



## *Calculating Hospital Specific DRG Payments*

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**Disclaimer:** *The following methodology and calculation for calculating acute inpatient hospital specific DRGs provides only a general guideline to estimate a DRG payment for hospitals under the Medicare PPS payment system. The calculation does not necessarily reflect the exact calculation for hospitals with special treatments (e.g., Hold Harmless, Pay Under Responsible Cost). We recommend contacting ResDAC for any further questions about the application of this calculation.*

Medicare pays most acute hospitals for their inpatient hospital services at a predetermined rate (DRG price) for each discharge under the prospective payment system (PPS).

The DRG adjusted payment (DRG price) is the base amount multiplied by a national "weight" associated with the hospitalization's DRG. The base amount is calculated from information (for the hospital) found in the PPS Impact File (wage indices, disproportionate share and medical education adjustments) and a national calculation of average capital costs and operating costs with geographic adjustments for all Medicare hospitalizations found in the Federal Register.

The costs incurred by a hospital for a case are evaluated to determine whether it is eligible for additional payments as an outlier case. This additional payment is designed to protect the hospital from large financial losses due to unusually expensive cases. Any outlier payment due is added onto the DRG-adjusted base payment rate. Outlier reimbursements are calculated on a case-by-case basis and will not be further discussed in this document. For an example that simulates an outlier payment, go to:  
[http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/outlier\\_example.pdf](http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/outlier_example.pdf).

### **COSTS NOT INCLUDED IN PPS PAYMENTS**

The direct costs of medical education for interns and residents is paid based on a per resident payment amount.

The following costs continue to be paid on a reasonable cost basis:

- Hospital bad debts attributable to nonpayment of the Medicare deductible and coinsurance.
- Heart, liver, lung and kidney acquisition costs incurred by an approved transplant facility.

### **CORE ELEMENTS OF A PPS PAYMENT**

- The standardized amounts, which are the basic payment amounts.
- A wage index to account for differences in hospital labor costs.
- The DRG relative weights, which account for differences in the mix of patients treated across hospitals.
- An add-on payment for hospitals that serve a disproportionate share of low-income patients.
- An add-on payment for hospitals that incur indirect costs of medical education.

### **DIRECTIONS FOR CALCULATING HOSPITAL SPECIFIC DRG PAYMENTS/PRICES**

**Step One:** Download the following two Public Use Files from the CMS website <http://www.cms.hhs.gov/AcuteInpatientPPS/FFD/list.asp#TopOfPage>.

- [Impact file for IPPS FY 2007 Final Rule SEPTEMBER 2006 \[Excel Zipped, 960KB\]](http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/imppuf07_1488N.zip)
- [Table 5 - DRG Relative Weights -September 2006 \[Excel Zipped, 33KB\]](http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/table5_fn07_Sept.zip)

Identify the CMS Medicare provider number (not the AHA Medicare number) for the hospital(s) in your study sample. If you do not have the CMS Medicare provider number, you can search by facility name or address in the Hospital Names and Addresses file downloadable from [http://www.cms.hhs.gov/CostReports/02\\_HospitalCostReport.asp#TopOfPage](http://www.cms.hhs.gov/CostReports/02_HospitalCostReport.asp#TopOfPage). The PPS Impact file supplies hospital specific information such as the wage indices, DSH, IME, and COLA.

**Step Two:** Search the Federal Register Final Rule for the following tables. The tables for FY 2007 can be located through the following CMS website document: <http://www.cms.hhs.gov/AcuteInpatientPPS/downloads/CMS-1488-N.pdf>. Tables begin on page 59 of the Federal Register document.

- Table 1a & Table 1b - National Adjusted Operating Standardized Amounts, Labor/Nonlabor (See Note 1)
- Table 1d - Capital Standard Federal Payment Rate
- Table 4a - Wage Index and Capital Geographic Adjustment Factor (GAF) for Urban Areas By CBSA
- Table 4b - Wage Index and Capital Geographic Adjustment Factor (GAF) for Rural Areas by CBSA

- Table 4c - Wage Index and Capital Geographic Adjustment Factor (GAF) for Hospitals That Are Reclassified (See Note 2)

**Note 1:** Full Update amounts applicable to hospitals that submitted quality data to CMS.

**Note 2:** Table 4c is used when Hospital is identified as Reclassified (See Variable 'Reclassification Status' in PPS Impact File).

**Step Three:** Calculate the PPS Hospital Specific DRG Price. The calculation is broken down into 3 separate calculations: 1) PPS Operating Payment, 2) PPS Capital Payment, and 3) sum of calculations (1) and (2) for the PPS Hospital Specific DRG Price. See Table 1 and Table 2 for the data elements needed and where they can be located for the respective calculation.

**CALCULATIONS:**

**PPS Operating Payment:**

$[(\text{Standardized Labor Share} \times \text{Operating Wage Index}) + (\text{Standardized Non-Labor Share} \times \text{Operating COLA Adjustment for Hospitals Located in Alaska and Hawaii})] \times (1 + \text{Operating IME} + \text{Operating DSH Adjustment Factor}) \times (\text{DRG Weight})$

**PPS Capital Payment:**

$(\text{Standard Federal Rate}) \times (\text{GAF}) \times (\text{Large Urban Add-on, if applicable}) \times (\text{Capital COLA Adjustment for Hospitals Located in Alaska and Hawaii}) \times (1 + \text{DSH Adjustment Factor} + \text{IME Adjustment Factor}) \times (\text{DRG Weight})$

**Hospital Specific DRG Price:**

PPS Operating Payment + PPS Capital Payment

**Table 1 - PPS Operating Payment**

<b>Data Element</b>	<b>Location</b>
<b>Standardized Labor Share</b>	Federal Register Final Rule
<b>Operating Wage Index</b>	PPS Impact File
<b>Standardized Non-Labor Share</b>	Federal Register Final Rule
<b>Operating IME Adjustment</b>	PPS Impact File
<b>Operating DSH Adjustment Factor</b>	PPS Impact File
<b>DRG Weight</b>	DRG Relative Weight File
<b>COLA Adjustment for Hospitals Located in Alaska and Hawaii</b>	PPS Impact File

**Table 2 - PPS Capital Payment**

<b>Data Element</b>	<b>Location</b>
<b>Capital Standard Federal Payment Rate</b>	Federal Register Final Rule
<b>Geographic Cost (GAF)</b>	Federal Register Final Rule
<b>Large Urban Add-On (if applicable)</b>	1.03 <sup>1</sup>
<b>Capital IME Adjustment</b>	PPS Impact File
<b>Capital DSH Adjustment Factor</b>	PPS Impact File
<b>DRG Weight</b>	DRG Relative Weight File
<b>COLA Adjustment for Hospitals Located in Alaska and Hawaii</b>	PPS Impact File

All data elements are updated annually in the Final Rule Federal Register.

**Note 3:** The above example and associated URLs pertain to FY 2007. Hospital specific DRG payments can be calculated for previous Fiscal Years, however, some of the relevant information and data files may no longer be available through the CMS Website. Please contact ResDAC for further assistance.

If you have any questions or comments, ResDAC staff can be contacted at 1-888-ResDAC or [resdac@umn.edu](mailto:resdac@umn.edu)

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<sup>1</sup> Fixed adjustment factor since 1992 [See Federal Register Final Rule, August 30, 1991 (56 FR 43773-43774)]