Hospitals in the US are increasingly subject to government regulations intended to improve the quality of care for patients with sepsis. Examples include the Centers for Medicare and Medicaid Services sepsis management bundle program (SEP-1) as well as state-level mandates such as those in New York. These programs exist for good reason. Sepsis is among the most costly and deadly conditions for hospitalized patients, and only a minority of patients with sepsis receive guideline-adherent care. In theory, government regulations like these would incentivize hospital-level quality improvement efforts leading to improved performance and increased survival for patients with sepsis.

Unfortunately, these programs don't always work as intended. For instance, the first iteration of SEP-1 did not lead to improved outcomes for sepsis patients. There are likely a few reasons for this failure. At the time, SEP-1 was limited to public reporting of quality data, which is known to be a relatively weak policy option. SEP-1 also focused only on process-based quality measures, which are not tightly linked to mortality in most patients. In contrast to SEP-1, the New York State program was much more intensive. It included a broader range of performance measures—both process and outcome—and it went beyond public reporting to mandate use of hospital-wide sepsis education and protocolized resuscitation. Perhaps for this reason, the New York state sepsis program was more successful than SEP-1, with evidence suggesting that it led to lower mortality in New York hospitals.

Although intensive programs like New York State's appear to succeed, they come with a substantial downside—they are extremely costly to implement. To effect change, hospitals must employ a wide array of resource-intensive tools, including staff education, electronic health record alerts, clinical decision support, and internal audit and feedback. These investments are outside the reach of many hospitals, particularly safety-net hospitals, which provide care for traditionally underserved and minoritized patients. Safety-net hospitals play a critical role in the US health care system by serving patients that would otherwise lack access to high-quality acute care. Yet safety-net hospitals are under intense financial pressures, reducing their ability to invest in mandated quality improvement activities like those related to sepsis. These pressures are leading to widening health disparities. In New York State, for example, more performance gains under the sepsis regulations were seen by White patients than Black patients. Sepsis quality measurement, as well-intended as it may be, is fraying the safety net.

The subtle ways in which existing sepsis quality measurement disadvantage safety-net hospitals are further highlighted in a recent study by Law et al in JAMA Network Open. Law and colleagues focused on 1 sepsis quality measure in particular: risk-adjusted in-hospital mortality. In-hospital mortality is a convenient quality measure because it's easy to assess. Unlike time-anchored measures like 30-day mortality, it does not require following the patient beyond their hospitalization or linking hospital data to other data sources like the Social Security death index. Using a Medicare dataset that contains both in-hospital mortality and 30-day mortality, the authors were able to compare these 2 measures in both safety-net and non-safety-net hospitals.

As expected, 30-day mortality was substantially higher than in-hospital mortality in the Law et al study. In sepsis, like in other clinical domains, hospitals can shift the mortality-burden by discharging patients sicker and quicker to postacute facilities. Yet the differences between in-hospital mortality and 30-day mortality were much greater in safety-net hospitals compared with non-safety-net hospitals. That is, safety-net hospitals were adept at shifting the mortality burden to other sites, relative to other hospitals. These differences were not just due to payer mix, since all
patients in this study had the same insurer (fee-for-service Medicare). Instead, as elegantly shown by the study authors, these differences were due to differential access to end-of-life services, such as palliative care consultation and hospice. Discharge to hospice was significantly lower in safety-net hospitals compared with other hospitals, meaning that although patients in safety-net hospitals were dying at the same rates as patients in other hospitals, they were more likely to die in the hospital, without access to specialized palliative care.

These findings are not altogether surprising. As Law et al8 note in their discussion, many past studies demonstrate that in-hospital mortality is a biased quality measure. Past studies also document disparities in access to palliative care and the ways that quality improvement programs put safety-net hospitals at risk. However, these findings are both new and of heightened relevance in the context of sepsis. State-level programs like New York’s continue to expand, and Medicare recently upped the stakes by incorporating SEP-1 into its existing pay-for-performance program. Absent more thoughtful design of these programs, safety-net hospitals will be put further at risk.

Several steps are warranted. First, sepsis quality programs should clearly be based on time-delineated mortality rates (eg, 30-day mortality) rather than in-hospital mortality. In the past, there were not easy ways to link hospital data to death records, but that is changing in the era of big data and secure data sharing tools. This change alone will go a long way to ensure that sepsis regulations don’t unfairly penalize safety-net hospitals. Second, governments should accompany sepsis regulations with policies that expand access to high-quality end-of-life care through innovative means, such as telemedicine-enabled palliative care consultation. Third, governments should provide performance improvement toolkits and promote multihospital collaborations to support quality improvement efforts in under-resourced hospitals. Prior work9 shows that safety-net hospitals provide higher quality sepsis care when they are part of multihospital systems and are therefore able to avail themselves of a broad array of resources for quality improvement.

While we take these steps, it’s important that we not abandon health policy as a tool to improve sepsis outcomes. Hospitals can and should be held accountable for delivering high-quality care to patients with sepsis. Yet it’s critical that we design these health policies so that they don’t widen health disparities by hurting the hospitals meant to serve the most vulnerable patients. Sepsis quality measurement should lead to improved outcomes at all hospitals, not just hospitals that are financially well off.

ARTICLE INFORMATION
Published: May 31, 2024. doi:10.1001/jamanetworkopen.2024.12781

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Conflict of Interest Disclosures: None reported.

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