MSA MEDICAL SERVICES ADMINISTRATION

Bulletin

Michigan Department of Health and Human Services

Bulletin Number: MSA 15-30

Distribution: Hospitals, Medicaid Health Plans

Issued: September 1, 2015

Subject: Inpatient Hospital Reimbursement System Reform

Effective: October 1, 2015

Programs Affected: Medicaid, Children's Special Health Care Services (CSHCS), Maternal Outpatient Medical Services (MOMS)

NOTE: Implementation of this policy is contingent upon State Plan Amendment approval from the Centers for Medicare & Medicaid Services (CMS).

Introduction

In March 2013, the State of Michigan announced its Hospital Reimbursement Reform Initiative (HRRI), a project to evaluate the existing hospital reimbursement structure and to consider options to update the reimbursement system. The HRRI was governed by the following five guiding principles: more predictability, less volatility, efficiency, cost effectiveness, and simplicity.

The HRRI project's Technical Workgroup, comprised of representatives from the State, hospitals and other stakeholders, recommended the State update the system used to reimburse inpatient hospital claims. This policy outlines the proposal for the new inpatient hospital reimbursement system that was developed in collaboration with hospitals involved with the HRRI Severity Subgroup.

Summary of Policy

Effective for inpatient discharges on or after October 1, 2015, the Michigan Department of Health and Human Services (MDHHS) is converting the inpatient reimbursement episode of care grouping structure from the current MS-DRG system to the All Patient Refined Diagnosis Related Group (APR-DRG) system. The APR-DRG system provides greater accuracy when reimbursing inpatient stays by better accounting for the severity of illness of individual cases, and grouping them accordingly. Furthermore, the APR-DRG system is based on data collected from the complete population of patients in an acute care setting, as opposed to the MS-DRG, which focuses on the Medicare population. This change ensures that the rate-setting process more closely reflects the resource utilization of the population of beneficiaries within the Michigan Medicaid system. APR-DRGs have four levels of severity that take into account severity of illness and risk of mortality. Consistent with longstanding policy, MDHHS develops state-specific relative weights, alternate weights and outlier thresholds for APR-DRGs using Medicaid Fee-for-Service (FFS) and Medicaid Health Plan (MHP) claims.

MDHHS proposes the following for inpatient discharges on or after October 1, 2015. Additional information about each of these items is provided in subsequent sections of this bulletin:

MDHHS proposes to develop two statewide per discharge rates, one for Prospective Payment System (PPS) hospitals and another for Critical Access Hospitals (CAHs), with an area wage index to recognize geographic differences in labor costs. Policies are also outlined for special circumstance such as cost outliers, low day payments, transfers, transplants, and organ acquisitions.

In developing the statewide DRG rate, the following data and calculations are used for each hospital:

1. Hospital's adjusted charges;
2. Inpatient cost-to-charge ratio;
3. Hospital's adjusted costs (line 1 x line 2);
4. Hospital's episodes;
5. Cost per discharge (line 3/line 4);
6. Hospital's case mix;
7. Standardized cost per discharge (line 5/line 6);
8. Establish statewide rate as weighted standardized cost per discharge ((∑line 7 x line 4)/∑ line 4);
9. Hospital's Area Wage Index;
10. Apply budget neutrality factor; and
11. Hospital's final DRG rate (line 8 x line 9 x line 10). The DRG rate is rounded to the nearest whole dollar amount.

Finally, MDHHS develops statewide per diem rates for free standing rehabilitation hospitals, distinct part rehabilitation units, and Long-Term Acute Care Hospitals (LTACHs).

Final APR-DRG relative weights, DRG and per diem rates, and cost ratios will be published on the MDHHS Inpatient Hospital website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Inpatient Hospitals.

Medical/Surgical Episode File

The episode file is comprised of the underlying data used to calculate the statewide rate, relative weights, and alternate weights. The costs associated with episodes from the episode file are standardized as described below. The episode file is comprised of two years of Medicaid and Children's Special Health Care Services FFS paid claims and managed care encounters. Claims and encounters with discharges between October 1, 2012 and September 30, 2014, accepted in the MDHHS data warehouse by April 30, 2015, are used to set the rates and weights for the October 1, 2015 rate period.

Each claim or encounter from the episode file is assigned a DRG value using the APR-DRG Grouper in effect nationally on October 1, 2015. The data are adjusted to:

- Eliminate episodes for dual Medicare/Medicaid eligible beneficiaries, unless paid a full Medicaid DRG.
- Eliminate certain transplants and low day payment episodes assigned to DRGs reimbursed by multiplying a hospital's operating cost-to-charge ratio by charges.
- Eliminate episodes without any charges or days.
- Assign alternate weights for neonatal services. Two sets of weights are calculated for the DRG classifications representing neonatal services (DRGs 580x-640x). These alternate weights are calculated based on episodes that are assigned to one of these DRGs and include charges for services in a Neonatal Intensive Care Unit (NICU). Those qualifying as an alternate weight hospital under the MS-DRG system continue to qualify as long as units remain active. The remaining claims assigned to these DRGs are used for the base weights. No other alternate weights are assigned.
- Limit episodes to those from Michigan hospitals, including hospitals that are no longer in operation (provided that hospital cost report data is available).
- Limit episodes to those with a valid discharge status.
- Eliminate episodes with a zero dollar Medicaid liability.
- Eliminate episodes that qualify for the Short Hospital Stay rate.
- Determine the low day trim point and average length of stay.
  - See the Relative Weight Trim Points section of this policy for additional information.
- Limit episodes ending in a transfer to another acute setting to those whose length of stay was at least equal to the published average length of stay for the DRG (Since DRGs 580x and 581x are transfer DRGs, all transfer costs are included within those DRGs).
- Inflate the first year of episodes to the second year through application of an inflation factor derived from IHS Global Insight.

- Recognize area cost differences by dividing the charges for each hospital by an area wage index.
  - See the Area Wage Index section of this policy for additional information regarding the area wage index.
- Adjust charges for high cost outliers to remove the amount paid as an outlier.
  - See the Cost Outlier section of this policy for additional information regarding cost outliers.
- The adjusted cost for each episode is calculated by multiplying the adjusted charges for the episode by the inpatient operating cost-to-charge ratio.
  - See the Cost-to-Charge Ratio section of this policy for additional information regarding cost-to-charge ratios.

The Indirect Medical Education (IME) adjustment is no longer made following the conversion to the APR-DRG Grouper. In other words, no IME cost is removed from teaching hospitals.

The high day outlier is no longer applied.

Statewide Medical/Surgical Hospital DRG Rates

Two statewide medical/surgical hospital DRG rates are developed by MDHHS using the Episode File. For hospital DRG rate setting purposes, the medical/surgical Episode File is limited to those hospitals enrolled with MDHHS as of October 1, 2015. Two separate statewide rates are developed: one rate is developed for PPS hospitals and another rate is developed for hospitals designated as critical access by CMS as of October 1, 2015. In the event a hospital status changes from PPS to CAH, MDHHS recognizes the hospital under CAH status as of the CMS effective date. The reverse is also true. If a hospital status changes from CAH to PPS, MDHHS recognizes the hospital under PPS status as of the CMS effective date.

Hospitals' final DRG rates are calculated as follows:

- The case mix is calculated using the sum of all relative weights assigned to each hospital's claims during the base period, divided by the total number of episodes for the hospital during the same period.
- The case mix index adjusted cost for each hospital is summed.
- A hospital-level standardized cost per discharge is computed.
  - Divide total adjusted costs by the total number of episodes.
  - Divide average costs by the case mix.
  - Multiply the result by the applicable inflation factor to bring costs to a common point in time. Costs are inflated through the rate period. For example, costs are inflated through September 30, 2016. Inflation factors are obtained from IHS Global Insight.
- The statewide rate per discharge is the weighted mean of all hospital-level standardized cost.
- The statewide rate is adjusted by an Area Wage Index and Budget Neutrality Factor to determine the hospital's final DRG rate.

Cost-to-Charge Ratio

The operating cost-to-charge ratios described in this section are used to determine adjusted hospital costs as described in the Episode File section of this policy proposal. In addition, they are used to reimburse hospitals for transplant services, cost outliers and low-day payments. The operating cost-to-charge ratios are updated annually on October 1 by rolling the data forward by one year.

The most recent two years of cost report data for hospitals are used to calculate hospital-specific operating cost-to-charge ratios. For the one year rate that begins on October 1, 2015, data from cost reports with fiscal years ending between October 1, 2011 and September 30, 2013 are used. Consistent with current practice, data for the most recent year are weighted at 60 percent while data for the second previous year are weighted at 40 percent. Costs and charges for both FFS and managed care are combined so that a weighted operating cost-to-charge ratio is developed. Cost and charge data are inflated to a common point in time using inflation factors from IHS Global Insight. The cost-to-charge ratio will not exceed 1.0.

If two or more hospitals merge and are operating as a single hospital, a cost-to-charge ratio for the period is computed using the combined cost report data from all hospitals involved in the merger.

The operating cost-to-charge ratios will be published on the MDHHS Inpatient Hospitals website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Inpatient Hospitals.

Area Wage Index

The area wage index described in this section is used to determine adjusted hospital costs as described in the Episode File section of this policy proposal. In addition, it is used to adjust the statewide rate to recognize variances in area labor costs.

To calculate each hospital's area wage index, two years of Medicare-audited wage data, as published in the Medicare Inpatient Prospective Payment System (IPPS) Final Rule, are obtained for the most recent available hospital fiscal years. If any updates or corrections to the IPPS Final rule occur, it is the responsibility of each hospital to notify MDHHS of any changes necessary to modify their area wage index. Contract labor costs, as defined by Medicare, are included in determining a hospital's wage costs. Hospitals are grouped by U.S. Census Core Based Statistical Areas (CBSAs) as determined by CMS for the Medicare program. Consistent with CMS, the cost report references are obtained from the Medicare Provider Manual, Worksheet S3, Part 3, Line 6 for wages and hours.

The following calculations are completed:

- Each hospital's wage costs are brought to a common point in time by multiplying the hospital's fiscal year end costs by inflation factors derived from IHS Global Insight and weighting factors.
- For hospitals with cost reporting periods ending other than the end of a quarter, the inflation update for the quarter in which the hospital's fiscal year ends is used.
- The wage data for distinct part rehabilitation units is the same as for the inpatient medical/surgical area of the hospital. The cost reports do not differentiate salaries/hours by unit type.
- The wage adjustor is based on a two-year moving average with the most recent year weighted at 60 percent and the second year weighted at 40 percent.
- If two or more hospitals merge and are operating as a single hospital, salary and wages are computed using the combined cost report data from all hospitals involved in the merger. Salary data is inflated to a common point in time.
- The average wage for each CBSA is calculated with and without hospital reclassifications:
  A. The average wage for each CBSA without reclassifications is determined. The statewide average wage for all hospitals in the state is calculated. Using these data, CBSA-specific area wage indices are calculated by dividing the average wage for the CBSA by the statewide average wage. This quotient is area wage index A.
  B. The average wage for each CBSA with reclassifications is determined. Using these data and the statewide average wage for all hospitals in the state, CBSA-specific area wage indices are calculated by dividing the average wage for the CBSA by the statewide average wage. This quotient is area wage index B.
- For hospitals that did not reclassify:
  - If area wage index A is greater than one percent variation from its area wage index B, area wage index A will be used. Otherwise, area wage index B will be used.
- For hospitals that reclassified, area wage index B will be used.
- MDHHS will apply a rural floor whereby no hospital will have an Area Wage Index less than the rural index.

Only the labor share of the statewide rate is adjusted by the area wage index using the following formula:

Medical/Surgical Area Wage Index Adjusted Rate = 0.70 x Area Wage Index + 0.30

Per Diem Area Wage Index Adjusted Rate = 0.70 x Area Wage Index + 0.30

Special Circumstances

Under normal circumstances, a hospital is reimbursed for services rendered to Medicaid patients in the inpatient medical/surgical hospital setting using the following formula once the episode is assigned a DRG:

(Hospital DRG Rate) x (Relative Weight) = Hospital Reimbursement

However, MDHHS proposes additional adjustors for special inpatient hospital circumstances. Specifically, MDHHS proposes the following operating reimbursement for these special circumstances.

High Cost Outliers

An episode is a cost outlier when costs (charges x the hospital's operating cost-to-charge ratio) exceed the computed cost threshold. Transplant claims cannot be high cost outliers.

Reimbursement for cost outliers is dependent upon the cost threshold.

The cost threshold is the greater of:

- 2 x Hospital DRG Rate x Relative Weight (twice the regular payment for a transfer paid on a per day basis for episodes getting less than a full DRG); or
- $35,000.

Cost outliers are reimbursed according to the following formula:

(Hospital DRG Rate x Relative Weight) + [(Charges x Operating Cost-to-Charge Ratio) - (Cost Threshold)] x 85 percent) = Reimbursement for Cost Outlier Claim

Low Day Payments

For services where the length of stay is less than the published low day threshold, reimbursement is charges multiplied by the individual hospital's cost-to-charge ratio, not to exceed the full DRG payment rate. The specific low day thresholds for each DRG are listed in the DRG Grouper on the MDHHS Inpatient Hospital website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Inpatient Hospitals.

Reimbursement for Transplant Services

Transplant services are paid using the following formula:

Hospital Charges x Hospital cost-to-charge ratio = Hospital Payment

Transplant services are defined as claims which fall under the following DRGs:

DRG	Description
001x	Liver Transplant &/or Intestinal Transplant
002x	Heart &/or Lung Transplant
006x	Pancreas Transplant
440x	Kidney Transplant

Organ acquisition within these DRGs is billed at acquisition cost, and is reimbursed at 100% of acquisition cost.

15-Day Re-admissions

Any admission or hospitalization of a beneficiary within 15 days of a previous discharge for a related condition, whether the re-admission is to the same or a different hospital will be subjected to MDHHS re-admission reimbursement. Under the APR-DRG system, the severity level does not need to match for a claim to qualify as a re-admission, provided the base DRG matches between the original claim and the re-admission.

As an example, if the original DRG was 0242, an inpatient claim within 15 days of the previous discharge that grouped as 0241, 0242, 0243, or 0244 would qualify for special reimbursement.

Conversion to APR-DRG Grouper System

Effective for inpatient discharges on or after October 1, 2015, MDHHS is converting the inpatient reimbursement episode of care grouping structure from the current MS-DRG system to the APR-DRG system.

Medical/surgical hospitals are reimbursed a per discharge operating rate. Effective for inpatient discharges on or after October 1, 2015, MDHHS uses the APR-DRG Grouper Version effective nationally on October 1, 2015, with updates to the most recent version scheduled to occur annually on October 1.

Relative Weights

Michigan-specific relative weights are developed utilizing the adjusted costs from the Episode File. The average cost for episodes within each DRG is calculated by dividing the sum of the costs for the episodes by the number of episodes within the DRG. The relative weight for each DRG is calculated by dividing the average cost for episodes within each DRG by the average cost per episode for all episodes. A table showing the relative weights, average lengths of stay, and low day payment threshold for each DRG will be published on the MDHHS Inpatient Hospital website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Inpatient Hospitals.

MDHHS establishes alternate weights for neonatal services from episodes that are assigned to one of the DRGs in the following range: 580x-640x. These weights are utilized for services rendered in a neonatal intensive care unit (NICU). Those qualifying as an alternate weight hospital under the MS-DRG system continue to qualify as long as units remain active. The remaining claims assigned to these DRGs are used for the base weights. No other alternate weights are assigned.

To ensure each relative weight adequately reflects resource utilization for a particular DRG in the State, MDHHS requires that each DRG have a minimum of 10 episodes. If a DRG does not have at least 10 episodes, an alternative solution is applied as follows:

State-Specific Relative Weight Methodology:

- If the episode count for a DRG is 10 or more, use the relative weight setting methodology outlined above. Otherwise:
  - For severity levels 1 through 3 where the targeted severity level is equal to *n:*
    - If the episode count for the next greater severity level is 10 or more, the following calculation is completed: (MI DRG Severity$_{n+1}$ Relative Weight) x (National DRG Severity$_n$ Relative Weight) / (National DRG Severity$_{n+1}$ Relative Weight) = (MI Relative Weight Factor$_n$)
    - Otherwise, (National DRG Severity$_n$ Relative Weight) x (MI Case Mix Factor$_n$)
  - For severity level 4:
    - If the episode count for the prior severity level is 10 or more, the following calculation is completed: (MI DRG Severityn-1 Relative Weight) x (National DRG Severityn Relative Weight) / (National DRG Severityn-1 Relative Weight) = (MI Relative Weight Factorn)
    - Otherwise, (National DRG Severityn Relative Weight) x (MI Case Mix Factorn)
  - Where:
    - (MI Case Mix Factorn) = sum of Michigan specific relative weights multiplied by the number of episodes if the number of episodes is 10 or more divided by the sum of National relative weights multiplied by the number of episodes if the number of episodes is 10 or more.
    - (MI Alternate Weight Case Mix Factor) = Average of (MI Alternate Weight DRG Severity) / (MI DRG Severity Relative Weight) for DRGs with an episode count of 10 or more.
- Further adjustments are necessary if the resulting adjustment described above is inconsistent with Michigan or National trends and data.
  - Example 1: If a severity level has an episode count of more than 10 but less than 20 and the alternate weight would be less than the standard relative weight, but other severity levels are not consistent with this, then apply the next severity level imputing method.

  - Example 2: If the episode count is between 10 and 20, MDHHS may consider using the Alternate Weight Case Mix Factor applied to the National Alternate Weight if the alternate weight is not consistent with other severity levels of the same DRG.
  - All relative weights are subject to reasonableness testing.

Relative Weight Trim Points:

The following trim points are established for the relative weighting system.

- The low day trim point is used to determine whether an episode qualifies for a low day payment and is established as follows.
  - If the episode count for a DRG is 10 or more, the low day trim point is set to the 3rd percentile of the length of stay for the DRG.
  - If the episode count for a DRG is less than 10, the low day trim point is set to the lesser of the national low day trim point or 3rd percentile of length of stay for the DRG.
  - If the episode count for a DRG is zero, the low day threshold is set to the national low day trim point for the DRG.
- The average length of stay (ALOS) is used to price claims episodes involving a transfer from a hospital and is established as follows.
  - If the episode count for a DRG is 10 or more, set the ALOS to the simple average length of stay for the DRG.
  - If the episode count for a DRG is less than 10, set the ALOS to the lesser of national ALOS or the simple average length of stay for the DRG.
  - If the episode count for a DRG is zero, set the ALOS to the national ALOS.

LTACHs and Freestanding Rehabilitation Hospitals/Distinct Part Rehabilitation Unit Reimbursement and Episode File and Per Diem Rate

The episode file is comprised of the underlying data used to calculate the statewide per diem rates. The costs associated with episodes from the episode file are standardized as described below. The episode file is comprised of two years of Medicaid and Children's Special Health Care Services FFS paid claims and managed care encounters. Claims and encounters with discharges between October 1, 2012 and September 30, 2014, accepted in the MDHHS data warehouse by April 30, 2015, are used to set the per diem rates for the October 1, 2015 rate period.

The data is adjusted to:

- Eliminate episodes with any Medicare charges. (For dual Medicare/Medicaid eligible beneficiaries, only claims paid a full Medicaid payment are included.)
- Eliminate episodes without any charges or days.
- Eliminate episodes with a zero dollar Medicaid liability.
- Limit episodes to those from Michigan hospitals (provided that hospital cost report data is available).
- Limit episodes to those with a valid discharge status.

Total charges and days paid are summed by hospital.

The cost for each hospital is calculated by multiplying the charges for the hospital by its cost-to-charge ratio.

- See the Cost-to-Charge Ratio section of this policy for additional information.

The cost per day by hospital is calculated by dividing the sum of the costs by the number of days for the hospital. To determine a statewide per diem base rate:

- Multiply the result by the applicable inflation factor to bring costs to a common point in time. Costs are inflated through the rate period. For example, costs are inflated through September 30, 2016. Inflation factors are obtained from IHS Global Insight.

- Recognize area cost differences by dividing the charges for each hospital by an area wage index.
  - See the Area Wage Index section of this policy for additional information.
- Calculate the statewide operating rate (by provider type). This is a weighted mean of all hospitals' specific base rates.
- The per diem base rate is the weighted mean adjusted by the Area Wage Index specific to the hospital.

The final per diem rate is calculated by rounding to the nearest whole dollar.

Budget Neutrality

A budget neutrality factor is included in the hospital rate calculation for medical/surgical and per diem reimbursed hospitals. Hospital rates are reduced by the percentage necessary so that total aggregate hospital payments using the new hospital rates do not exceed the total aggregate hospital payments made using the prior hospital base period data. The estimate is based on one year's paid claims, including MHP encounter data with FFS rates applied. The calculated rates are deflated by the percentage necessary for the total payments to equate to the amount currently paid.

Budget neutrality will be determined for each hospital group type. For example, separate adjustments will be developed for CAHs, PPS, LTACHs, and other per diem reimbursed hospitals.

MDHHS will monitor and evaluate reimbursement mid-year to ensure the changes implemented as part of this policy are budget neutral. MDHHS will also evaluate the impact on individual hospitals. It is possible that mid-year changes will occur.

Recalibration

Effective for discharges on and after October 1 of each year, MDHHS will update the APR-DRG grouper to the version in effect nationally on that day. MDHHS will review and update the relative weights for reasonableness. The review will compare the Michigan relative weights to the national weights and changes will be made on a pro rata basis.

The operating cost-to-charge ratios will be updated annually by rolling data forward by one year. The historic operating cost-to-charge ratios will be published on the MDHHS Inpatient Hospital website at www.michigan.gov/medicaidproviders >> Billing and Reimbursement >> Provider Specific Information >> Inpatient Hospitals.

The Area Wage Index will be updated annually to reflect federal changes in CBSA assignment and hospital wage changes for each CBSA.

The statewide medical/surgical rate and per diem rates will be updated annually to reflect these annual updates and will be adjusted for budget neutrality as needed.

ICD-10 Concurrent Implementation

MDHHS is implementing the rate changes specified in this policy concurrent with the conversion of diagnosis and surgical procedure codes used to group episodes of care and price inpatient hospital claims from ICD-9-CM to ICD-10-CM. These changes must be implemented in a manner that is budget neutral to the State of Michigan. MDHHS will monitor inpatient claims submissions closely and reserves the right to modify its budget neutrality factor to reflect any potential shift in case mix.

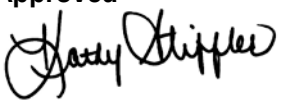
Manual Maintenance

Retain this bulletin until the information is incorporated into the Michigan Medicaid Provider Manual.

Questions

Any questions regarding this bulletin should be directed to Provider Inquiry, Department of Health and Human Services, P.O. Box 30731, Lansing, Michigan 48909-8231, or e-mail at ProviderSupport@michigan.gov. When you submit an e-mail be sure to include your name, affiliation, and phone number so you may be contacted if necessary. Providers may phone toll-free 1-800-292-2550.

Approved



Kathy Stiffler, Acting Director
Medical Services Administration