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MEDICARE'S COMPREHENSIVE JOINT REPLACEMENT PROGRAM: ARE MEDICARE BENEFICIARIES BENEFITTING?

Medicare beneficiaries' outcomes following a hip or knee replacement are not well understood in New Jersey under Medicare's mandatory bundling program, known as Comprehensive Care for Joint Replacement, or CJR. This is because submission of data related to patient-reported outcomes is voluntary, and to date, none of the published evaluations of the program, report on these outcomes. While CJR appears to be successfully reducing the use and cost of facility-based post-acute rehabilitation, there are few findings on how Medicare beneficiaries fare in their recoveries under CJR in terms of their everyday physical activities, such as carrying groceries and climbing stairs, or enjoying social activities. Further, there currently is no insight into the social determinants of health that may affect outcomes for these patients. This paper focuses on those underreported patient outcomes following hip and knee replacements under CJR and the need for further attention in this important area.

BACKGROUND

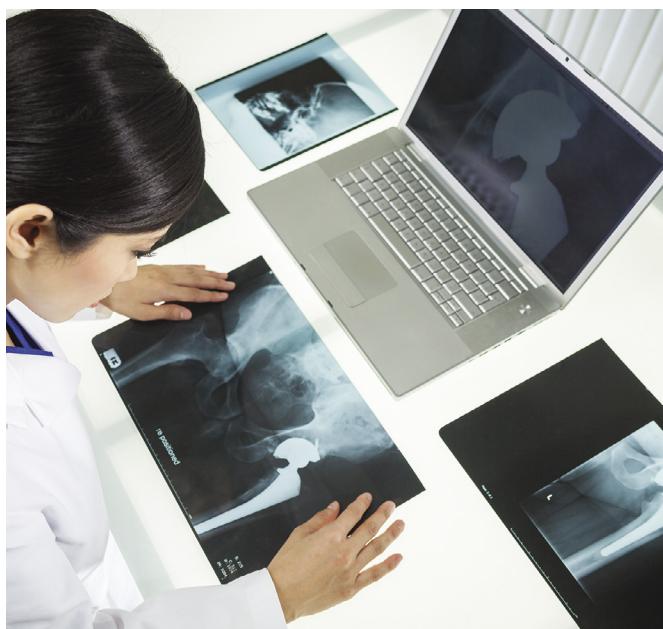
April 2016 saw the implementation of the first mandatory bundled payment model under Medicare – Comprehensive Care for Joint Replacement (CJR) – focused on hip and knee replacements. Hospitals in randomly selected metropolitan statistical areas were required to participate; 38 hospitals in New Jersey have been part of the mandatory program since its inception. These hospitals receive bonuses or pay penalties

based on Medicare spending per episode, defined as 90 days following hospital discharge. In 2018, the Secretary of Health and Human Services announced that some of the geographic areas originally mandated to participate were being converted to voluntary status. However, none of the New Jersey areas were included in this change. The model is planned to continue through Dec. 31, 2020.

THE QUESTION

Studies to date on the early impact of CJR have largely focused on financial and utilization measures at the national level.^{1,2,3} This paper from NJHA's Center for Health Analytics, Research & Transformation (CHART) focuses solely on the New Jersey experience with a particular emphasis on consumers, and draws comparisons between our state and the nation. It also sets the stage for deeper inquiry as CJR continues to evolve.

According to an article in the Jan. 2, 2019, issue of the New England Journal of Medicine¹, Barnett, et.al., saw that at the national level, there were greater decreases in institutional spending per joint replacement episode in CJR areas compared to non-CJR areas between 2015 and 2017.



According to an article in the Jan. 2, 2019, issue of the *New England Journal of Medicine*¹, Barnett, et.al., saw that at the national level, there were greater decreases in institutional spending per joint replacement episode in CJR areas compared to non-CJR areas between 2015 and 2017. The differential reduction reported in the study was -3.1 percent, with a high level of statistical significance ($p<0.001$). This was largely driven by a 5.9 percent relative decrease in the percentage of episodes in which patients were discharged to post-acute care facilities, such as skilled nursing facilities. The authors pose a question concerning whether these changes will increase, and along with them cost savings, as CJR matures. They also explore whether there could be negative implications, such as hospitals declining to treat sicker patients whose care could be more complex and costly.

NEW JERSEY'S EXPERIENCE

CHART analyzed data from 2015 through 2018 to identify changes in discharge status for patients in hospitals mandated by CMS to participate in the CJR program, in hospitals that participated in the Bundled Payment for Care Improvement (BPCI) "Classic" program, and in hospitals that participated in neither of these bundling initiatives. BPCI "Classic" was CMS' first voluntary bundling initiative carried out from 2013 through 2016 under the statutory authority of the Affordable Care Act which established the Center for Medicare and Medicaid Innovation (CMMI). Hospitals, physician group practices and post-acute providers were able to choose from four different models under BPCI to engage in bundled payments for up to 48 different clinical episodes.

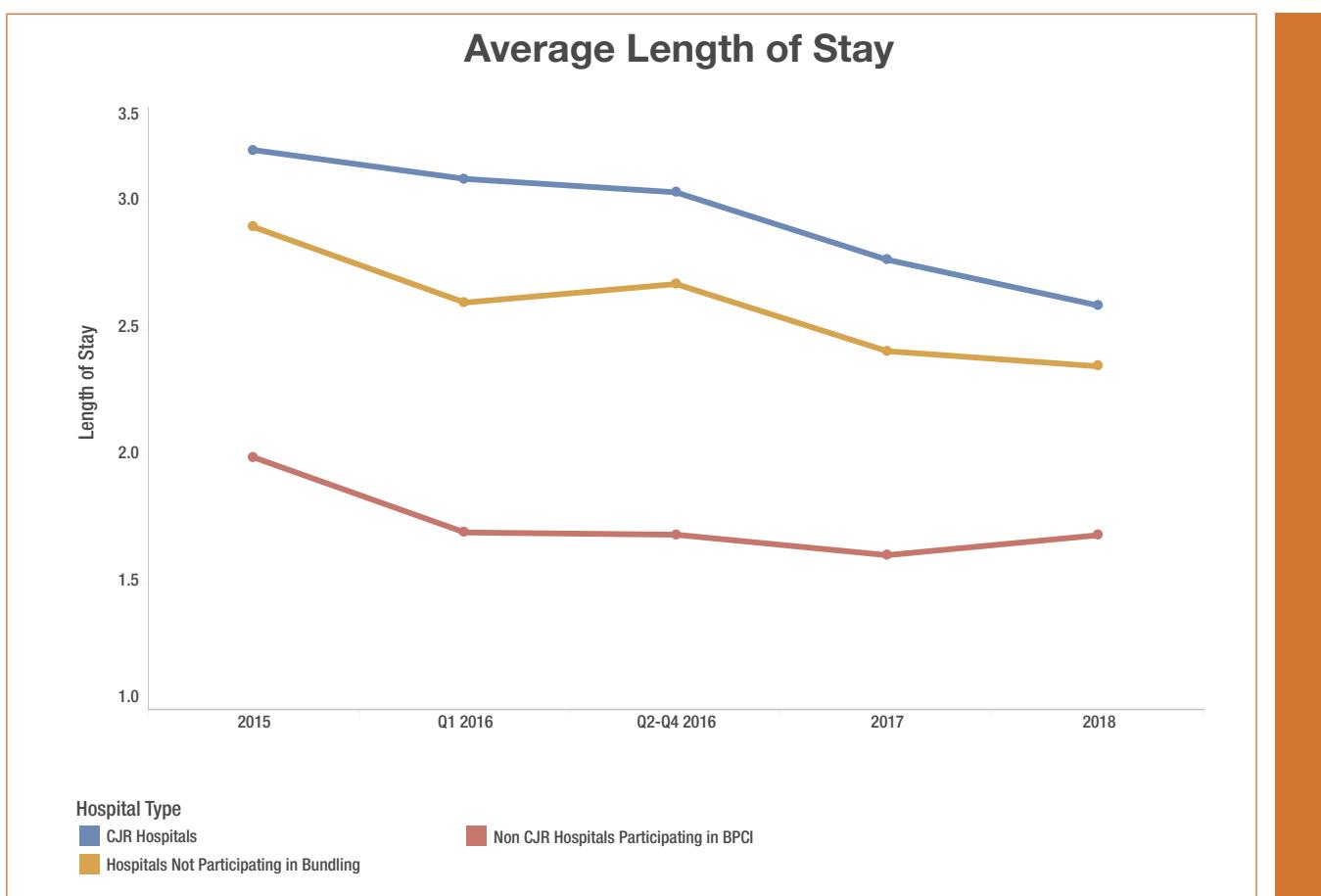
A comparison of the average length of stay (LOS) in 2018 for hip and knee replacement patients across the three groups revealed the following:

- For CJR hospitals, the LOS was 2.6 days
- For BPCI (non-CJR) hospitals, 1.7 days
- For hospitals in neither program, the average LOS was 2.4 days.

Over the three-year period CHART studied, all three hospital groups' overall LOS trended downward for these patients. CHART also reviewed LOS trends by fracture/non-fracture status and found the following:

- In 2018, LOS for patients with fractures in CJR hospitals was 5.5 days, while the non-fracture patients had a LOS of 2.2 days
- In BPCI-only hospitals, the LOS was 5.3 days and 1.5 days, respectively
- And in non-CJR/non-BPCI hospitals, the LOS was, 5.4 days and 1.9 days, respectively.

Since BPCI began two years earlier than CJR, it stands to reason that the BPCI hospitals' have had more time to develop strategies to improve LOS for both types of patients.

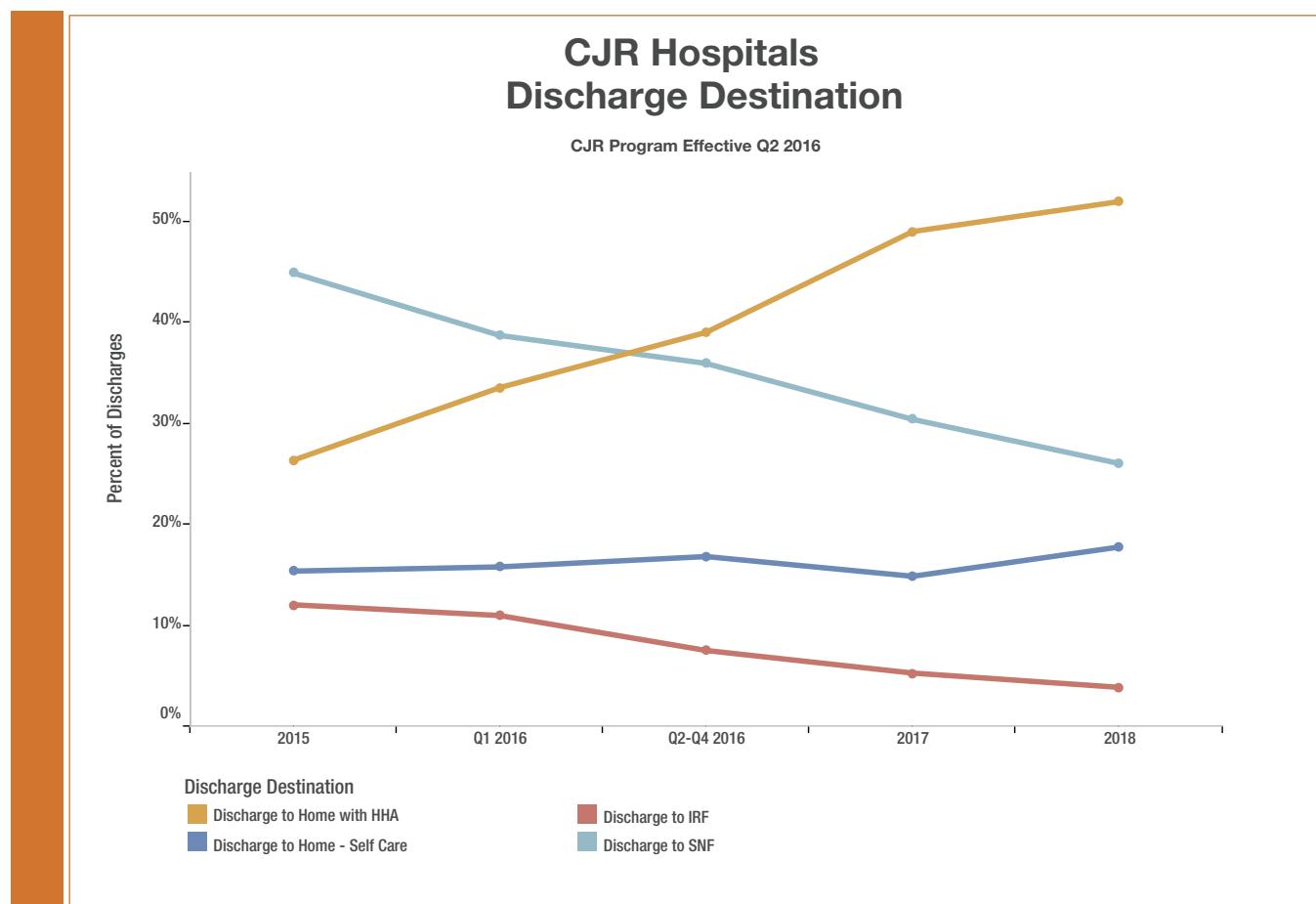


In the counties served by CJR hospitals, blacks make up 8.1 percent of these patients compared to 12 percent of the counties' population, while Asians make up 3.3 percent of the patients compared to 10 percent of the population.

Nationally, for CJR hospitals the average acute care hospital LOS decreased from 3.4 days at baseline (2015) to 2.9 days in 2018; for non-CJR hospitals, LOS decreased from 3.3 days to 2.8 days. In summary, New Jersey's CJR hospitals' LOS started slightly lower than the national average in 2015 and continued to be better than the national average in 2018.

As the graphs below illustrate, for all three groups of New Jersey hospitals (CJR, BPCI or neither), discharge to inpatient rehabilitation facilities (IRF) has decreased over the period. Nationally, according to the evaluation conducted by the Lewin Group,³ there was a 2.0 percentage point relative decrease in the proportion of patients who were discharged immediately following their acute care stay to an IRF.

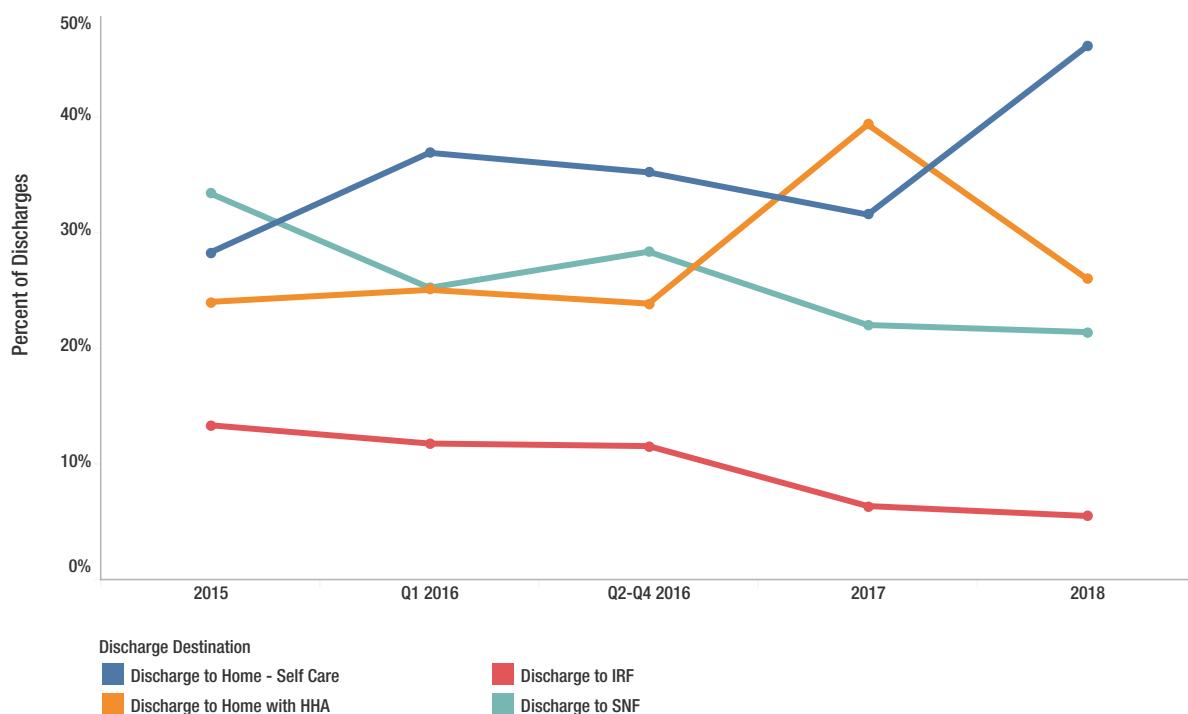
Discharge to skilled nursing facilities (SNFs) has trended downward for New Jersey CJR hospitals and for hospitals that are in neither CJR or BPCI. Interestingly, hospitals that participated only in BPCI saw an upward trend in discharge to SNF. However, these hospitals started with a lower percentage of their hip and knee replacement patients being discharged to SNF at the start of the period at 10 percent, compared with the CJR hospitals at 45 percent and the non-CJR, non-BPCI hospitals at 33 percent.



These findings stimulated further review of the patients in the DRGs in question to see if the volume of patients with a hip replacement caused by a fracture could be related to some of the trends identified. Approximately 10-13 percent of patients in CJR hospitals and hospitals without CJR or BPCI had a fracture identified. However, non-CJR hospitals that participated in BPCI had 5 to 6 percent of patients with a fracture identified – a much lower rate. However, there was no real difference in discharge status in New Jersey related to a fracture being the cause of the joint replacement. This is different from what Lewin observed across the nation, in which SNF care was substituted for IRF care for CJR patients in fracture episodes.³

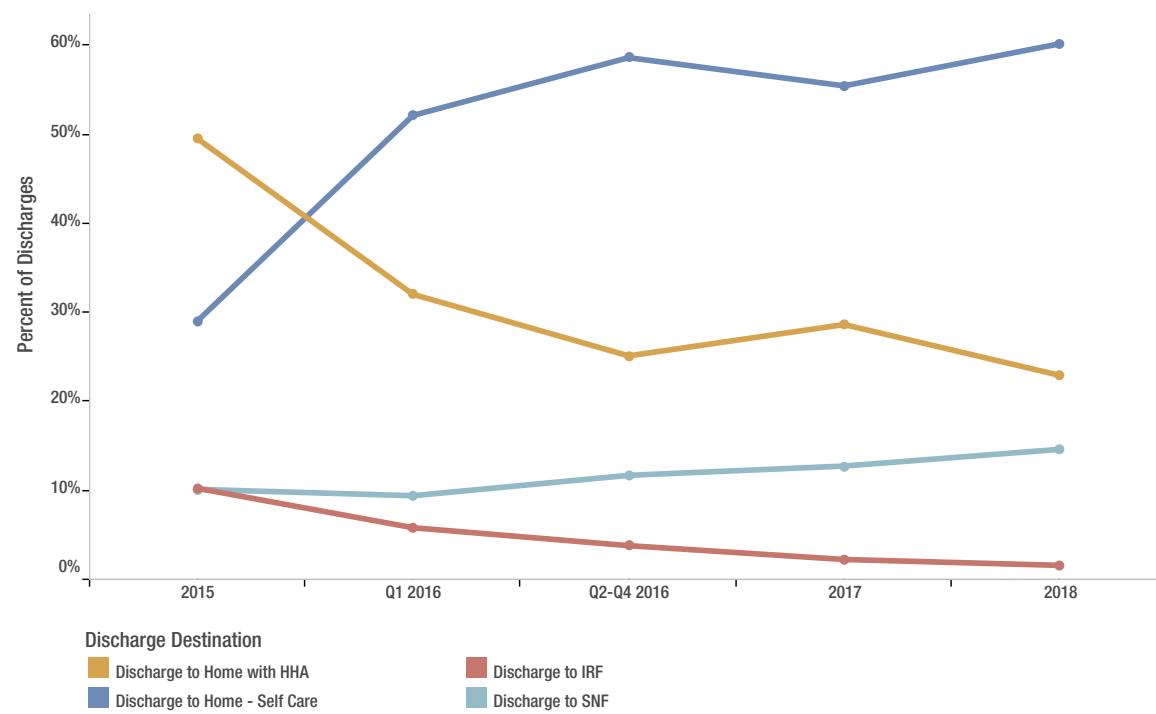
Hospitals Not Participating in Bundling Discharge Destination

CJR Program Effective Q2 2016



Non CJR Hospitals Participating in BPCI Discharge Destination

CJR Program Effective Q2 2016





Significant variation exists in discharge to home health. Again, New Jersey's CJR hospitals and hospitals in neither CJR nor BPCI discharged more patients to home health over the period. However, there is a sharp downward trend in discharges to home health for BPCI-only hospitals. According to the national evaluation conducted by Lewin³, the proportion of CJR patients initially discharged to a home health agency increased from 42.6 percent to 49.1 percent, compared with a change from 39.9 percent to 42 percent for non-CJR hospitals.

Discharge to home with only self-care also showed interesting trends by hospital type. CJR hospitals have steadily had the lowest discharge percentage (15-18 percent) in this category. Hospitals without CJR or BPCI have been steadily increasing the percentage of patients discharged to self-care – from 28 to 46 percent between 2015 and 2018. Non-CJR hospitals that participated in BPCI trended sharply upward in this category, going from 29 percent in 2015 to 60 percent in 2018. This significant upward trend could be related to the relative lower level of complexity of the patient population in non-CJR hospitals that participated in BPCI as demonstrated by the lower percentage of hip and knee replacement patients that had a fracture identified as the cause.

With respect to readmissions, in 2017 and 2018 the CJR-only hospitals statewide had a readmission rate of 4 percent for hip and knee replacement patients. Hospitals that were neither in CJR or BPCI had readmissions rates of 4.75 percent in 2017 and 5.6 percent in 2018. Further analysis is necessary to determine whether the increase in readmissions in these

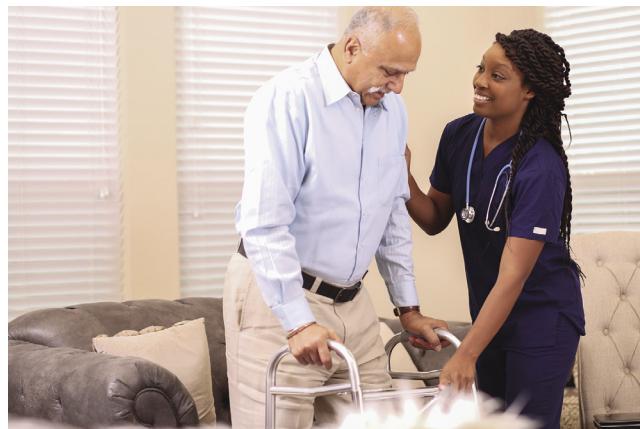
hospitals could be related to the BPCI hospitals' increase in discharge to skilled nursing facilities, as noted earlier.

By contrast, hospitals that were only in BPCI had readmission rates of 1.83 percent in 2017 and 2.54 percent in 2018. This again could be related to the relative lower level of complexity of the non-CJR hospitals that participated in BPCI, as mentioned previously.

CHART also analyzed whether there are racial disparities among Medicare beneficiaries who are undergoing hip or knee replacement procedures in New Jersey and found that blacks and Asians are less likely to undergo these procedures as compared to the percentage of the population they make up in the counties CJR hospitals serve. In the counties served by CJR hospitals, blacks make up 8.1 percent of these patients compared to 12 percent of the counties' population, while Asians make up 3.3 percent of the patients compared to 10 percent of the population. By contrast, whites constituted 82 percent of patients, but made up 75.4 percent of the population in the counties.

THE CONSUMER IMPACT

Translating utilization data into outcomes for patients is a significant component of CJR. There are two quality measures included in the model – total hip arthroplasty and/or total knee arthroplasty (THA/TKA) complications measure (NQF #1550) and the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey measure (NQF #0166). In addition, CJR incentivizes the submission of patient-reported outcomes (PRO) and limited risk variable data following eligible elective primary THA/TKA procedures. Submission of these data is not mandatory for reconciliation payment eligibility. However, hospitals that do submit these data may increase their financial opportunity under the model.



The CJR model uses a composite quality score methodology to link quality to payment. Hospitals earn points from their performance on two quality measures as well as from demonstrating improvement on either or both of the quality measures.

during both the pre- and post-operative data collection timeframes. Performance on the data elements is not considered when CMS assigns composite quality score points, as described below.

The CJR model uses a composite quality score methodology to link quality to payment. Hospitals earn points from their performance on two quality measures as well as from demonstrating improvement on either or both of the quality measures. If they submit the PRO and limited risk variable data, hospitals can earn an additional two points. The sum of the components makes up the composite quality score which is capped at 20 points.

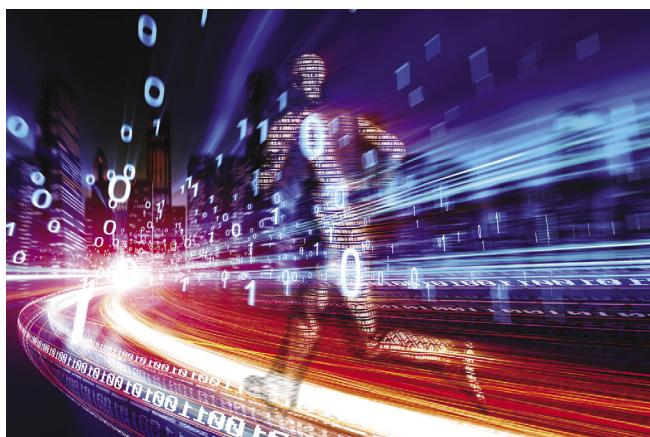
A hospital's score is incorporated into the pay-for-performance methodology, which assigns the hospital to one of four quality categories (Excellent, Good, Acceptable, Below Acceptable) at the time of reconciliation for a performance year. Hospitals must have a composite score equal to or greater than 5.0 to be eligible for a reconciliation payment.

For performance year 1, 21 New Jersey hospitals in CJR qualified through their performance on the quality measures for a reconciliation payment. Five earned their payments by achieving a score in the "Excellent" category, and 14 earned their payments with a score in the "Good" category. The remaining two had scores in the "Acceptable" category.

The preliminary data for performance year 2 shows that 25 N.J. hospitals could qualify for a reconciliation payment. Six have a preliminary quality score in the Excellent category; 16 have a preliminary score in the "Good" category. Three have a preliminary score in the "Acceptable" category.

CJR hospitals can use one of two surveys in each of two categories of surveys to satisfy the voluntary PRO data submission.

These surveys, which are self-administered, focus on how the person feels and how well he or she is able to do usual activities, emotional well-being, pain, social activities and roles and functional status. The surveys must be collected



NEXT STEPS

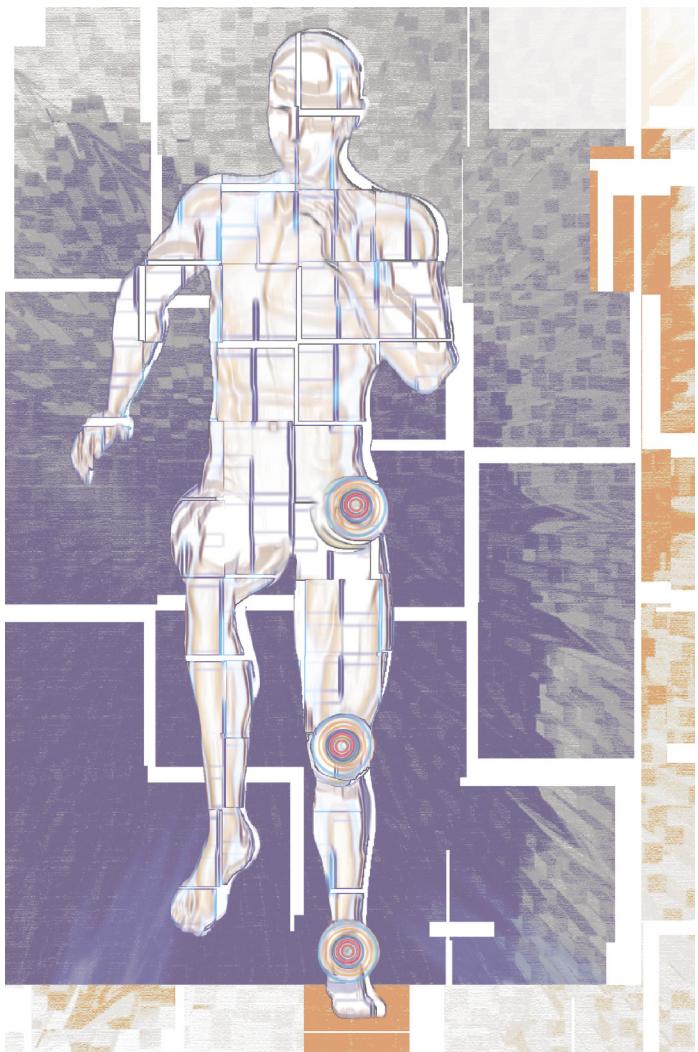
While it is encouraging that nearly two-thirds of New Jersey's CJR hospitals are anticipated to have a quality score high enough to earn a reconciliation payment, it is impossible to look at the data from a patient-centered perspective in the aggregate for hospitals that are submitting the voluntary data. This area of inquiry is important because the success of CJR, or any bundling initiative, should not be measured solely based on changes in utilization patterns and resources expended. Functional and emotional status of patients within the episode timeframe and subsequent to the end of the episode are important markers of impact for the long term.

For example, it would be important to know the functional ability of patients who were in CJR versus those who were not, based on the setting to which they were discharged from their inpatient stay. Also, the utilization of additional Medicare-funded services after the end of the episode (physician visits, outpatient rehabilitation services, skilled nursing facility, surgical procedures related to the original joint replacement surgery) related to discharge disposition would be important to understand.

Further, none of the data currently being collected directly measures social determinants of health such as food insecurity, adequacy of housing, neighborhood safety, financial security, social isolation, accessibility of transportation, interpersonal violence, etc. These factors are known to impact health and well-being of Medicare beneficiaries, as well as how frequently these individuals use healthcare services. While not directly related to the joint replacement procedure, these factors could have an adverse impact on the ability of the beneficiary to follow through on rehabilitation programs, follow-up medical appointments and correct adherence to medication regimens, among other activities.

The CJR mandatory bundling program could provide important insights into how future Medicare reimbursement will be designed for both fee-for-service and managed care enrollees. However, any evaluation of CJR must include a consumer-focused perspective to identify the true quality of care outcomes along with all of the utilization and financial metrics used to determine whether the model has been successful.

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