HOSPITALS SHOWING MODEST IMPROVEMENT

2,984 hospitals met the Hospital Value Based Purchasing (VBP) Program eligibility criteria in Fiscal Year (FY) 2013, while fewer (2,728) hospitals met the criteria in FY2014. The primary reason for exclusion from the Hospital VBP Program is a high number of low case thresholds.

No unintended consequences in the form of hospital closings have been observed. However, our monitoring indicates a trend in hospital status change largely influenced by health system business acquisition and merger strategies as well as hospital conversions to different payment types, rather than actual hospital closings. Nationally, the total number of hospitals (those that remained open as well as those that closed) remained stable and unchanged in 2012 and 2013.

Hospitals performing above the national average in Total Performance Score (TPS) include:
- Urban hospitals less than 100 beds
- Large rural hospitals with 200 or more beds
- Proprietary hospitals
- Voluntary non-profit hospitals

Teaching hospitals showed modest improvement and performed slightly above national average in FY2014, but not in FY2013. In FY2014, hospitals showing improvement and performing above the national average TPS were federal government and non-profit hospitals. Overall, government hospitals (federal, state, local) reported lower average TPS.

More studies are needed to assess the potential impact of changing TPS and domain weights from year to year, as a decreasing TPS value over time is not necessarily indicative of worsening care. When the FY2014 TPS was weighted according to FY2013 weights, the overall TPS improved by ~2 points and domain scores improved by ~ 0.5 to 1.5 points.

There is a lack of evidence that Safety Net Hospitals (SNHs) are disproportionately affected by the Program. On average, hospitals with one or more Safety Net Hospital (SNH) definitions do not provide any differences in quality of care compared to non-SNHs in FY2013 and FY2014. In observing the individual domains, the trends for the Clinical and Patient Experience of Care domains are similar for both types of hospitals. The same result was found for the average net base operating DRG payment received by SNHs in both years, where the observed differences are small and resembles non-SNH trends.

Significantly more states performed above national average on the Clinical Process domain scores in FY2014 (26 states) than in FY2013 (19 states), despite the change in the clinical domain weighting. For the Patient Experience of Care domain and overall TPS, the distribution of hospitals by state showed little variation in either year. The outcome domain was introduced in FY2014, and hospitals in 19 states performed above the national average for this domain.

Low Performers (LPs) are defined as hospitals in the bottom decile (lowest 10%) of TPS, and High Performers (HPs) are defined as hospitals in the highest decile (top 10%) of TPS. LPs tended to be hospitals with a higher percentage of high bad debt levels, located in high poverty areas, with high Medicaid utilization rates, Sole Community Hospitals, and a high proportion of designated Disproportionate Share Hospital status. Consistently, LPs have had significantly lower Domain scores and TPS compared to HPs in both years. HPs tend to be large rural hospitals with 200 or more beds.

On average, more hospitals received an increase in base operating DRG payment amount in both years (FY2013 and FY2014). However, the distribution of base operating DRG payment varied by states.

Access to care, as measured by hospital case mix index, has remained stable over time. However, the proportion of hospital discharges varied across the following sub-populations:
- Non-White
- Medicare beneficiaries younger than 65 years of age
- Disabled
- Dual eligible
Summary: Since 2010, a number of hospitals changed status. These changes reflected a change in hospital payment status rather than the hospital closing.

In 2010, eight hospitals converted to long term care hospitals; three became Critical Access Hospitals (CAH); four became psychiatric facilities; one became a skilled nursing facility; one became a drug and alcoholism recovery center; and twelve merged or were acquired by other health systems. In 2013, four hospitals converted to CAH.*

Closings accounted for a small proportion of exclusions from the Hospital VBP Program: 5% in FY2013 and 7% in FY2014.

*Information regarding reason for CMS Certification Number (CCN) termination was gained from a secondary systematic environmental scan of internet searches and gray literatures.

WHAT HOSPITALS ARE ELIGIBLE FOR THE PROGRAM?

Summary: The number of hospitals eligible for the program decreased between FY2013 and FY2014, mainly because many hospitals that were eligible in FY2013 had low case thresholds in the following year (FY2014). (Maryland hospitals are exempt from Medicare regulations and do not participate in Hospital VBP.)

In FY2013, 86% of U.S. short-term acute-care hospitals were eligible for the Hospital VBP program. In FY2014, 78% were eligible. The most common exclusion reason was low case threshold, followed by hospital closure, Hospital Inpatient Quality Reporting (IQR) payment reduction, received state exemption, and intermediate jeopardy.

<table>
<thead>
<tr>
<th>Exclusion Categories</th>
<th>FY 2013</th>
<th>FY 2014*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did Not Meet Minimum Measures</td>
<td>81%</td>
<td>85%</td>
</tr>
<tr>
<td>Hospital Closure</td>
<td>5%</td>
<td>7%</td>
</tr>
<tr>
<td>Hospital Subject to Hospital IQR Reduction</td>
<td>8%</td>
<td>5%</td>
</tr>
<tr>
<td>Hospital Cited for Immediate Jeopardy</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Hospital Received State Exemption</td>
<td>5%</td>
<td>3%</td>
</tr>
</tbody>
</table>

*Individual percentages are rounded and may not total 100%.
Summary: The net change in hospital status remained stable between 2011 and 2013.

Hospitals that changed payment status through merger/acquisition, converted to a different hospital type (e.g., Critical Access Hospital), or closed, are defined collectively as “hospitals with closed status.” Hospital characteristics (urban/rural, teaching status, hospital ownership, and hospital bed size) were examined to determine if there was a relationship between changing status and hospital characteristics. These analyses are based on hospitals that closed or opened between FY2010 and FY2013.

Hospitals that changed payment status tended to be smaller urban hospitals with fewer than 200 beds. Smaller rural hospitals with fewer than 100 beds showed higher hospital payment status change compared to large rural hospitals (results not shown).

Hospitals that changed their status were typically proprietary, private non-profit, government-(federal, state and local) owned, and non-teaching facilities. These trends were consistent over time. (Results not shown).
**PERFORMANCE SCORES: WHAT TYPES OF HOSPITALS ARE DOING WELL?**

*Summary:* On average, eligible hospitals that performed above the national average for Total Performance Score (TPS) were small urban and rural hospitals (less than 100 beds), larger rural hospitals (200 or more beds), proprietary, and voluntary non-profit hospitals. Teaching hospitals showed modest improvement than non-teaching hospitals in FY2014. Overall, government hospitals (federal, state, local) reported lower TPS. However in FY2014, federal hospitals and non-profit hospitals showed improvement and performed above national average TPS.

*Rural/Urban:* Urban hospitals had on average a higher TPS compared to rural hospitals and performed above the national average in both FY2013 and FY2014.

*Bed Size:* Small rural hospitals (less than 50 beds) and small urban hospitals (less than 100 beds) had on average higher TPS scores than hospitals of other sizes. These hospitals performed above national average TPS in both years.

*Teaching status:* In FY2013, teaching hospitals had lower average TPS values than non-teaching hospitals, but showed *modest* improvement in FY2014.

*Ownership:* In FY2013, proprietary and voluntary non-profit religious (church) hospitals had on average higher TPS values than other ownership types, and their scores were above the national average. All government hospitals had lower average TPS than proprietary and voluntary non-profit hospitals. In FY2014, federal, proprietary and all voluntary non-profit hospitals performed above the TPS national average.
Summary: On average, hospitals located in 24 states* scored above the national average TPS in FY2013 and on average, hospitals located in 26 states** scored above the national average TPS in FY2014.

These maps show hospital TPS values by state in FY2013 and FY2014. States that contained at least one hospital that scored above the national average are indicated by a darker color (24 states in FY2013 and 26 states in FY2014).

The national average score was 55.46 in FY2013 and 46.53 in FY2014.

The change in scores between FY2013 and FY2014 may have been affected by both the addition of the Outcome Domain and the re-weighting of the Clinical and Patient Experience of Care domains. (Refer to page 9: “Changing TPS Over Time: Do Domain Score Weights Matter?”).


**Alabama, Colorado, Delaware, Florida, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Jersey, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, and Wisconsin.
Summary: On average, hospitals located in 19 states* scored above the national average Clinical Domain score in FY2013 and on average, hospitals located in 26 states** scored above the national average Clinical Domain Score in FY2014. These maps show hospital Clinical Domain Scores by state in FY2013 and FY2014. States that contained at least one hospital that scored above the national average are indicated by a darker color (19 states in FY2013 and 26 states in FY2014).

Domain weights vary across years:

<table>
<thead>
<tr>
<th>Domains</th>
<th>FY2013</th>
<th>FY2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>70%</td>
<td>45%</td>
</tr>
<tr>
<td>HCAHPS</td>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>Outcome</td>
<td>-</td>
<td>25%</td>
</tr>
</tbody>
</table>

The national average for the Clinical Domain was 42.51 (out of 70 points) in FY2013 and 26.51 (out of 45 points) in FY2014.

The change in the Clinical Domain score reflects the re-weighting of the domains’ scores. (Refer to page 9: “Changing TPS Over Time: Do Domain Score Weights Matter?”).


^HCAHPS=Patient Experience of Care Domain
Summary: On average, hospitals located in 29 states* scored above the national average HCAHPS^ score in FY2013 and on an average, hospitals located in 28 states** scored above the national average HCAHPS^ score in FY2014.

These maps show hospital HCAHPS^ scores by state in FY2013 and FY2014. States that contained at least one hospital that scored above the national average are indicated by a darker color (29 states in FY2013 and 28 states in FY2014).

The national average for the HCAHPS^ Domain was 12.94 (out of 30 points) in FY2013 and 12.15 (out of 30 points) in FY2014.

*Alabama, Alaska, Arkansas, Colorado, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Hampshire, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, and Wisconsin.

**Alabama, Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, North Carolina, Ohio, Oklahoma, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, and Wisconsin.

^HCAHPS=Patient Experience of Care Domain
Summary: The Outcome domain became effective in FY2014. On average, hospitals located in 19 states* scored above the national average Outcome score in FY2014.

These maps show hospital Outcome scores by state in FY2014. States that contained at least one hospital that scored above the national average are indicated by a darker color (19 states in FY2014).

The national average for the FY2014 Outcome Domain is 7.86 (out of 25 points).


**HCAHPS=Patient Experience of Care Domain**

**FY2013 and FY2014 Domains and Total Performance Scores**

Summary: The Domains and TPS values varied from year to year. These variations are explained on page 9 ("Changing TPS Over Time: Do Domain Score Weights Matter").

FY2013 national average scores were: 55.46 TPS, 42.51 Clinical domain, and 12.94 HCAHPS^ domain. FY2014 national average scores were as follows: 46.53 TPS, 26.51 Clinical domain, 12.15 HCAHPS^, and 7.86 Outcome domain.

It must be noted that a decreasing TPS is not necessarily indicative of worsening quality of care. Because the weights for each of the domains change over time, the actual measures that make up the Clinical and HCAHPS^ domains must be examined for evidence of improved or worsening care.

<table>
<thead>
<tr>
<th>FY2013</th>
<th>FY2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Performance Score</td>
<td>55.46</td>
</tr>
<tr>
<td>Clinical Process of Care Domain</td>
<td>42.51</td>
</tr>
<tr>
<td>Patient Experience of Care Domain</td>
<td>12.94</td>
</tr>
<tr>
<td>Outcome Domain</td>
<td>N/A</td>
</tr>
</tbody>
</table>
**CHANGING TPS OVER TIME: DO DOMAIN SCORE WEIGHTS MATTER?**

*Summary:* In FY2014, domains scores improved by ~0.5 to 1.5 points and TPS values improved by ~2 points, when adjusted to reflect the FY2013 weights. Hospitals are showing modest improvements.

The FY2014 Domain scores were recalculated using the benchmarks and achievement thresholds (also known as performance standard) from the FY2013 Baseline data. The FY2014 TPS was then calculated using the same weighting as the FY2013 TPS (Clinical=70%; HCAHPS\(^\wedge\)=30%). This approach demonstrates the change in Clinical and HCAHPS\(^\wedge\) scores from the beginning of the program to the current performance period (FY2014). In order to compare the Hospital VBP Program from year-to-year, performance standards were recalculated so that they were comparable. Adjusting the FY2014 scores to reflect FY2013 domains, domain weighting, and performance standards allows for valid comparisons across years. Without adjusting the domains, domain weighting, and performance standards, a comparison across years could not be made accurately.

When comparing the re-weighted FY2014 Domain and TPS values to FY2013 scores, the average net difference is ~ 0.5 to 2 points *increase* in FY2014. The map below shows the adjusted FY2014 TPS change nationally using FY2013 domain weights and performance standards.

More studies are needed to evaluate the potential impact of changing TPS domain weights from year-to-year.

\(^\wedge\) HCAHPS=Patient Experience of Care Domain
ARE SAFETY NET HOSPITALS DISPROPORTIONATELY AFFECTED BY THE PROGRAM?

Summary: There is a lack of evidence that Safety Net Hospitals (SNHs) are disproportionately affected by the Program. On average, hospitals with one or more Safety Net Hospital (SNH) definitions do not provide any differences in quality of care compared to non-SNHs in FY2013 and FY2014. In observing the individual domains, the trends for the Clinical and Patient Experience of Care domains are similar for both types of hospitals. The same result was found for the average net base operating DRG payment received by SNHs in both years, where the observed differences are small and resembles non-SNH trends. In summary, it is a CMS priority to continue to monitor whether unintended consequences of the Hospital VBP Program are disproportionately affecting certain types of hospitals.

A SNH provides a significant level of care to low-income, uninsured, and vulnerable populations. This monitoring evaluation defined Safety Net hospitals as those 1) with high SSI Ratio (serving a large Medicaid population), 2) located in counties with high poverty rates as determined by the United States Census Bureau, and/or 3) with high rates of uncompensated care (reporting high levels of bad-debt in the CMS cost reports). We created two groups of hospitals, SNH (those with one or more safety net definitions) and non-SNH (those with no safety net definition).

As Figure 1 shows, although there is a slight trend of decreasing domain scores for SNHs, the difference between non-SNHs and SNHs is small. The difference between FY2013 and FY2014 for the Clinical Domain scores is due to the change in weighting use to construct the TPS. On the other hand, the weights for HCAHPS domain remained the same in both fiscal years. This gives a clearer picture of the similarity between SNHs and non-SNHs—consumers’ experiences and care received at these hospital types appear to be relatively the same in both hospital types.

One way to observe the differences in the payment between SNHs and non-SNHs is by assessing the differences in distribution of the payments as a proportion of the base operating DRG payment amounts. Figures 2 and 3 show these distributions for FY2013 and FY2014 respectively.

Although the number of SNHs (shown in green) is much smaller than the number of non-SNHs (shown in white), the distribution of the payment as a proportion of the base operating DRG payment amount looks very similar between the two hospital types. As expected, the distributions follow a bell-shaped curve, with the highest number of both SNHs and non-SNHs having 0.0% payment (i.e., gaining back all of what was withheld). This indicates that the award amounts as a percent of base operating DRG payments are similar between the two types of hospitals when we assess the entire distribution of payment awards, and that the majority of both SNHs and non-SNHs received back approximately all that was originally withheld. In FY2013 and FY2014, we consider there to be negligible differences in net payments to SNHs versus non-SNHs resulting from the Program. In FY2013, the typical SNH received approximately $11,000 less than the average non-SNH (Results not shown). This amount is negligible relative to the average Hospital VBP payment withheld before redistribution ($322,505 in FY2013). Also, the $11,000 difference is minimal relative to hospitals’ total IPPS payment (average $32 million). Similar results were noted for FY2014: The typical SNH received approximately $1,655 less than the average non-SNH from the Program, a trivial amount compared to the Hospital VBP payment withheld before redistribution ($403,226 in FY2014) and compared to the $32 million in average total IPPS payment.

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**FINANCIAL REWARDS AND PENALTIES: CHANGES BETWEEN FY2013 AND FY2014**

*Summary:* On average, more hospitals received an increase in base operating DRG payment amount in both years (FY2013 and FY2014). However, the distribution of base operating DRG payment varied by states.

The Hospital VBP Program is funded through a reduction in participating hospitals’ base operating DRG payments for the applicable fiscal year. This reduction differs from year to year (see table for more detail). The money that is withheld is redistributed to hospitals based on their TPS and the actual amount earned by hospitals and the range of base operating DRG payments that correspond to these TPS amounts. This information is used in computing the exchange function slope. The total payments withheld are redistributed among all the hospitals that score above national average TPS, to maintain budget neutrality.

In FY2013, on average approximately 57% of the hospitals received a net increase in the base operating DRG payment. On average, payments were decreased in 43% of the hospitals.

In FY2014, on average approximately 56% of the hospitals received a net increase in the base operating DRG payment. On average, payments were decreased in 44% of the hospitals.

### Fiscal Year Withhold Percent

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Withhold Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2013</td>
<td>1.00%</td>
</tr>
<tr>
<td>FY 2014</td>
<td>1.25%</td>
</tr>
</tbody>
</table>

**FINANCIAL REWARDS AND PENALTIES: STATE-LEVEL VARIATION**

On average, in FY2013, hospitals in 29 states received a net increase of up to 1% of the base operating DRG payment, while payments were decreased in 21 states.

States that contained at least one hospital that received a net increase in base operating DRG payments were mostly in Maine, Nebraska, South Dakota, Utah, South Carolina, etc. Likewise, states that contained at least one hospital that had payments decrease: District of Columbia, Connecticut, New York, Wyoming, Delaware, etc.

On average, in FY2014, hospitals in 22 states received a net increase of up to 1% of the base operating DRG payment, while payments were decreased in 28 states.

States that contained at least one hospital receiving a net increase in the base operating DRG payments were mostly found in Maine, New Hampshire, Wisconsin, Nebraska, North Carolina, etc. States that contained at least one hospital that had payment decrease: Wyoming, New Mexico, District of Columbia, New York, Nebraska, etc.
**WHO IS DOING WELL: ANALYSIS OF HIGH & LOW PERFORMERS**

**Summary:** Low Performers (LPs) are generally hospitals with a high percentage of bad debt, located in a high poverty area, have high Medicaid utilization, are Sole Community Hospitals, and have a Disproportionate Share Hospital (DSH) status. In FY2013, teaching hospitals were characterized as LPs, but they were not in FY2014. Consistently, LPs had significantly lower Domains scores and Total Performance Score (TPS) values compared to High Performers (HPs) in both years. On an average, HPs were generally rural hospitals or hospitals with 200 or more beds.

<table>
<thead>
<tr>
<th></th>
<th>Low Performer</th>
<th>High Performer</th>
<th>All Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FY 2013</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Hospitals</td>
<td>298</td>
<td>299</td>
<td>2,984</td>
</tr>
<tr>
<td>Average Bed Size</td>
<td>180.7</td>
<td>129.9</td>
<td>255.8</td>
</tr>
<tr>
<td>Percent Rural</td>
<td>40.9%</td>
<td>62.9%</td>
<td>43.4%</td>
</tr>
<tr>
<td>Percent Teaching</td>
<td>67.8%</td>
<td>85.6%</td>
<td>66.1%</td>
</tr>
<tr>
<td>Percent Safety Net</td>
<td>12.4%</td>
<td>12.4%</td>
<td>10.0%</td>
</tr>
<tr>
<td>High Poverty Level</td>
<td>21.5%</td>
<td>9.0%</td>
<td>10.1%</td>
</tr>
<tr>
<td>High SSI Ratio</td>
<td>17.1%</td>
<td>9.7%</td>
<td>10.2%</td>
</tr>
<tr>
<td>High Uncompensated Care</td>
<td>19.1%</td>
<td>10.0%</td>
<td>12.7%</td>
</tr>
<tr>
<td>Sole Community Hospital</td>
<td>58.7%</td>
<td>31.1%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Disproportionate Share Hospital</td>
<td>58.7%</td>
<td>31.1%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Average Scoring Values</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Performance Score</td>
<td>28.7</td>
<td>81.3</td>
<td>55.5</td>
</tr>
<tr>
<td>Clinical Process of Care Domain</td>
<td>28.1</td>
<td>86.8</td>
<td>60.7</td>
</tr>
<tr>
<td>Patient Experience of Care Domain</td>
<td>30.2</td>
<td>68.6</td>
<td>43.2</td>
</tr>
<tr>
<td>Outcome Domain</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>FY 2014</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Hospitals</td>
<td>272</td>
<td>273</td>
<td>2,728</td>
</tr>
<tr>
<td>Average Bed Size</td>
<td>218.9</td>
<td>229.8</td>
<td>259.7</td>
</tr>
<tr>
<td>Percent Rural</td>
<td>44.0%</td>
<td>51.6%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Percent Teaching</td>
<td>30.5%</td>
<td>29.7%</td>
<td>34.6%</td>
</tr>
<tr>
<td>Percent Safety Net</td>
<td>13.6%</td>
<td>9.2%</td>
<td>9.9%</td>
</tr>
<tr>
<td>High Poverty Level</td>
<td>19.1%</td>
<td>8.1%</td>
<td>10.2%</td>
</tr>
<tr>
<td>High SSI Ratio</td>
<td>19.5%</td>
<td>11.0%</td>
<td>13.3%</td>
</tr>
<tr>
<td>High Uncompensated Care</td>
<td>21.3%</td>
<td>9.9%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Sole Community Hospital</td>
<td>62.1%</td>
<td>35.5%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Disproportionate Share Hospital</td>
<td>62.1%</td>
<td>35.5%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Average Scoring Values</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Performance Score</td>
<td>26.2</td>
<td>66.3</td>
<td>46.5</td>
</tr>
<tr>
<td>Clinical Process of Care Domain</td>
<td>30.1</td>
<td>80.6</td>
<td>58.9</td>
</tr>
<tr>
<td>Patient Experience of Care Domain</td>
<td>26.8</td>
<td>59.4</td>
<td>40.5</td>
</tr>
<tr>
<td>Outcome Domain</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

This analysis characterized hospitals participating in the Hospital VBP Program based on HP or LP status. High Performers-HPs are defined as those scoring in the top 90th percentile or above of TPS and Low Performers-LPs are defined as those scoring in the bottom 10th percentile or lower of TPS.

Although the top and bottom decile cutoff values are different for each fiscal year, the comparisons between the HPs and LPs are remarkably consistent for each fiscal year. LPs consistently have higher proportions of the Safety Net Hospital features. The Safety Net Hospital is defined on page 10 (“Are Safety Net Hospitals Disproportionately Affected by the Program?”).

The LPs consist of hospitals with high bad debt, Sole Community Hospitals, and hospitals with Disproportionate Share Hospital (DSH) status. Interestingly, in FY2013, LPs were twice as likely to be a teaching hospital than were the HPs. However, this difference was not evident in FY2014; both LPs and HPs had approximately the same proportion of teaching hospitals (approximately 30%). In addition, HPs were generally smaller (130 beds) than the LPs (181 beds) in FY2013. This observation was reversed in FY2014 where the HPs were generally larger (216 beds) than the LPs (186 beds). In both fiscal years, HPs and LPs were slightly smaller than the average of all participating hospitals.

LPs had an average TPS of 28.7 in FY2013 and 26.2 in FY2014 while the TPS for HPs were 81.4 and 66.3, respectively. Overall, the TPS was reduced by an average of eight points per hospital between FY2013 and FY2014 (Refer to Page 9: “Changing TPS Over Time: Do Domain Score Weights Matter”). A similar trend was noted for the individual Domains scores, including both Clinical and HCAHPS scores.

^HCAHPS=Patient Experience of Care Domain
PROGRAM UNINTENDED CONSEQUENCES ON ACCESS TO CARE?

Summary: In participating hospitals, the proportion of discharges by key patient characteristics (Case Mix Index, or CMI) remained stable over time during the pre- and post-payment application periods.

Using Medicare Part A claims, the “number of discharges by key patient characteristics divided by the absolute total number of discharges” was used as a proxy to examine unintended consequences and to evaluate changes in access to care over time for certain segments of the patient population.

Race: There was no difference in CMI trends for any race groups. There is a significant gap between White and non-White groups in terms of the overall proportion of discharges. However, White beneficiaries make up the largest proportion of Medicare discharges, which could have inflated the proportion of discharges. More studies are warranted to determine whether there is an impact of the Hospital VBP Program on enrollment and discharge proportion among different race groups.

Gender: The average CMI in both male and female groups did not change over time. However, hospitals report higher female Medicare beneficiary discharges compared to males. Similar to results described for race, female beneficiaries make up the largest proportion of all Medicare beneficiaries, which could have inflated this impact.

Age: The average CMI by age did not change over time. Most hospital discharges are in the 65 to 84 years old group, followed by the under 65 years old and then by the older than 85 years old group. The noted trends in age group were expected, based on Medicare enrollment.

Disabled and Dual Eligible: The average CMI for disabled and dual eligible groups did not change over time. Hospitals report the most frequent discharges in the dual eligible group, follow by disabled without End Stage Renal Disease (ESRD) condition, disable with ESRD condition, and ESRD only groups.

**Program Performance and Case Mix Index: Evidence of Health Disparities?**

**Summary:** There are differences in the TPS for hospitals with differing case mix indices, but additional analyses are needed to determine causal relationships between program performance and hospital case mix index.

**Race:** In FY2014, hospitals discharging a higher-than-average proportion of White beneficiaries have higher average TPS values than hospitals discharging a lower-than-average proportion of White beneficiaries. Conversely, hospitals discharging higher-than-average proportions of non-White beneficiaries have lower average TPS.

**Gender:** In general, hospitals have slightly higher average proportion of female discharges than male discharges. The average TPS scores are evenly distributed between both genders.

**Age:** Hospitals with a high proportion of discharges aged 65 - 84 years old have above-average TPS values, whereas hospitals with a high proportion of discharges younger than 65 years old have lower-than-average TPS value. Improvement strategies to increase TPS values in hospitals with a younger than 65 years old patient mix may be warranted.

**Disability and Dual Eligible:** Hospitals with a high proportion of disabled without End Stage Renal Disease (ESRD) and dual eligible beneficiaries have lower-than-average TPS value.

More studies are warranted to determine whether there is an impact of the Hospital VBP Program on enrollment and discharge proportion among various groups, which could have inflated this impact.

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The Centers for Medicare & Medicaid Services (CMS) is conducting a study between 2010 and 2014 on the Hospital Value-Based Purchasing Program. The analysis is a descriptive study design to monitor the program’s progress, sustainability, and unintended consequences. Quality, patient experiences of care, and outcome indicators are being used to examine contemporaneous trend changes over time before and during the Hospital VBP Program. Trends and frequencies are reported using graphs, maps, and tables. Administrative data were extracted from the CMS CCSQ/ISG Data Warehouse. SAS System (release 9.1; SAS Institute, Cary, North Carolina) was used for all analyses.

**DATA SOURCES AND METHODS**

The Congress, through the Deficit Reduction Act of 2005, Section 5001(b), authorized the Secretary of Health and Human Services to develop a plan to implement value-based purchasing (VBP) commencing in Fiscal Year (FY) 2009 for Medicare hospital services provided by subsection (d) hospitals paid under the Inpatient Prospective Payment System (IPPS).²

The Hospital VBP Program, established by the Affordable Care Act, implements a pay-for-performance approach to the payment system that accounts for the largest share of Medicare spending—affecting payment for inpatient stays in 2,728 hospitals across the country. Under Hospital VBP, Medicare is adjusting a portion of payments to hospitals beginning in Fiscal Year (FY) 2013 based on either:

- How well they perform on each measure compared to all hospitals, or
- How much they improve their own performance on each measure compared to their performance during the baseline period.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Baseline Period</th>
<th>Performance Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2014</td>
<td>4/1/2010-12/31/2010</td>
<td>4/1/2012-12/31/2012</td>
</tr>
</tbody>
</table>

**POLICY RECOMMENDATIONS**

CMS will continue to support the Hospital VBP Program by adopting these strategies:

- Continue to monitor strategies to identify contemporaneous trends,
- Strengthen quality improvement outreach and education strategies to reduce health disparities and improve scores in low performing hospitals,
- Identify barriers, bridge gaps and promote strategies and lessons learned across all hospitals,
- Identify the impact of changing domain weights on the Hospital VBP program,
- Make informed decision and policy recommendations based on evidence-based studies and clinical relevance,
- Reassess topped out measures and determine synergy, utility, and parsimony of measures across all domains (specifically mortality and clinical process of care measures), and
- Continue to monitor and evaluate the impact of cumulative payment programs (e.g., Hospital IQR, Hospital VBP, HAC, HRRP, HITECH, etc.) over the next few years to identify trends and unintended consequences.

LIMITATIONS

This analysis is limited to the scope of the study design (descriptive analysis), which does not afford any causal relationship determinations. Rather, monitoring trends in key quality, patient experiences, and outcomes indicators will allow policy makers to determining how the Hospital VBP Program is progressing so that decisions about the future goals of the program can be determined. Another limitation is relatively few hospital characteristics are examined in the study. Also, the use of administrative claims data limits the patient characteristics that can be examined in the study.

ACRONYMS

AMI=Acute Myocardial Infarction
CCSQ = Center for Clinical Standards, and Quality
CMS = Centers for Medicare & Medicaid Services
CY=Calendar Year
DRG=Diagnosis-Related Group
ESRD=End Stage Renal Disease
FY = Fiscal Year
HAC=Hospital-Acquired Conditions
HCAPHS= Hospital Consumer Assessment of Healthcare Providers and Systems
Hospital IQR=Hospital Inpatient Quality Reporting
HITECH=Health Information Technology for Economic and Clinical Health
HPs=High Performers
HRRP=Hospital Readmission Reduction Program
ISG = Information System Group
LPs=Low Performers
SAS = Statistical Analysis System
SNH=Safety Net Hospitals
TPS = Total Performance Score

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For a printable copy, please visit our website at https://www.qualitynet.org/.

DISCLOSURE

This project was funded by Centers for Medicare and Medicaid Services under the contract number HHSM-500-2011-IA10C, Special Innovation Project SIP-IA-03, Modification IA0011 with Telligen and RTI.

RESOURCES

⇒ Hospital Compare Website: http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalCompare.html.
⇒ HCAHPS Website: http://www.hcahpsonline.org/home.aspx.
⇒ QualityNet Website: https://www.qualitynet.org.