Could Medicare Readmission Policy Exacerbate Health Care System Inequity?

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The Centers for Medicare & Medicaid Services recently started publicly reporting hospital readmission rates. Health care reform proposals include readmission provisions as vehicles to promote care coordination and achieve savings. Current approaches ascribe variability in hospital readmission primarily to differences in patient medical risk and hospital performance. These approaches do not adequately account for the effect of patient sociodemographic and community factors that influence health care utilization and outcomes. The evidence base on cost-effective and generalizable care management techniques to reduce readmission is still evolving. Although readmission-related policies may prove to be a transformational force in health care reform, their incorrect application in facilities serving vulnerable communities may increase health care system inequity. Policy options can mitigate this potential.

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The Centers for Medicare & Medicaid Services (CMS) began publicly reporting hospital readmission rates in July 2009 (1), and proposals to reduce hospital readmission have gained prominence in health care reform discussions. A recent article by Jencks and colleagues (2) showed that 19.6% of Medicare beneficiaries were readmitted within 30 days of hospital discharge. Nearly $17.4 billion could be saved annually by preventing readmissions. If hospitals were evaluated and differentiated payments were generated on the basis of comparative readmission rates (3), readmission-based reimbursement would serve as a precursor to “bundled payments,” whereby hospitals, physicians, skilled nursing facilities, home care agencies, and other providers would receive a single payment under the auspices of an accountable care organization (7), and all would be expected to work together to effectively manage care transitions.

PATIENT-LEVEL POLICY LIMITATIONS

Consider 2 patients. Patient A, a man aged 70 years, is a Medicare beneficiary with hypertension, diabetes, and congestive heart failure. He is an affluent retiree with a doctoral degree; he lives with his wife, plays golf, drives to appointments to see his primary care physician (of 10 years), and has ample coverage for prescription drugs. Patient B, a man aged 70 years, is also a Medicare beneficiary with hypertension, diabetes, and congestive heart failure. Rates that the CMS publicly reports include acute myocardial infarction, congestive heart failure, and pneumonia.

Executive and congressional health care reform proposals from 2009 have relied on readmission provisions to catalyze payment system reform, and such proposals have even been supported by prominent media sources (4–6). A U.S. Senate Finance Committee policy option called for withholding up to 20% of a hospital’s inpatient payments on the basis of comparative readmission rates (4). Original U.S. House of Representatives options called for penalties of up to 5% of hospital payments for facilities with higher-than-expected readmission rates (5). Readmission-based reimbursement would serve as a precursor to “bundled payments,” whereby hospitals, physicians, skilled nursing facilities, home care agencies, and other providers would receive a single payment under the auspices of an accountable care organization (7), and all would be expected to work together to effectively manage care transitions.

CURRENT READMISSION REPORTING AND POLICY APPROACHES

Readmission rates are now publicly reported as part of the CMS Reporting Hospital and Quality Data Annual Payment Update program. The 43 hospital quality measures reported to date have encompassed effectiveness of care, patient safety, and patient-centeredness. Inclusion of readmission rates allows the CMS to add measures of hospital efficiency and care coordination as part of its overall value-based purchasing efforts (3). The 30-day readmission
However, patient B is of modest means; he did not com-
plete high school, lives alone in urban housing, speaks lim-
ited English, relies on his working children to make med-
ical appointments at a clinic, and has gaps in his
prescription drug coverage. If a hospital discharged both of
these patients with congestive heart failure, which one
would be more likely to be readmitted within 30 days?

Although patients A and B are medically “identical,”
the current CMS readmission measurement model does
not account well for the important differences in the 2
patients’ situations. Demographic variables, such as race,
ethnicity, and preferred language, and socioeconomic vari-
ables (for example, education level and income) are not
included (8). Although hospital readmission rates are ad-
justed for coded comorbid conditions, clinical factors, such
as degree of left ventricular or kidney function, are ex-
cluded. The all-cause method also does not exclude read-
missions for unrelated conditions—a patient discharged
with pneumonia and readmitted 3 weeks later after a mo-
tor vehicle accident would count in the hospital’s pneumo-
nia readmission rate.

Although the socioeconomic circumstances for pa-
tients A and B contrast anecdotally, the effect of these
factors has been shown to predict health care utilization
and outcomes. Ross and coworkers (9) completed a sys-
tematic review of 117 studies that included models to as-
sess the relationship between patient characteristics and
heart failure readmission rates. Among models in which
sociodemographic variables were included, several studies
were identified in which race, ethnicity, living status, in-
urance, and income were statistically significantly associ-
ated with heart failure readmission.

Rathore and colleagues (10) analyzed a national sam-
ple of records of Medicare beneficiaries with heart failure
to evaluate the relationship among socioeconomic status,
quality of inpatient care, and outcomes. They used a com-
posite socioeconomic status measure derived from com-
munity data and concluded that socioeconomic status was in-
dependently and significantly associated with higher 1-year
readmission and mortality rates. A recent statistical brief
from the Agency for Healthcare Research and Quality eval-
uated the national frequency and costs of preventable hos-
pitalizations (11). Rates of hospitalization for all 12 adult
medical conditions evaluated were higher for patients re-
siding in the lowest-income communities than for those
living in the highest-income communities.

With respect to education level and its effect on
health, a recent report from the Robert Wood Johnson
Foundation assessed adult health in the United States.
Compared with the most educated adults, the least edu-
cated adults in every state were more likely to be in less
than very good health. (12). The Institute of Medicine’s
report on racial and ethnic disparities summarized more
than 2 decades of work documenting disparities in health
care outcomes among Hispanic/Latino, African-American/
black, and American-Indian populations (13). These gaps

| Key Summary Points |
|-------------------|
| The Centers for Medicare & Medicaid Services recently
  started publicly reporting readmission rates. |
| Options for health care reform would create differentiated
  hospital payments based on readmission rates. |
| Hospital performance is one of many factors that deter-
  mine readmission. |
| Current models and reform discussions largely omit the
  contribution of demographic, socioeconomic, and commu-
  nity variables. |
| Demographic, socioeconomic, and community variables
  may play a substantial role in determining readmission in
  hospitals serving vulnerable communities. |
| Generalizable techniques to manage care cost-effectively
  are still evolving. |
| Evaluating hospitals that serve challenged communities on
  the basis of readmission rates and imposing corresponding
  financial penalties may amplify inequity in the health care
  system. |

| Community-Level Policy Limitations |
|-----------------------------------|
| Regional variation in health care spending and utiliza-
  tion has received much attention recently (17). Analyses of
  hospital readmission data have revealed variation in read-
  mission rates at state and local levels (2, 18). Although
  such findings can be viewed as indicative of suboptimal
  hospital performance, they may also indicate that demo-
  graphic and socioeconomic factors, health care service
  provider accessibility, and community characteristics produce
  variability in hospital utilization, in addition to patient
  medical characteristics and hospital performance. Access to
  primary care; subacute rehabilitation; skilled nursing;
  home care; and services unrelated to health care, such as
  transportation, can determine hospital utilization rates.
  Comparison of recently released readmission data from
  hospitals in different communities illustrates this finding
  (Appendix Table, available at www.annals.org). |
Publicly reported quality measures released by the CMS for congestive heart failure care include comprehensive discharge instruction and readmission rates (1). The county our institution serves, Bronx, New York, is a highly diverse urban community and 1 of the poorest counties in the United States. In contrast, some of the most affluent suburban counties in the United States are located within a 30-minute commute. For the provision of heart failure discharge instructions, a quality variable that is fully under a hospital’s control, 6 of 7 Bronx county hospitals reporting data perform more favorably than the national average. In contrast, only 3 of 6 facilities in a neighboring affluent county do. Heart failure mortality rates are also similar. However, for corresponding heart failure readmission rates, in which socioeconomic and community factors exert a significant influence, Bronx hospitals do not perform as well as the same neighboring affluent county.

Current Policy and Care Management

A central tenet of basing future hospital payments on readmission rates is that hospitals and postdischarge providers will successfully work together to reduce hospital readmission. This introduces questions about which interventions they would use to accomplish this. Quality improvement rests on the application of established evidence-based practices. In contrast, the state of the science on effective care management methods is evolving, and the generalizability of approaches in varied patient populations remains to be seen. In such areas as heart failure care, in which effective care management methods have been identified, it is unclear that overall spending is reduced (19).

Peikes and colleagues (20) recently evaluated the effectiveness of the CMS Coordinated Care Demonstration. Fifteen care coordination programs across diverse settings used different techniques to manage chronic conditions, including congestive heart failure, coronary artery disease, and diabetes. Thirteen showed no significant difference in hospitalizations, and none of the 15 yielded net savings. These results from motivated and funded care coordination entities suggest the difficulties that nascent coalitions of hospitals and disparate postdischarge providers will confront in developing “home-grown” programs to prevent readmission.

Addressing Policy Limitations

Preventable hospital readmissions present an opportunity to improve care coordination and achieve savings. However, current approaches omit consideration of important variables that determine readmission. The addition of financial penalties for hospitals with higher readmission rates treating vulnerable populations in challenged communities amplifies these policy shortcomings. Hospitals’ disproportionate share funding was intended to remedy these challenges. Eliminating this funding and reducing payments based on readmission rates may create financial “double jeopardy” and paradoxically worsen care coordination and exacerbate health disparities in such communities.

Given this deleterious potential, the CMS should not broadly apply readmission policies until specific policy remedies are incorporated. Readmission measurement models should include additional factors, such as patient sociodemographic and community characteristics. The CMS could leverage disproportionate share funding methods, census and national health survey data, and the data it already uses to adjust federal patient satisfaction surveys to account for these factors. If hospital discharge performance is the primary variable of interest, readmission for unrelated conditions should be excluded from calculation of rates, and a shorter readmission window, such as 7 days, should be used.

Hospitals should be judged on the basis of their own expected performance rather than penalized for having higher readmission rates than those of other facilities. The relationships among patient sociodemographic variables, community characteristics, and readmission rates should be studied to promote fair hospital comparison and further advance the evidence base on care management. Critical evaluation of demonstration projects, such as the recently launched CMS Care Transitions Project, remains essential in determining the effectiveness of care management efforts in varied patient populations.

Informed readmission policy can be a transformational force in promoting coordinated and patient-centered care. However, gains in health care system efficiency should not come at the expense of equity. A hasty one-size-fits-all approach is unlikely to work in formulating details for the most important health care reform in a generation.

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Appendix Table. Community Characteristics and Hospital Quality Measures

| Community Characteristic                               | Fairfield, Connecticut* | Bronx, New York† |
|--------------------------------------------------------|-------------------------|------------------|
| Estimated population, n                                | 895 030                 | 1 391 903        |
| Median household income, $                              | 80 020                  | 34 031           |
| Persons below poverty level, %                         | 7                      | 27               |
| Non-Hispanic white population, %                       | 70                     | 13               |
| No English spoken at home (aged ≥5 y), %               | 24                     | 53               |
| Bachelor degree or higher (aged ≥25 y), %              | 40                     | 15               |

Hospital quality data (1)

| Hospital quality data                                      | Fairfield, Connecticut* | Bronx, New York† |
|-----------------------------------------------------------|-------------------------|------------------|
| Hospitals in county with quality data on CMS Hospital Compare site, n | 6                       | 7                |
| Hospitals with heart failure discharge instruction rate better than the U.S. average, n (%) | 3 (50)                  | 6 (86)           |
| Hospitals with heart failure readmission rate significantly worse than U.S. average, n (%) | 0 (0)                   | 6 (86)           |
| Hospitals with heart failure mortality rate significantly worse than U.S. average, n (%) | 0 (0)                   | 0 (0)            |

CMS = Centers for Medicare & Medicaid Services.
* Data from reference 21.
† Data from reference 22.