Designing Quality Programs for Rural Hospitals

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Population-based hospital payments provide incentives to reduce unnecessary healthcare use and a mechanism to finance population health investments. For hospitals, these payments provide stable revenue and flexibility in exchange for increased financial risk. The COVID-19 pandemic significantly reduced fee-for-service revenues, which has spurred provider interest in population-based payments, particularly from cash-strapped rural hospitals.

The Centers for Medicare & Medicaid Services (CMS) recently announced the launch of the Community Health Access and Rural Transformation (CHART) Model to test whether up-front, population-based payments improve access to high-quality care in rural communities and protect the financial stability of rural providers. This model follows the ongoing Pennsylvania Rural Health Model (PARHM), which offers similar payments to Pennsylvania's rural hospitals. Prospective population-based hospital reimbursement appears to have helped Maryland's hospitals survive the financial stress of the COVID-19 pandemic,[1] and it is likely that the PARHM did the same for rural hospitals in Pennsylvania. Both the PARHM and the CHART Model place quality measurement and improvement at the core of payment reform, and for good reason. Capitation generates incentives for care stinting; linking prospective payments to quality measurement helps to ensure accountability. However, measuring the quality of rural healthcare is challenging. Rural health is different: Hospital size, payment mechanisms, and community health priorities are all distinct from those of metropolitan areas, which is why CMS exempts Critical Access Hospitals from Medicare's core quality programs. Rural quality reporting programs could be established that address the unique aspects of rural healthcare.

As designers (JEF, DTL) of, and an advisor (ALS) for, a proposed pay-for-performance (P4P) program for the PARHM,[2] we identified three central challenges in constructing and implementing P4P programs for rural hospitals, along with potential solutions. We hope that the lessons we learned can inform similar policy efforts.

First, many rural hospitals serve as stewards of community health resources. While metropolitan hospital systems can make targeted investments in population health, assigning accountability for health outcomes is challenging in cities where geographically overlapping provider systems compete for patients. In contrast, a rural hospital system with few or no competing providers is more naturally accountable for community health outcomes, especially if it owns most ambulatory clinics in its community. P4P programs could therefore reward rural hospitals for improving healthcare quality or health outcomes within their catchment areas. Like an accountable care organization (ACO), a rural hospital or hospital-based health system could be held accountable for appropriate screening for, and treatment of, uncontrolled hypertension, diabetes, or asthma, even without a network of community-based primary care providers that ACOs usually possess. Participants in the CHART Model's Community Transformation Track, for example, select three community-level population health measures from four domains: substance use, chronic conditions, maternal health, and prevention. Accountability for community health outcomes is increasingly feasible because many larger rural hospitals have merged or been acquired.[3]

Second, small rural hospital patient volumes obscure the signal of true quality with statistical noise. Many common quality indicators, like risk-standardized mortality rates, are unreliable in rural settings with low patient volumes; in 2012-2013, the mean rural hospital daily census was seven inpatients.[4,5] Payers and regulators have addressed this challenge by exempting rural hospitals from quality-reporting programs or by employing statistical techniques that diminish incentives to invest in improvement. CMS, for example, uses "shrinkage" estimators that adjust a hospital's quality score toward a program-wide average, which makes it difficult to detect and reward performance improvement.[4] Instead, rural P4P programs should use measures that are resistant to low patient volumes, such as the Measure Application Partnership's (MAP) Core Set of Rural-Relevant Measures.[6] Low volume–resistant measures include process and population-health outcome measures with naturally large denominators (eg, medication reconciliation), structural measures for which sample size is irrelevant (eg, nurse staffing ratios), and qualitative assessments of hospital adherence to best practices. CMS and other measure developers should also prioritize the creation of other rural-relevant, cross-cutting, low volume–resistant measures, like avoidance of deliriogenic medications in the elderly or initiation of treatment for substance use disorders, in consultation with rural stakeholders and the MAP Rural Health Workgroup. When extensive measurement noise is inevitable, public and private policymakers should eschew downside risk in rural P4P contracts.

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Third, many rural hospitals have limited resources for measurement and improvement.[7] While many well-resourced community hospitals have dedicated quality departments, quality directors in rural hospitals often have at least one other full-time job. Well-intentioned exemptions from P4P programs have left rural hospitals with limited experience with basic data collection and reporting, a handicap compounded by redundant and misaligned payor quality reporting requirements. To engage rural hospitals in quality improvement work, payors should coordinate to make participation in rural P4P programs as easy as possible. The adoption of a locally aligned set of healthcare quality measures by all payors in a region, like the PARHM's proposed "all-payer quality program," could substantially reduce administrative burden and motivate rural hospitals to enhance patient care and improve community health. In the CHART Model's Community Transformation Track, for example, all public and private participating payers in each region must report on six quality measures: inpatient and emergency department visits for ambulatory care sensitive conditions, hospital-wide all-cause unplanned readmissions, and the Hospital Consumer Assessment of Health Care survey, as well as three community-chosen measures from the domains of substance use, maternal health, and prevention.[8] As with all P4P programs, rural P4P programs should focus on a small number of meaningful measures, such as functional and clinical outcomes, complications, and patient experience, and feature relatively large rewards for improvement.[9] The National Quality Forum recommends that rural programs avoid downside risk, reward improvement as well as achievement, and permit virtual provider groups.[10] We would add that programs in rural communities ought to pair economic rewards with social recognition and comparison, offer technical assistance and opportunities for shared learning, and account for social as well as medical risk.

Many challenges to the adoption of rural P4P programs have been targeted through multi-stakeholder collaborations like the PARHM. Careful allocation of technical assistance resources may help address barriers such as comparing the performance of heterogeneous rural hospitals that vary in characteristics like size, affiliation with large health systems, or integration of ambulatory care services, which may affect hospital measurement capabilities and performance. Quality improvement efforts could be further bolstered through direct allocation of funds to the creation of virtual shared learning platforms, and by providing performance bonuses to groups of small hospitals that elect to engage in shared reporting.

The stakes are high for designing robust quality programs for rural hospitals. Although one in five Americans rely on them for healthcare, their rate of closure has accelerated in the past decade.[11] CMS has made it clear that a sustainable system for financing rural health must be built around a commitment to quality measurement and improvement. While some rural provider organizations might be best served by participating in voluntary rural health networks and preexisting federal programs like the Medicare Beneficiary Quality Improvement Project, they should also have the opportunity to accept payments tied to quality, especially as growing numbers of rural hospitals are absorbed into larger healthcare systems. Adopting aligned sets of reliable and meaningful quality measures alongside population-based payments will help to create a sustainable future for rural hospitals.

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