Measuring Quality and Enacting Policy
Readmission Rates and Socioeconomic Factors

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In this issue of Circulation Cardiovascular Quality and
Outcomes, Blum et al1 ask how hospital quality profiling
for the 48 hospitals in New York City would change if pub-
licly reported heart failure readmission measures accounted
for patients’ socioeconomic status. This article is timely—
the debate about patients’ socioeconomic status and outcome
quality measures is garnering national attention, including
public statements by the American Hospital Association,2
the release of an expert report commissioned by the National
Quality Forum,3 and proposed legislation on the same topic,
which would modify the formula used to penalize hospitals for
excess readmissions to account for the low-income patients
served by the hospital.4

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Sparked by concerns about impact of pay-for-performance
programs on safety-net providers5,6 and fueled by data sug-
gesting that hospitals with higher disproportionate share hos-
pital funding face payment penalties at a greater rate under the
Hospital Readmission Reduction Program,7,8 increasingly stake-
holders are calling for a change to the Center for
Medicare and Medicaid Services (CMS) readmission mea-
sures to include risk adjustment for patients’ socioeconomic
status. The article by Blum et al,1 however, demonstrates that
for a diverse set of New York City hospitals such a change
would have little impact on hospital profiling.

Blum et al1 use a methodological approach that closely mir-
rors, but is not identical to, the methods used by CMS to cal-
culate hospitals’ 30-day risk-standardized readmission risk for
patients after heart failure hospitalizations. This is a strength
of the article. As with CMS’s measures, the authors’ use hier-
archical modeling to compare a hospital’s performance to
what would be expected for an average hospital with a similar
case mix. They then simulate the effect of adding socioeco-


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those of the Centers for Medicare and Medicaid Services.

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mean New York City readmission rate, changes if the same
measure includes risk adjustment for patients’ socioeconomic
status. They account for the uncertainty in measurement by
estimating the confidence interval around each hospital’s risk-
standardized readmission rate and categorize hospitals based
on whether that interval crosses the New York average, similar
to the use of the interval estimate in the national measures.
Ultimately, the authors find that only 1 out of 48 hospitals
would change category with the inclusion of socioeconomic
status in the risk models.

Critics will be quick to point out limitations of the socioeco-


nomic status variable used by these authors. To account for
patients’ socioeconomic status, the authors used a validated
Agency for Healthcare Research and Quality index linked to
patient zip code that incorporates 7 socioeconomic status vari-
able. This article is timely—
variables into a single measure including area income, poverty,
housing, and education levels. There is no perfect measure
of patients’ socioeconomic status. Socioeconomic status is a
multifaceted concept that includes education, wealth, income,
and occupation, along with many other factors that have the
potential to influence individuals’ clinical outcomes differently
depending on context. There is a critical need to collect more
reliable national data on socioeconomic factors and continued
work to be done to fully explore the most important socio-
ecconomic factors influencing patient outcomes. However, the
metric used by the authors is arguably as good an index of
social determinants as could be feasibly incorporated into
national measures in the near term. Given the dearth of nation-
ally available individual socioeconomic variables, and the
lack of a single accepted variable for assessing socioeconomic
status, this study reasonably approximates a realistic change
to current measures by using “CMS-like” measure methodol-
ogy and a nationally available source of socioeconomic status.

Although the generalizability of the article by Blum et al1
may be limited by its focus on only 48 hospitals within New
York City, these hospitals have a broad range of socioeconomic
case mix, which is reflected by the Agency for Healthcare
Research and Quality socioeconomic status index. Moreover,
the findings are supported by other reports showing that risk
adjustment for dual-eligible status would not substantially
change risk-standardized readmission rates nationally for heart
failure, acute myocardial infarction, or pneumonia9 as well as
a recent study showing that adjustment for patient-level socio-
ecoconomic status would have only a modest effect on the per-
centage of hospitals penalized under the Hospital Readmission
Reduction Program (only 4% fewer disproportionate share
hospitals would be affected by penalties for heart failure read-
mission).10 This article adds to growing evidence that patient-
level risk adjustment for socioeconomic status may not have a
meaningful impact on readmission measure results.
The impetus for stakeholder calls to incorporate socioeconomic status into outcome measures, and readmission measures in particular is primarily concerns about the financial impact of pay-for-performance programs on providers caring for patients of low socioeconomic status. The findings of Blum et al. do not undermine these concerns. The key to reconciling findings of Blum et al. and legitimate concerns about the health of the safety net in the era of pay for performance is disentangling discussions about the quality measures themselves and the policies surrounding their use.

Quality measures are meant to illuminate performance gaps and incentivize improvements in care. Outcome measures, in particular, are intended to provide broad targets that will catalyze innovation and transformations in care to improve outcomes that are meaningful to patients. Regardless of the results of this article, there are important conceptual and scientific reasons for being cautious about incorporating socioeconomic status into risk adjustment of outcome quality measures. Risk-standardized readmission measures are constructed to compare a hospital’s results to what would be expected based on an average hospital’s performance caring for a similar mix of patients. Risk adjustment thereby sets the standard by which a hospital is evaluated. By adding socioeconomic status to the readmission measures, the measures evaluate a hospital with reference to hospitals with a similar socioeconomic status mix—if low socioeconomic status patients have worse outcomes overall, then the expectation for hospitals with more low socioeconomic status patients will be to achieve worse outcome rates. Literally, we accept worse outcome rates as “expected” performance because a hospital cares for patients of low socioeconomic status, whereas we set higher standards for hospitals with fewer low socioeconomic status patients. CMS has, for obvious reasons, been reticent to set different standards for the outcomes of low socioeconomic status patients—particularly given evidence that disparities in outcomes for low socioeconomic status patients are at least partly the result of such patients’ exposure to worse quality of care.11 Quality measures should not be constructed to treat disparities in patient outcomes as inevitable. Evidence shows that hospitals caring for low socioeconomic status patients can successfully diminish quality gaps through participation in incentive programs12 and safety-net providers can achieve similar outcomes to non–safety-net providers on readmission and mortality rates.13 Risk adjustment for patient socioeconomic status, by setting worse outcomes as the expectation, risks diminishing the incentives to improve care for vulnerable patients of low socioeconomic status by enshrining and accepting current outcomes disparities.

On the other hand, within pay-for-performance programs, hospitals that care for low socioeconomic status patients may be at a distinct disadvantage. Safety-net hospitals often have lower operating margins and may be more vulnerable to payment penalties; this is what led to the establishment of disproportionate share hospital payments initially. Moreover, above and beyond the risk to financial margins and operations, it may take a greater investment of resources by hospitals and partner community organizations to achieve best outcomes for low socioeconomic status patients compared with other groups, and this is an investment that is not always funded. If we had empirical evidence that a pill helped low socioeconomic status patients avoid readmission, we might cover the cost for it, but in the case of readmission, that pill might actually be resource-intensive services such as social workers, extra time with translators, follow-up phone calls, or bus rides to the next appointment.

Rather than adjusting outcome measures for socioeconomic status, several other possible approaches might better support the safety net to improve patient outcomes. These include incentives based on improvement rather than relative performance, slower phasing in of penalties for providers of low socioeconomic status patients to allow for investment in quality, or peer-group comparisons for the application of payment penalties as proposed by Medicare Payment Advisory Commission.14 Additionally, programs that directly fund quality efforts, such as Medicare’s Partnership for Patients, can be targeted to safety-net providers.

Risk adjustment for socioeconomic status seems to have little effect on provider results on these outcome measures, and yet, it risks entrenching disparities in outcomes and decreasing incentives to improve care for vulnerable populations. We need policies and programs that hold high standards for improving outcomes and maintain a focus on improving disparities but recognize that safety-net providers may need greater resources to succeed.

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References


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