital has multiple claims sampled in a month, the medical record requests will be transmitted in one package.

The dates hospitals can expect to see HWDRG medical record requests are published on Livanta’s website: https://livantaqio.com/en/ClaimReview/Review_Types/hwdrg.html

Sample Medical Record Request

An example HWDRG record request template is shown below to help hospitals become familiar with how to identify them.
Initial Medical Record Request for HWDRG Review

Livanta LLC is the Quality Improvement Organization (QIO) authorized by the Medicare Program to review services provided to Medicare patients. Federal guidelines (42 CFR 480.111) indicate that a QIO is authorized to have access to and obtain medical records and information pertinent to the health care services furnished to Medicare patients.

Please forward a complete copy of the medical record requested below to Livanta. The medical record must be received by Livanta as soon as possible, but no later than DUE DATE IN BOLD [30 days from date of request].

For questions call the Higher Weighted DRG Review Department at 844-740-7122.

Please submit the following medical record in its entirety:

<table>
<thead>
<tr>
<th>QIO ID:</th>
<th>QIO ID</th>
<th>EMR Key:</th>
<th>EMR Key</th>
</tr>
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<td>Provider ID</td>
<td>Provider Name</td>
<td>Provider Name</td>
</tr>
<tr>
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<td>Bene Name</td>
<td>Date of Birth</td>
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<td>Medical Record #</td>
<td>Medical Record #</td>
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<tr>
<td>Admit Date:</td>
<td>Admit Date</td>
<td>Discharge Date</td>
<td>Claim Thru Date</td>
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</tbody>
</table>

In compliance with 42 CFR § 476.78 (b)(2)(ii)(A), providers are required to submit medical records to the QIO electronically. If you are unable to submit using one of the methods below, please call Livanta’s technical assistance line at 240-712-4300 x 2998.

1. **Direct Secure Messaging.** Direct Secure Messaging can be performed inside many electronic medical record (EMR) systems. Direct Secure Messaging is NOT email. Medical records may be transmitted to Livanta through Direct Secure Messaging at this address: qiohwdrg@direct.livanta.com (This is not an email address)

2. **Livanta File Transfer Portal.** Providers can upload medical records as a .PDF file through a portal application via [https://livantaqio.com/en/ClaimReview/Medical_Records/e-lift.html](https://livantaqio.com/en/ClaimReview/Medical_Records/e-lift.html) by clicking on the e-LIFT portal button. To ensure secure transmission, providers must enter the QIO ID and the unique EMR Key supplied above before uploading any medical documentation.

3. **esMD.** urn:oid 2.16.840.1.113883.13.34.110.1.500.15 (for more information on esMD, see [www.cms.gov/esMD](http://www.cms.gov/esMD))
Questions?

Should you have questions, please email ClaimReview@Livanta.com.

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