SECTION 5

# Quality of care in the Medicare program

## Chart 5-1. SNFs improved on some measures but not others from 2011 to 2017

| Measure | 2011 | 2013 | 2015 | 2017 |
|---|---|---|---|---|
| Discharged to the community | 33.5% | 35.7% | 38.8% | 40.0% |
| Potentially avoidable readmissions | | | | |
| During SNF stay | 12.4 | 11.2 | 10.4 | 10.9 |
| During 30 days after discharge from SNF | 5.9 | 5.5 | 5.0 | 6.1 |
| Rate of improvement in one or more mobility ADLs | 43.6 | 43.7 | 43.6 | 43.9 |
| Rate of no decline in mobility | 87.2 | 87.1 | 87.1 | 87.0 |

Note: SNF (skilled nursing facility), ADL (activity of daily living). High rates of discharge to the community indicate better quality. High readmission rates indicate worse quality. All rates were risk adjusted. The rate of improvement in mobility ADLs is the average of the rates of improvement in bed mobility, transfer, and ambulation, weighted by the number of stays included in each measure. Stays with improvement in one, two, or three mobility ADLs are counted in the improvement measures. "Rate of no decline in mobility" is the share of stays with no decline in any of the three ADLs. Rates are the average of facility rates and calculated for all facilities with 25 or more stays, except the rate of potentially avoidable readmissions during the 30 days after discharge, which is reported for all facilities with 20 or more stays. Measures exclude hospital-based swing-bed units.

Source: MedPAC analysis of Medicare claims and Minimum Data Set data for 2011–2017.

- Quality measures for SNFs draw on two sources, claims for payment submitted by SNFs and patient assessment data collected by SNFs. Evidence that patient assessment–based functional measures of quality should be interpreted carefully, given evidence that the patient assessment information reported by inpatient rehabilitation facilities and home health agencies may reflect financial considerations.

- Rates of claims-based, risk-adjusted community discharge and potentially avoidable readmission during the SNF stay improved between 2011 and 2017. A greater share of beneficiaries was discharged to the community (40.0 percent compared with 33.5 percent). A lesser share of beneficiaries was readmitted to an acute care hospital during the SNF stay (10.9 percent compared with 12.4 percent). The share of beneficiaries readmitted to an acute care hospital in the 30 days after discharge increased between 2015 and 2017, putting the rate higher than in 2011.

- Both readmission rates include only patients readmitted to a hospital with the principal diagnosis of a potentially avoidable condition. The 13 potentially avoidable conditions are congestive heart failure, electrolyte imbalance/dehydration, respiratory infection, sepsis, urinary tract or kidney infection, hypoglycemia or diabetic complications, anticoagulant complications, fractures and musculoskeletal injuries, acute delirium, adverse drug reactions, cellulitis/wound infections, pressure ulcers, and abnormal blood pressure.

- The two patient assessment–based, risk-adjusted measures of change in functional status were essentially unchanged between 2011 and 2017. The mobility measures are composites of the patients' abilities in bed mobility, transfer, and ambulation, and they reflect the likelihood that a patient will change, given his or her functional ability at admission. A facility admitting patients with worse prognoses will have lower expected rates of achieving these outcomes, and this difference will be reflected in the risk-adjusted rates.

## Chart 5-2. Home health agencies' assessment-based performance measures increased markedly from 2014 to 2017, while claims-based performance measures were largely unchanged

| Measure | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|
| Average share of an agency's beneficiaries who: | | | | |
| Used emergency department care | 12.0% | 12.2% | 12.1% | 12.7% |
| Had to be admitted to the hospital | 15.4 | 15.5 | 16.2 | 15.4 |
| Average share of a home health agency's beneficiaries with improvements in: | | | | |
| Walking | 61 | 63 | 69 | 74 |
| Transferring | 55 | 59 | 65 | 72 |

Note: All data pertain to fee-for-service beneficiaries only and are risk adjusted for differences in patient condition among home health patients.

Source: MedPAC analysis of Medicare claims data and Outcome and Assessment Information Set data provided by the University of Colorado.

- Quality measures for home health care draw on two sources, claims for payment submitted by HHAs and other patient assessment data collected by HHAs. In recent years, quality measures based on claims have indicated little change in quality, while measures based on patient assessment data have indicated improved quality. The claims-based rates of hospitalization and emergency department use have not changed significantly from 2014 to 2017, while the patient assessment–based functional improvement rates have improved. From 2014 and 2017, average rates of beneficiaries with improvement in transferring improved from 55 percent to 72 percent. These divergent trends raise concerns about the objectivity of the patient assessment data and suggest that the functional measures of quality, such as walking and transferring, should be interpreted carefully.

- Medicare implemented a value-based purchasing program for home health agencies in nine states in 2018. In 2019, agencies in these states will receive bonuses or penalties of up to 5 percent depending on their performance on 16 measures, including the functional and emergency department use measures listed above.

## Chart 5-3. IRFs improved on risk-adjusted rates of discharge to the community and potentially avoidable rehospitalizations during the stay, 2012 to 2017

| Measure | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|
| Potentially avoidable rehospitalizations during IRF stay | 2.8% | 2.6% | 2.7% | 2.6% | 2.7% | 2.6% |
| Potentially avoidable rehospitalizations during 30 days after discharge from IRF | 4.8 | 4.8 | 4.7 | 4.3 | 4.7 | 4.7 |
| Discharged to the community | 74.2 | 74.9 | 75.2 | 75.0 | 75.9 | 76.0 |
| Discharged to a SNF | 6.9 | 6.9 | 7.1 | 7.0 | 6.8 | 6.8 |

Note: IRF (inpatient rehabilitation facility), SNF (skilled nursing facility). High rates of rehospitalization and discharge to a SNF indicate worse quality. High rates of discharge to the community indicate better quality. Rates are the average of the facility rates and are calculated for all facilities with 25 or more stays.

Source: Analysis of Medicare claims data and Inpatient Rehabilitation Facility–Patient Assessment Instrument data from CMS.

- Between 2012 and 2017, the national average rate of risk-adjusted potentially avoidable rehospitalizations during IRF stays declined from 2.8 percent to 2.6 percent. (Lower rates are better.) The national average rate of risk-adjusted potentially avoidable rehospitalizations within 30 days after discharge from an IRF declined from 4.8 percent to 4.3 percent in 2015, then rose to 4.7 percent in 2016 and 2017.

- The rehospitalization rates count only stays readmitted to a hospital with the principal diagnosis of a potentially avoidable condition. The potentially avoidable rehospitalizations we measure are respiratory-related illness (pneumonia, influenza, bronchitis, chronic obstructive pulmonary disease, and asthma); sepsis; congestive heart failure; fractures or fall with a major injury; urinary tract or kidney infection; blood pressure management; electrolyte imbalance; anticoagulant therapy complications; diabetes-related complications; cellulitis or wound infection; pressure ulcer; medication error or adverse drug reaction; and delirium.

- Between 2012 and 2017, the national average for the risk-adjusted community discharge rate increased from 74.2 percent to 76.0 percent. (Higher rates are better). Our measure of community discharge does not give IRFs credit for discharging a Medicare beneficiary to the community if the beneficiary is subsequently admitted to an acute care hospital within 30 days of the IRF discharge. Between 2012 and 2014, the national risk-adjusted rate of discharge to a SNF increased from 6.9 percent to 7.1 percent, but subsequently declined to 6.8 percent in 2017 (lower rates are better).

## Chart 5-4. Dialysis quality of care: Some measures show progress, others need improvement, 2012–2016

| Outcome measure | 2012 | 2014 | 2016 |
|---|---|---|---|
| Share of in-center hemodialysis patients: | | | |
| Receiving adequate dialysis | 97% | 97% | 98% |
| Managing anemia | | | |
| Mean hemoglobin <10 g/dL | 22 | 26 | 27 |
| Mean hemoglobin 10 to <12 g/dL | 71 | 69 | 68 |
| Mean hemoglobin ≥12 g/dL | 7 | 5 | 5 |
| Dialyzed with an AV fistula | 60 | 62 | 63 |
| Share of peritoneal dialysis patients: | | | |
| Receiving adequate dialysis | 90 | 91 | 93 |
| Managing anemia | | | |
| Mean hemoglobin <10 g/dL | 30 | 34 | 34 |
| Mean hemoglobin 10 to <12 g/dL | 63 | 61 | 60 |
| Mean hemoglobin ≥12 g/dL | 7 | 5 | 5 |
| Share of all dialysis patients wait-listed for a kidney | 17.6 | 17.3 | 15.3 |
| Renal transplant rate per 100 dialysis-patient years | 3.5 | 3.4 | 3.5 |
| Annual mortality rate per 100 patient years* | 17.0 | 16.5 | 16.4 |
| Total hospital admissions per patient year* | 1.9 | 1.7 | 1.7 |
| Hospital days per patient year* | 12.0 | 11.4 | 11.3 |

Note: g/dL (grams per deciliter [of blood]), AV (arteriovenous). The rate per patient year is calculated by dividing the total number of events by the fraction of the year that patients were followed. Data on dialysis adequacy, anemia management, and fistula utilization represent the share of patients meeting CMS's clinical performance measures. The United States Renal Data System adjusts data by age, gender, race, and primary diagnosis of end-stage renal disease.
*Lower values suggest higher quality.

Source: Compiled by MedPAC with data from Fistula First, the United States Renal Data System, and institutional outpatient files from CMS.

- Quality of dialysis care is mixed. Performance has improved on some measures, but performance on others remains unchanged or has declined.
- All hemodialysis patients require vascular access—the site on the patient's body where blood is removed and returned during dialysis. Between 2012 and 2016, use of arteriovenous fistulas, considered the best type of vascular access, increased from 60 percent to 63 percent of hemodialysis patients. Between 2012 and 2016, overall adjusted mortality rates decreased by 4.0 percent (from 17.0 percent to 16.4 percent).
- Between 2012 and 2016, the proportion of hemodialysis patients receiving adequate dialysis remained high, and overall rates of hospitalization declined.
- Other measures suggest that improvements in dialysis quality are still needed. We looked at access to kidney transplantation because it is widely believed to be the best treatment option for individuals with end-stage renal disease. Between 2012 and 2016, the proportion of dialysis patients accepted on the kidney transplant waiting list declined, and the renal transplant rate per 100 dialysis-patient years did not change.

## Chart 5-5. Small improvements in hospital patient experience measures, 2013–2017

| H–CAHPS® measure | 2013 | 2014 | 2015 | 2016 | 2017 | Percentage point change, 2013–2017 |
|---|---|---|---|---|---|---|
| Hospital rating | 71% | 71% | 72% | 73% | 73% | 2 |
| Communication with nurses | 79 | 79 | 80 | 80 | 80 | 1 |
| Communication with doctors | 82 | 82 | 82 | 82 | 82 | 0 |
| Responsiveness of hospital staff | 68 | 68 | 68 | 69 | 70 | 2 |
| Communication about medicines | 64 | 65 | 65 | 65 | 66 | 2 |
| Cleanliness of hospital environment | 74 | 74 | 74 | 75 | 75 | 1 |
| Quietness of hospital environment | 61 | 62 | 62 | 63 | 62 | 1 |
| Discharge information | 86 | 86 | 87 | 87 | 87 | 1 |
| Recommend the hospital | 71 | 71 | 72 | 72 | 72 | 1 |
| Care transition* | 51 | 52 | 52 | 52 | 53 | 2 |

Note: H–CAHPS® (Hospital Consumer Assessment of Healthcare Providers and Systems®). H–CAHPS is a standardized 32-item survey of patients' evaluations of hospital care. The survey items are combined to calculate measures of patient experience for each hospital. The H–CAHPS measures included in the table are the "top-box," or the most positive, response to H–CAHPS survey items. The top-box response is "Always" for four H–CAHPS composite measures (communication with nurses, communication with doctors, responsiveness of hospital staff, and communication about medicines) and two individual items (cleanliness of hospital environment and quietness of hospital environment), "Yes" for the discharge information composite, "'9' or '10' (high)" for the hospital rating item, "Definitely yes" for the recommend the hospital item, and "Strongly agree" for the care transition composite. Each year's results are based on a sample of hospital surveys of their patients from January to December. About 4,239 hospitals are included, and, on average, these hospitals had patient-level survey response rates of 28 percent.

Source: CMS summary of H–CAHPS public report of survey results tables.

- In 2008, CMS began publicly reporting H–CAHPS results on the Hospital Compare website. In 2013, Medicare began the hospital value-based purchasing program, which makes incentive payments to hospitals based on the outcomes of certain quality measures. This program incorporates results from H–CAHPS.
- The share of patients who rated their hospital a 9 or 10 on a 10-point scale increased from 71 percent in 2013 to 73 percent in 2017.
- All but one of the hospital patient experience measures improved slightly from 2013 to 2017.