

Case Study Series on Process-of-Care Measures: Improvement Strategies of Top-Performing Hospitals

The following synthesis of performance improvement strategies is based on a case study series published on The Commonwealth Fund Web site, WhyNotTheBest.org. The hospitals profiled in this series were identified based on their performance on the process-of-care measures, or "core measures," as reported to the Centers for Medicare and Medicaid Services. Please see the case studies for a full description of the selection methodology.

The case studies describe the strategies and factors that appear to contribute to performance improvement on the core measures. It is based on information obtained from interviews with key hospital personnel and materials provided by the hospitals.ⁱ

The hospitals profiled in the case study series are:

- Luther Midelfort Mayo Health System, Eau Claire, Wis.
- Flowers Hospital, Dothan, Ala.
- Gaston Memorial Hospital, Gastonia, N.C.
- Oklahoma Heart Hospital, Oklahoma City, Okla.
- St. Mary's Health Center, Jefferson City, Mo.
- NorthShore University Health System, Evanston, Ill.

Management and Culture	Leadership	Dedicate staff time to quality improvement	<ul style="list-style-type: none"> 20% of staff time is protected from other responsibilities to develop and test new ideas, supporting a culture of experimentation (Luther Midelfort Mayo Health System).
		Conduct strategic planning	<ul style="list-style-type: none"> Strategic planning takes place every 180 days, supported by ongoing data collection, monitoring progress toward goals, and adoption of plans that support the goals (Luther Midelfort Mayo Health System).
		Devote at time at board meetings	<ul style="list-style-type: none"> 20% of board meetings is reserved for discussions of quality among the whole board, not just a quality subcommittee (Gaston Memorial Hospital).
		Derive momentum from national campaigns	<ul style="list-style-type: none"> Participate in a national improvement collaborative, such as those sponsored by the Institute for Healthcare Improvement and the Centers for Medicare and Medicaid Services (Gaston Memorial Hospital).
		Commit resources based on potential to affect quality	<ul style="list-style-type: none"> Explicit prioritization of spending based on expectation about the impact on the patient (Oklahoma Heart Hospital).
	Physician Engagement	Establish peer-to-peer counseling	<ul style="list-style-type: none"> Physicians discuss quality data and performance with peers whose performance does not meet standards

			<p>(Gaston Memorial Hospital; Flowers Hospital; St. Mary's Health Center).</p> <ul style="list-style-type: none"> • Reinforcement of performance goals through personal feedback (Flowers Hospital).
		Review variances at a high level	<ul style="list-style-type: none"> • Medical staff has a peer review committee to review variation from practice standards and present findings to all physicians (St. Mary's Health Center).
		Urge adoption of practice standards	<ul style="list-style-type: none"> • The president and the board provide direction to the entire medical staff about the importance of adopting standards of practice related to core measures (St. Mary's Health Center).
		Make core measures part of physician credentialing	<ul style="list-style-type: none"> • As one of the criteria for physician credentialing, performance on core measures is assessed (St. Mary's Health Center).
		Facilitate communication between physicians and CMS	<ul style="list-style-type: none"> • Doctors address questions about the quality measures and receive responses directly from CMS through the QualityNet Web site (NorthShore University Health System).

		Appoint physicians to lead improvement committees	<ul style="list-style-type: none"> Using physicians to lead teams not only provides clinical expertise, but helps build support for implementing needed changes (St. Mary's Health Center). Involve hospitalists in care map and order set design to ensure physician buy-in (Gaston Memorial Hospital).
Clinical staff engagement		Designate case managers to attend to discharge measures	<ul style="list-style-type: none"> Designated discharge care managers focus on getting each patient the correct discharge instructions and follow-up appointments (NorthShore University Health System).
		Establish pharmacist review of drug-related protocols	<ul style="list-style-type: none"> Pharmacists review prescribing decisions throughout patients' hospitalizations to address problems or deviations from standards directly with doctors (NorthShore University Health System).
		Create interdisciplinary teams of caregivers	<ul style="list-style-type: none"> With doctors, nurses, pharmacists, and others involved in the care process at the table, it is possible to avoid surprises or slips later (Gaston Memorial Hospital).
		Appoint process improvement team to coordinate changes	<ul style="list-style-type: none"> A designated process improvement team can provide the expertise in process redesign, complementing the work of the clinical performance improvement team (Luther Midelfort Mayo Health System). The team can also coordinate the staging of all

			improvement efforts so as not to overload any particular area (Luther Midelfort Mayo Health System).
		Provide quality improvement education to clinical staff	<ul style="list-style-type: none"> • Nurses, doctors, and pharmacists are trained in ways to improve care (NorthShore University Health System).
		Support favorable nurse/patient ratios	<ul style="list-style-type: none"> • Most hospitals agree adequate staffing is important to quality care. Oklahoma Heart Hospital makes it one of its core strategies (Oklahoma Heart Hospital).
	Motivating Staff	System and regional benchmarking	<ul style="list-style-type: none"> • Hospitals compare their performance with other hospitals in their system, region, or peer group to instigate competition and motivate improvement (Luther Midelfort Mayo Health System; St. Mary's Health Center; Gaston Memorial Hospital). • Use of performance data to highlight practice variations within the hospital (Gaston Memorial Hospital).
		Discuss performance data	<ul style="list-style-type: none"> • Display and discuss data throughout the hospital to create transparency and accountability (St. Mary's Health Center). • Discuss and display data weekly, even for a small number of patients, to focus staff attention (Luther Midelfort Mayo Health System).

		Celebrate successes	<ul style="list-style-type: none"> Use newsletters, meetings, and positive feedback to recognize good results (Flowers Hospital).
Monitoring and Measurement	Monitoring adherence to standards	Perform a daily audit or concurrent review of care	<ul style="list-style-type: none"> Every hospital in this series has a method of auditing the achievement of care standards on a daily basis—giving them time to intervene if they find deficiencies (For example, see Flowers Hospital; St. Mary’s Health Center; NorthShore University Health System; Luther Midelfort Mayo Health System). Bed management rounding is a process during which care is monitored and the status of patients is recorded (NorthShore University Health System).
		Electronic monitoring systems	<p>Feed data from electronic health records into real-time census tracker</p> <ul style="list-style-type: none"> One hospital has simplified the daily audit by using a data feed out of the electronic health record as a real-time census tracker, with all the core measures included (NorthShore University Health System).
		Reconcile medication	<ul style="list-style-type: none"> To discharge the patient with the correct medications, one hospital performs daily medication reconciliation to ensure a complete record is available whenever discharge is scheduled (Flowers Hospital).
	Use of data to	System and regional benchmarking	<ul style="list-style-type: none"> Hospitals compare their performance

	benchmark and motivate		with other hospitals in their system, region, or peer group to instigate competition and motivate improvement (Luther Midelfort Mayo Health System; St. Mary's Health Center; Gaston Memorial Hospital).
		Discuss performance data	<ul style="list-style-type: none"> • Display and discuss data throughout the hospital to create transparency and accountability (St. Mary's Health Center). • Provide individualized feedback to physicians with scores compared with benchmarks (St. Mary's Health Center). • Discuss and display data weekly, even for a small number of patients, to focus staff attention (Luther Midelfort Mayo Health System).
Problem Identification and Solving	Performance Improvement Infrastructure	Support staff with a central quality department	<ul style="list-style-type: none"> • Every hospital in this series has staff with expertise in quality measurement and improvement. Centralized quality departments can play an important role in supporting teams (Luther Midelfort Mayo Health System).
	Improvement Methods	Use the Plan-Do-Check-Act cycle	<ul style="list-style-type: none"> • Hospitals have adopted similar quality improvement methods. The Plan-Do-Check-Act strategy is a favorite at Luther Midelfort Mayo Health System.

		Support continuous quality improvement	<ul style="list-style-type: none"> Ongoing examination and improvement of care processes (Oklahoma Heart Hospital).
Practice Improvements	Standardizing care	Have physicians create care maps.	<ul style="list-style-type: none"> Physician involvement in the design of care maps ensures buy-in and clinical relevance (NorthShore University Health System, Gaston Memorial Hospital).
		Explore the evidence base	<ul style="list-style-type: none"> Even if physicians don't write the care map themselves, showing them the medical evidence in support of it increases buy-in (St. Mary's Health Center).
		Place care map in medical record	<ul style="list-style-type: none"> Having the care map in the medical record has helped physicians adhere to the plan (NorthShore University Health System).
		Use care map to define what data are collected	<ul style="list-style-type: none"> Measures should be closely aligned with processes in order to affect the outcomes desired (Luther Midelfort Mayo Health System).
		Align order sheets with care map	<ul style="list-style-type: none"> Designing order sets so that the easy approach is the right approach is a core tenet of human factors engineering (Luther Midelfort Mayo Health System).
		Align progress notes with care map	<ul style="list-style-type: none"> Physician-designed progress notes with check-offs of relevant criteria provide physicians with a useful reminder of

			<p>the decisions embedded in the care map; pre-printed orders complement this tool (Flowers Hospital; St. Mary's Health Center; Oklahoma Heart Hospital).</p>
		Use color-coded nursing materials	<ul style="list-style-type: none"> Each of the four HQA conditions is given a color; care plans, file labels, and educational materials are color-coded to make them easy to find and use (Flowers Hospital).
	Electronic support systems	Use computerized physician order entry	<ul style="list-style-type: none"> When a physician orders care not aligned with the care map, a prompt lets him/her know. The prompt can educate and lead to immediate improvement in care (Oklahoma Heart Hospital; NorthShore).
		Use Web-based decision tools	<ul style="list-style-type: none"> Nurses respond to a series of questions to guide them toward a decision about whether to order a vaccination (NorthShore University Health System).
		Build electronic checklists	<ul style="list-style-type: none"> An electronic checklist can generate a flowchart to guide care decisions (NorthShore University Health System).
		Create opportunities for feedback	<ul style="list-style-type: none"> Information can flow from clinician to administration electronically, giving frontline staff the opportunity to express quality-related concerns that will be addressed quickly by quality

			improvement staff (Oklahoma Heart Hospital).
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ⁱ This study was based on publicly available information and self-reported data provided by the case study institution(s). The Commonwealth Fund is not an accreditor of health care organizations or systems, and the inclusion of an institution in the Fund's case studies series is not an endorsement by the Fund for receipt of health care from the institution.

The aim of Commonwealth Fund-sponsored case studies of this type is to identify institutions that have achieved results indicating high performance in a particular area of interest, have undertaken innovations designed to reach higher performance, or exemplify attributes that can foster high performance. The studies are intended to enable other institutions to draw lessons from the studied institutions' experience that will be helpful in their own efforts to become high performers. It is important to note, however, that even the best-performing organizations may fall short in some areas; doing well in one dimension of quality does not necessarily mean that the same level of quality will be achieved in other dimensions. Similarly, performance may vary from one year to the next. Thus, it is critical to adopt systematic approaches for improving quality and preventing harm to patients and staff.