

Code Source: [CMS Acute Inpatient PPS](#) - last updated March 2025.

The link above is to the general home page. For each FY weights, refer to the left side panel and scroll down to find the "FY XXXX IPPS Final Rule Home Page". After selecting the FY, scroll down to the Proposed Rule Tables and locate the **Table 5 (ZIP)**. The excel contains information for each DRG and their respective weight rates.

Understanding Case Mix Index (CMI):

CMI is a metric used to reflect the average clinical complexity and resource intensity of the patients treated at a hospital. It is derived from the Diagnosis-Related Group (DRG) system, where each DRG has a relative weight assigned by the Centers for Medicare & Medicaid Services (CMS).

These weights are calculated annually using national Medicare inpatient claims data and are based on the average cost of care for each DRG across the U.S. health system. Higher DRG weights represent more resource-intensive, medically complex conditions or procedures.

How to Assign DRG Weights:

Note: HQI is applying the FY codes to CY data. (Ex. FY 2022 logic is applied to CY 2022 inpatient data instead of fiscal year)

For each patient encounter, based on their DRG, assign the proper weight.

- Patient A was discharged on 5/1/2024 with a DRG of 14. Patient A's record, based on FY 2024 weights, would be assigned the value 11.4609.

How to Calculate Hospital Overall CMI:

Hospital Average CMI = (Sum of all patient DRG weights) / (Total Number of Discharges)

This means your hospital's average care is about X times more resource-intensive than the national average. CMS base weight = 1. Example if your hospital's CMI is 3.8, this means your hospital uses 3.8x what the national average is.

How to Calculate LOS/CMI Ratio per DRG:

$\text{LOS/CMI Ratio} = (\text{Average LOS for DRG}) / (\text{CMS DRG Weight})$

This helps identify whether patients are staying longer or shorter than expected based on their DRG-assigned resource weight.

Example:

DRG	Average LOS	DRG Weight	LOS/CMI Ratio
001	15	27.0986	.5535
002	3	12.2441	.2450
003	14	21.3203	.6567
004	20	14.7	1.3605

Ratios < 1.0 = your LOS is **shorter** than expected for the DRG's weight -> suggests efficient resource use or low-acuity variation.

Ratios > 1.0 = your LOS is **longer** than expected -> May indicate overutilization, care delays, or patient-specific complexity not fully captured in the DRG.

Applying the LOS/CMI Ratio at the Patient Level:

You can extend this analysis to individual patient encounters

$\text{LOS/CMI Ratio for Patient} = (\text{Patient LOS}) / (\text{DRG Weight})$

This is especially useful for:

- Identifying outlier cases
- Conducting utilization review
- Supporting quality improvement initiatives

Below is a table showing the data sources included for these measures.

Data Source	Inpatient Encounters	Emergency Department Encounters	Ambulatory Surgery Encounters
SIERA Discharges	✓		
AB2876 Discharges	✓		