Fargen and colleagues2 queried the Nationwide Inpatient Sample database for all cases of acute ischemic stroke between 2002 and 2011 and calculated the rate of hospital-acquired conditions (HACs) and patient safety indicators (PSIs). Overall, 18% of patients suffered at least one of these conditions. Not surprisingly, rates varied by type of insurance, with privately insured patients having the lowest rate (15.9%) compared to Medicare (18%) and Medicaid (26.1%) patients. The obvious question—not directly addressed in this study but alluded to in the Discussion—is whether the quality of care was different for patients with different types of insurance or whether the patients themselves were different or both. Given the data presented by the authors, the preponderance of indirect evidence seems to support the contention that the hospitalized Medicaid population may be less healthy than the privately insured population and that access to similar-quality inpatient care is less of an issue. For instance, there are no differences in the rates of complications mostly related to the quality of care (iatrogenic pneumothorax, postoperative hip fracture, postoperative hemorrhage, deep vein thrombosis, pulmonary embolism, and retained foreign body). In contrast, there are marked differences in the rates of complications most likely to be significantly impacted by baseline health status (pressure ulcers, central line infections, poor diabetic glucose control, pneumonia, sepsis, catheter-associated urinary tract infection, and non–hip fracture falls). The possibility that Medicaid patients have a different baseline health status has received considerable attention over the years,1 but the degree to which Medicaid per se plays a role in this relatively poorer baseline health status, as compared to the poverty that led to the need for Medicaid or to the factors responsible for the poverty in the first place, is something that is unknown and truly beyond the scope of the current report. Perhaps the best use of this data is to focus attention on the problem of health disparities in neurosurgery and to develop incentives that encourage better outcomes for Medicaid patients rather than encouraging their abandonment, as one can envision might happen in a system that relies so heavily on non–risk-adjusted metrics.1

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References

Response
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We thank Dr. Connolly for his insightful review of our paper and its conclusions. We share his observation that the main question generated by our analysis of stroke patients in the Nationwide Inpatient Sample (NIS) database is whether the quality of care provided to individuals without private insurance is truly worse than the care provided to those with private insurance, or whether our interpretation is confounded by factors that we cannot study given the limitations inherent to the NIS. As Dr. Connolly mentioned, one potential explanation is that patients without private insurance are generally less healthy than those with private insurance and that the lower rates of patient safety events identified in the privately insured
population may be the result of better overall health, and not attributable to differences in the quality of care. In our analysis, we attempted to control for overall general health by controlling for concomitant health conditions through a comorbidity score described by Elixhauser et al. But even after controlling for this factor, patient safety events, longer hospital stays, and higher mortality were strongly associated with Medicaid patients as compared to privately insured patients. However, this method of broadly determining general health is by no means foolproof and is subject to significant biases because of the way the data in the NIS are collected and reported.

As cited in our paper, a number of previous studies have identified health discrepancies between those with different types of insurance. Interestingly, Dr. Connolly observes that the number of PSIs that can be argued to be closely related to quality of care (iatrogenic pneumothorax or postoperative hemorrhage) were no different between Medicaid patients and privately insured patients, while those with Medicaid had higher rates of PSIs that are more closely related to underlying general health (pressure ulcers). This point insinuates an inherent difference in the general health of these two populations that our comorbidity factor failed to mediate. On the other hand, it is also plausible that the degree of reimbursement provided by different types of insurance may have an actual detectable impact on the quality of care provided. While this may not be readily identifiable in everyday practice, in an administrative data set with enough power, such as the NIS, minor differences in patient safety events can be identified as statistically significant. Unfortunately, given the inherent limitations of the NIS, we believe that analyses generated from the NIS will be unable to answer the question as it has been posed. However, even though we cannot elucidate why the outcomes are better in those who are privately insured, knowing that the outcomes are in fact different between insurance types remains relevant.

As the US health care system continues to shift toward a pay-for-performance paradigm, there has been increasing focus on quality metrics as determinants of reimbursement. As this system continues to evolve, it will be important to recognize that different population subgroups are not created equal when it comes to the incidence of certain metrics. Hospitals caring predominantly for underserved or uninsured stroke patients may naturally have higher rates of PSIs than those caring mainly for privately insured patients, even though the quality of care may be the same. As such, hospitals may be dis-incentivized to care for patients without insurance in an attempt to improve their quality metrics and enhance reimbursement. Recognizing that hospital metrics may be influenced by both quality of care and patient population is important prior to establishing a system that further disenfranchises uninsured patients and the hospitals that work hard to care for them.

Reference