FREQUENTLY ASKED QUESTIONS (FAQs)

2013 Voluntary Hospital Public Reporting of PCI Readmission

Rationale for the Percutaneous Coronary Intervention (PCI) Readmission Measure

1. Why measure readmissions following PCI?

PCI is one of the most commonly performed cardiac procedures in the United States and can improve quality of life, increase exercise capacity, and reduce the burden of angina. Among heart attack patients, PCI can also improve survival and reduce the risk of reinfarction and need for additional invasive procedures. Nevertheless, studies have shown that approximately 1 in 7 Medicare patients undergoing a PCI are readmitted within 30 days of discharge. The majority of readmissions are unplanned, and patients are readmitted with a wide range of cardiovascular and non-cardiovascular diagnoses. In addition, both unadjusted and risk-standardized readmission rates vary substantially across hospitals, suggesting that differences in readmission rates may reflect the quality of care provided to PCI patients.

Measuring 30-day readmission rates following PCI procedures will inform health care providers about opportunities to improve care, strengthen investment in quality improvement initiatives, and promote improvements in the quality of care Medicare patients receive and their outcomes.

Measure Methodology

Data Source and Years

2. What data are used in the PCI readmission measure?

The measure uses data from the National Cardiovascular Data Registry (NCDR®)'s CathPCI Registry® for risk adjustment and Medicare claims data to determine outcomes.

3. Which years of data were used to calculate the PCI readmission measure?

Results for 2013 voluntary public reporting of the PCI readmission measure were calculated using CathPCI Registry® data for discharges occurring between January 1, 2010 and November 30, 2011 (measurement period).

Inclusion/Exclusion

4. Which patients are included in the PCI readmission measure?

The measure includes patients who meet *all* of the following criteria:
- They received a PCI during their hospital stay and were discharged in 2010 or through November 30, 2011;
- They were aged 65 or over when they arrived at the hospital; and
- They have a record in the CathPCI Registry® that meets the NCDR data quality threshold criteria and can be linked to the corresponding Medicare fee-for-service claim. For more information on the linking methodology, please refer to the 2013 Measure Updates Memo.

The measure excludes patients who meet *any* of the following criteria:

- They were not enrolled in Medicare fee-for-service at the time of the PCI procedure.
- They had a PCI procedure performed more than ten days following admission to the hospital.
- They were transferred to another acute care facility.
- They died during their initial hospitalization for a PCI procedure.
- They were discharged against medical advice.
- They do not have 30 days of follow-up data available in the Medicare claims data.

Note: If patients have a subsequent PCI within 30 days of the index PCI, the subsequent PCI will not be counted in the measure as an index admission, but will be counted as a readmission.

For more information about these inclusion and exclusion criteria, please refer to the 2009 Measure Methodology Report and cohort assignment flow diagram.

5.   How are transfers handled in the PCI readmission measure?

Patient stays in which the patient received a PCI and was then transferred to another hospital are excluded from the measure as it is difficult to determine to which hospital the readmission outcome should be attributed.

6.   Why does the measure link data from the CathPCI Registry® to Medicare claims data and how are the records linked?

Currently, the CathPCI Registry does not collect patient information post-discharge. Therefore, the measure links the CathPCI Registry® data to the Medicare claims data to obtain the readmission outcome. The measure has a 5-step linking strategy that uses both direct and indirect patient identifiers to link patient stays in the two databases. Using this approach, 94% of eligible PCI performed on Medicare fee-for-service patients were successfully linked. For more information on the PCI readmission linking strategy, please refer to the 2013 Measure Updates Memo.

7.   What hospitals are included in the measure calculation?

The PCI readmission measure includes all hospitals that submitted data for qualifying PCI procedures to the CathPCI Registry® with discharges between January 1, 2010 and November 30, 2011 (measurement period).

In this pilot effort, measure results are not calculated for hospitals that do not participate in the CathPCI Registry® since no registry data are available for their institutions. However, general information about the measure and this voluntary hospital public reporting pilot will be accessible to all hospitals on the public section of the NCDR® website.

Outcome

8.   Why does the PCI readmission measure use a 30-day outcome timeframe?

A 30-day outcome timeframe is a clinically sensible and meaningful timeframe for hospitals. During this time period, readmissions may be attributable to care received within the index hospitalization (or outpatient procedure) and during the transition to the outpatient setting.

Therefore, hospitals, in collaboration with their medical communities, can take actions to reduce 30-day readmission such as:

• Ensuring patients are clinically ready for discharge;

• Reducing risk of infection;

• Reconciling medications;

• Improving communication among providers involved in the transition of care;

• Encouraging strategies that promote disease management principles; and

• Educating patients about symptoms to monitor, whom to contact with questions, and where and when to seek follow-up care.

Finally, this timeframe is consistent with other publicly reported readmission measures endorsed by the National Quality Forum (NQF).

9. What counts as a readmission?

The PCI readmission measure defines a readmission as a subsequent acute care inpatient hospital admission within 30 days of discharge from the index hospital stay or procedure date, with the exception of readmissions that are planned.

The readmission outcome is dichotomous (yes/no). Therefore, each index hospital stay is coded either as having a readmission within 30 days of discharge or not. Any index admission with more than one readmission within 30 days will only contribute one outcome event (i.e., yes, readmission occurred) to the model.

10. Do planned readmissions count as readmissions?

No, planned readmissions within 30 days of discharge are not counted as readmissions in the PCI readmission measure. Planned readmissions are not explicitly identified in either the CathPCI Registry or the CMS data. The measure identifies planned readmissions in claims data using an algorithm that detects any readmissions that were either non-acute (in which a typically planned procedure took place), or were readmissions for maintenance chemotherapy or rehabilitation.

The algorithm used to identify planned readmissions takes into account that patients who have a coronary stent placed during their PCI procedure are not likely to be readmitted for a planned procedure within 30 days of discharge. Patients who receive a stent require at least four weeks of therapy with aspirin and a platelet inhibitor. In that time period, it is very unusual for these patients to undergo procedures that would require interruption of this dual antiplatelet therapy (DAP). In contrast, if no stent is deployed, DAP is not required, and patients are more likely to undergo planned surgical procedures.

For more information on the method of identifying planned readmissions, and the list of planned procedures used in the algorithm, please refer to the 2013 Measure Updates Memo.

Risk-adjustment

11. What are the risk factors used for risk adjustment?

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The PCI readmission measure adjusts for age, sex, and 18 other clinical risk factors, including cardiac status and presence of chronic diseases. Risk factors are derived from the CathPCI Registry® data. To access the full list of risk factors, see the Risk Factor Model tab in the Hospital-Specific Data and Results Excel® file available on your hospital's private NCDR® reports Dashboard. The Risk Factor Model tab also shows the relative effects of each risk factor on the PCI readmission measure. In addition, the Risk Factor Profile tab in the Hospital-Specific Results and Data Excel® file presents the prevalence of each risk factor for your hospital's patients, compared to all CathPCI Registry® hospitals.

12.   How are the risk-standardized readmission rates (RSRRs) calculated?

The RSRR is calculated as the ratio of the number of "predicted" to the number of "expected" readmissions multiplied by the CathPCI Registry® crude (unadjusted) readmission rate. For each hospital, the numerator of the ratio is the number of readmissions within 30 days predicted on the basis of the hospital's performance with its observed case mix. The denominator is the number of readmissions expected on the basis of the registry's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average CathPCI Registry® hospital's performance with the same case mix. Thus a lower ratio indicates a lower-than-expected readmission rate, or better quality. A higher ratio indicates a higher-than-expected readmission rate, or worse quality.

For more information on the risk-adjustment models and details on the statistical approach used to determine the predicted and expected rates, refer to the 2009 Measure Methodology Report.

13.   Will hospitals be able to replicate the RSRRs?

Hospitals will not be able to replicate the RSRR independently. Although hospitals have access to the inclusion/exclusion criteria and risk-adjustment coefficients used in the model, the model requires data from admissions to other hospitals and data from the entire CathPCI Registry® sample to estimate hospital-specific effects used in the equations.

However, for full transparency, the American College of Cardiology (ACC) is posting on the NCDR® website the 2009 Measure Methodology Report and 2013 Measure Updates Memo which include comprehensive information on the PCI readmission measure methodology.

14.   Why don't the measures adjust for socioeconomic status (SES) in the PCI readmission measure?

The measure does not adjust for SES or other patient factors such as race because we do not want to obscure important disparities in care. Analyses presented in the Center for Medicare & Medicaid Services (CMS) 2010 Medicare Hospital Quality Chartbook and 2011 Medicare Hospital Quality Chartbook demonstrate that patient SES does not determine hospital performance on the publicly reported heart failure, AMI, and pneumonia 30-day mortality and readmission measures. For example, many safety net providers and teaching hospitals do as well as or better than hospitals without substantial numbers of low SES patients. Additionally, this approach is consistent with guidance from the NQF, which states that risk models should not obscure disparities by adjusting for factors associated with inequality in care (such as race or SES). Finally, we do not want to mask potential disparities

or minimize incentives to improve the outcomes of disadvantaged populations. However, we are committed to tracking this issue and will continue to evaluate disparities in care.

Reporting for Hospitals with Low PCI Volume

15. What performance information will be provided to hospitals with few cases?

CMS and ACC are providing a CathPCI Registry® Results Summary and Data File Instructions report and a Hospital-Specific Data and Results Excel® file to all CathPCI Registry® hospitals. The RSRR will be calculated for every hospital and included in their private Hospital-Specific Data and Results Excel® file. However, if a hospital does not have any cases during the measurement period, their results will appear as "N/A." If a hospital has fewer than 25 matched cases during the measurement period, the hospital will be placed in the performance category, "Number of cases too small."

To maximize hospital case volume, CMS and ACC are calculating the PCI readmission measure using two years of data. This provides for more precise measure estimates and categorization of performance, and also reduces the likelihood of hospitals falling into the category for fewer than 25 cases.

16. Why did CMS choose 25 cases as the cutoff for publicly reporting an outcome?

Hospitals with fewer than 25 cases during the measurement period do not provide enough information to reliably estimate their performance. Therefore, CMS and ACC place these hospitals in their own category ("Number of cases too small"). The cutoff of 25 cases is consistent with currently publicly reported 30-day mortality and readmission measures and process of care measures.

Categorization of Hospital Performance

17. How do CMS and ACC categorize hospital performance on the PCI readmission measure for voluntary hospital public reporting?

CMS and ACC categorize a hospital's performance based on the 95% interval estimate of its RSRR compared to the CathPCI Registry® crude (unadjusted) readmission rate. The interval estimate represents the range of probable values of the rate. A 95% interval estimate indicates that there is 95% probability that the true value of the rate lies between the lower limit of the interval and the upper limit. It is a similar concept to a confidence interval.

Comparative performance for hospitals with 25 or more eligible cases is classified as follows:

• "No different than CathPCI Registry® rate" if the 95% interval estimate of the hospital's rate includes the CathPCI Registry® unadjusted readmission rate.

• "Worse than CathPCI Registry® rate" if the entire 95% interval estimate of the hospital's rate is higher than the CathPCI Registry® unadjusted readmission rate.

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• "Better than CathPCI Registry® rate" if the entire 95% interval estimate of the hospital's rate is lower than the CathPCI Registry® unadjusted readmission rate

If a hospital has fewer than 25 matched cases, it is assigned to a separate category: "Number of cases too small." For more information on how the readmission rates are calculated, please refer to the 2009 Measure Methodology Report.

2013 Voluntary Hospital Public Reporting Information and Process

18.   What is voluntary hospital public reporting?

Voluntary hospital public reporting is an opportunity for CathPCI Registry® hospitals to choose to publicly report their results for the PCI readmission measure. Participation is not mandatory. Hospitals that elect to participate in this quality reporting effort will have their results displayed on the CMS Hospital Compare website beginning in July 2013.

19.   Can my hospital see its performance score before deciding whether to participate?

Yes. Before deciding to participate, all CathPCI Registry® hospitals will have the opportunity to privately preview their hospital-specific results and the data used in measure calculation. CMS and ACC are providing hospitals with a Hospital-Specific Data and Results Excel® file containing their measure results, detailed discharge-level data, and patient risk factor information. They will also receive a CathPCI Registry® Results Summary and Data File Instructions report. Hospitals can access these files on their secure NCDR reports Dashboard on www.NCDR.com beginning the week of March 18, 2013.

20.   Why should my hospital participate?

Your hospital's participation in voluntary hospital public reporting signals to consumers and other stakeholders your hospital's commitment to improving care for patients undergoing PCI procedures.

21.   Are there any penalties for deciding not to participate?

There are no financial penalties for deciding not to participate in voluntary hospital public reporting. However, the ACC is encouraging all CathPCI Registry® hospitals to take part in this program by reviewing their hospital-specific results and opting to have their measure results publicly reported on Hospital Compare.

22.   Is my hospital eligible to participate in the 2013 voluntary hospital public reporting of the PCI readmission measure? How can my hospital participate?

Your hospital is eligible participate in the 2013 voluntary hospital public reporting of the PCI readmission measure if you:

- are a CathPCI Registry® participant, and
- submitted data for PCI cases with discharges between January 1, 2010 and November 30, 2011

To participate in the program and have your measure results publicly reported on Hospital Compare in July 2013, you must submit a Data Release Consent Form by May 3, 2011.

If you are a current CathPCI Registry participant but did not submit PCI cases during the measurement period, you will still receive a report with the CathPCI Registry hospital benchmark information.

If your hospital is not currently a member of the CathPCI Registry®, your hospital is not eligible to participate in this pilot program.

23.   What information is included in the CathPCI Registry® Results Summary and Data File Instruction Report and Hospital-Specific Data and Results Excel® file?

The CathPCI Registry® Results Summary and Data File Instruction report contains an overview of the measure methodology and the data used for measure calculation, summary results for all CathPCI Registry ® hospitals, and instructions on how to interpret the Hospital-Specific Data and Results Excel® file.

The Hospital-Specific Data and Results Excel® file contains your hospital's results on the measure, information on the top 10 discharge diagnoses for readmission, details for all patient stays used to calculate measure results, case mix information for your hospital's patients compared with all CathPCI Registry ® hospitals, and model risk factor coefficients.

CMS and ACC encourage hospitals to review their Hospital-Specific Data and Results Excel® file thoroughly. CMS and ACC will work with hospitals during this pilot program to help hospitals understand the measures, interpret their data, and to answer questions.

CathPCI Registry® Results Summary and Data File Instruction reports and Hospital-Specific Excel® files will be available through the private NCDR® reports Dashboard beginning the week of March 18, 2013.

24.   Why didn't my hospital receive a Hospital-Specific Data and Results Excel® file?

If your hospital did not receive a Hospital-Specific Data and Results Excel® file during this pilot, you are not a CathPCI Registry® participant. If you are not a CathPCI Registry® participant, you may still access the CathPCI Registry® Results Summary and Data File Instructions report posted on the public NCDR portal.

If you have questions about whether a Hospital-Specific data and Results Excel® file is available for your hospital, please contact **NCDR@acc.org**. To ensure proper handling of inquiries, please reference 'PCI Readmission Measure' when contacting the ACC regarding this initiative.

Resources

25.   Are there resources for strategies to reduce readmissions of PCI patients?

There are several resources that can be helpful in identifying strategies to reduce readmissions. The June 2007 Medicare Payment Advisory Commission (MedPAC) report contains information on lowering readmissions. Additionally, many organizations have been implementing quality initiatives to reduce readmissions, and you may find the information posted on their websites useful (please see the initiatives and their websites below.) Furthermore, we have found and listed below for your reference reports/studies that address readmissions.

Initiatives to Reduce Readmissions:

- The American College of Cardiology (ACC) and Institute for Healthcare Improvement (IHI) have launched a "Hospital to Home" (H2H) national campaign to reduce preventable readmissions (http://www.h2hquality.org).

- As part of the Integrating Care for Populations and Communities Aim (ICPCA), QIOs have been working to reduce unnecessary readmissions to hospitals and promote seamless transitions between healthcare settings (http://www.cfmc.org/integratingcare).

- The Community Based Care Transitions Program (CCTP), created by Section 3026 of the Affordable Care Act, enabled CMS to allocate funds for qualified hospitals to pursue two-year renewable agreements aiming to test models for improving care transitions from the hospital to other settings and reducing readmissions for high-risk Medicare beneficiaries (http://www.innovations.cms.gov/initiatives/Partnership-for-Patients/CCTP/index.html).

- The National Priorities Partnership (NPP) focuses on care coordination to reduce readmissions (http://www.nationalprioritiespartnership.org/PriorityDetails.aspx?id=606).

- IHI has additionally launched the State Action on Avoidable Rehospitalizations (STAAR) initiative, which aims to reduce rehospitalizations by working across organizational boundaries and engaging multiple stakeholders (http://www.ihi.org/offerings/initiatives/STAAR/Pages/default.aspx).

- The Commonwealth Fund, the John A. Hartford Foundation, and the Health Research & Educational Trust (HRET) of the American Hospital Association have produced a "Health Care Leader Action Guide to Reduce Avoidable Readmissions" (http://www.commonwealthfund.org/~/media/Files/Publications/Fund%20Report/2010/Jan/Readmission%20Guide/Health%20Care%20Leader%20Readmission%20Guide_Final.pdf).

- INTERACT (Interventions to Reduce Acute Care Transfers) is a quality improvement program, developed under CMS, that focuses on clinical and educational tools and strategies for long-term care facilities to reduce the frequency of transfers to the acute hospital (http://interact2.net).

- The Society of Hospital Medicine has developed Better Outcomes for Older Adults through Safe Transitions (Project BOOST), a national initiative to improve the care of patients as they transition from hospital to home (http://www.hospitalmedicine.org/boost/).

- Project RED (Re-Engineered Discharge) is a research group at Boston University Medical Center that develops and tests strategies to improve the hospital discharge

process in a way that promotes patient safety and reduces re-hospitalization rates (http://www.bu.edu/fammed/projectred).

- The Transitional Care Model (TCM) provides comprehensive in-hospital planning and home follow-up for chronically ill high-risk older adults hospitalized for common medical and surgical conditions (http://www.transitionalcare.info/).

- The Care Transitions Program aims to support patients and families, increase skills among healthcare providers, enhance the ability of health information technology to promote health information exchange across care settings, implement system level interventions to improve quality and safety, develop performance measures and public reporting mechanisms, and influence health policy at the national level (http://www.caretransitions.org/).

Reports/Studies Focused on Reducing Readmissions:

- Coleman, EA, Parry C, Chalmers S, Sung-joon, M. The Care Transitions Intervention: Results of a randomized controlled trial. Archives of Int Med. 2006; 166:1822-1828.

- Coleman EA, Smith JD, Frank JC, Min SJ, Parry C, Kramer AM. Preparing patients and caregivers to participate in care delivered across settings: the Care Transitions Intervention. J Am Geriatr Soc 2004;52(11):1817-25.

- Courtney M, Edwards H, Chang A, Parker A, Finlayson K, Hamilton K. Fewer emergency readmissions and better quality of life for older adults at risk of hospital readmission: a randomized controlled trial to determine the effectiveness of a 24-week exercise and telephone follow-up program. J Am Geriatr Soc 2009;57(3):395-402.

- Garasen H, Windspoll R, Johnsen R. Intermediate care at a community hospital as an alternative to prolonged general hospital care for elderly patients: a randomised controlled trial. BMC Public Health 2007;7:68.

- Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson AE, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. Ann Intern Med 2009;150(3):178-87.

- Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare fee-for-service program. New England Journal of Medicine 2009;360(14):1418-28.

- Koehler BE, Richter KM, Youngblood L, Cohen BA, Prengler ID, Cheng D, et al. Reduction of 30-day postdischarge hospital readmission or emergency department (ED) visit rates in high-risk elderly medical patients through delivery of a targeted care bundle. J Hosp Med 2009;4(4):211-218.

- Medicare Payment Advisory Commission (MedPAC). Promoting greater efficiency in Medicare. (http://www.medpac.gov/documents/jun07_entirereport.pdf). June 2007. Accessed March 19, 2012.

- Naylor M, Brooten D, Jones R, Lavizzo-Mourey R, Mezey M, Pauly M. Comprehensive discharge planning for the hospitalized elderly. A randomized clinical trial. Ann Intern Med 1994;120(12):999-1006.

- Naylor MD, Brooten D, Campbell R, Jacobsen BS, Mezey MD, Pauly MV, et al. Comprehensive discharge planning and home follow-up of hospitalized elders: a randomized clinical trial. JAMA 1999;281(7):613-20.

- van Walraven C, Seth R, Austin PC, Laupacis A. Effect of discharge summary availability during post-discharge visits on hospital readmission. J Gen Intern Med 2002;17(3):186-92.

- Voss R, Gardner R, Baier R, Butterfield K, Lehrman S, Gravenstein S. The care transitions intervention: translating from efficacy to effectiveness. Arch Intern Med Jul 25 2011;171(14):1232-1237.

- Weiss M, Yakusheva O, Bobay K. Nurse and patient perceptions of discharge readiness in relation to postdischarge utilization. Med Care 2010;48(5):482-6.

Future Implementation of PCI Readmission Measure

26. Will the PCI readmission measure be used in payment or other CMS programs?

This is a voluntary public reporting effort. CMS has no plans to use this measure in payment programs.

Other Questions

27. How can I best track my hospital's performance on the PCI readmission measure for quality improvement purposes?

The PCI readmission measure is not designed for hospitals' internal quality tracking purposes, since it is a measure of each hospital's performance relative to other hospitals with a similar case mix in a given time period. For quality improvement purposes, tracking your hospital's crude (unadjusted) readmission rates following a PCI procedure may be helpful. However, the unadjusted rates will not capture readmissions that occurred at other hospitals. Additionally, the unadjusted rates will not capture major changes to your hospital's case mix that affect risk-standardized rates. If your hospital's case mix and the proportion of patients readmitted to other hospitals are stable over time, your unadjusted rates can be used to track improvement.

28. My hospital provides discharge planning and education, but we cannot ensure patients will follow the recommended care plan when they go home. Doesn't the measure count readmissions resulting from patient behavior we cannot control?

CMS and ACC recognize that some patients who receive education and discharge planning do not follow the recommended care plan after they leave the hospital, even if they have access to the care they need. However, all hospitals have the opportunity to reduce their

readmission rates by working with their patients, regardless of their patients' compliance with their care plans. Improving readmission rates is the joint responsibility of hospitals, other clinicians and patients. Measuring readmissions will create incentives for hospitals to implement interventions which may improve hospital care, better assess the readiness of patients for discharge, and facilitate transitions to outpatient status.

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