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Case Study

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Park Nicollet Methodist Hospital: Aligning Goals to Achieve Efficiency

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Vital Signs

Hospital: Park Nicollet Methodist Hospital

System: Park Nicollet Health Services

Location: St. Louis Park, Minnesota

Type: Private, nonprofit, teaching hospital

Beds: 426

Distinction: Selected as one of 13 Highest Value Hospitals by the Leapfrog Group in 2008, based on efficiency scores taking into account the quality of care as well as resource utilization, among nearly 1,300 hospitals reviewed. Received a top efficiency score for three of four procedures examined (coronary artery bypass graft, percutaneous coronary interventions, and treatment of acute myocardial infarction). See Appendix A for full methodology.

Timeframe: Hospital data from 2007

This case study describes the strategies and factors that appear to contribute to high efficiency at Park Nicollet Methodist Hospital. It is based on information obtained from in-person interviews with key hospital personnel, publicly available information, and materials provided by the hospital in early 2010.

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SUMMARY

Park Nicollet Methodist Hospital (Methodist) is the single hospital of Park Nicollet Health Services (PNHS), an integrated health care delivery system based in St. Louis Park, Minnesota. Approximately 96 percent of the hospital's admissions are patients served by the systems' integrated multispecialty group practice, which comprises 25 clinics in the West Metro section of Minneapolis. Methodist serves about 27,000 patients per year (8% of the market, based on the 2009 Minnesota Hospital Association 11-county metropolitan service area) in a region

that has been leading the country in health care quality and payment innovations.[1]

In 2008, Methodist sought to demonstrate its value in the competitive Minneapolis–St. Paul market by completing a survey for the Leapfrog Group, providing data about its efforts to deliver high-quality, low-cost care. Low lengths of stay (taking into account readmissions) combined with high quality scores earned the hospital recognition as one of the 13 Highest Value Hospitals, among nearly 1,300 that voluntarily submitted surveys.

Hospital and health system administrators as well as clinical leaders pointed to the following strategies as key to Methodist's success:

- The hospital's integration with the health system's outpatient clinics and post-hospitalization treatment programs helps prevent hospitalizations, keep hospitalizations shorter, and lessen the risk of rehospitalization. For example, a shared electronic medical record system makes patient information available throughout the delivery system.
- The wide distribution of performance data at all levels of the organization enables staff to benchmark their clinical and financial performance and motivates them to improve.
- Methodist works to delegate staff to meet demand, optimize patient flow, and ensure effectiveness, thus improving quality and lowering costs.
- Looking ahead to a health care system where performance is measured and rewarded, Methodist has taken steps to ensure it meets all national quality and safety standards, while controlling costs.

INTERNAL AND EXTERNAL ENVIRONMENT

The Hospital

Park Nicollet Clinic was founded by 11 specialists in 1951 as St. Louis Park Medical Center, with the goal of combining clinical research with medical practice. In 1983, St. Louis Park Medical Center merged with Nicollet Clinic and began, according to its Web site, "its pursuit of a systematic approach to education, research and innovation, and to translate knowledge into high-quality, effective care." In 1993, Park Nicollet Medical Center and Methodist Hospital, a 426-bed community hospital, merged to form Health System Minnesota, later changing its name to Park Nicollet Health Services.

WhyNotTheBest.org
Efficiency Case Study Series

Eager to foster higher value in the health care system, providers and payers have worked to promote more rigorous adherence to quality standards and reduced resource use, particularly when higher utilization can be demonstrated to be of little or no added value to patients.

This case study is part of a series that highlights best practices among hospitals that have excelled at meeting these efficiency criteria. We used the Leapfrog Group's Highest Value Hospital recognition program to identify eligible hospitals. For more information on how hospitals in the series were selected, see Appendix A.

The System

In addition to Park Nicollet Methodist Hospital, PNHS includes Park Nicollet Clinics, a foundation, and the Park Nicollet Institute. Park Nicollet Clinics is one of the largest multispecialty clinics in the United States, providing care in more than 45 medical specialties and subspecialties. More than 5,300 employees, including 700 physicians and 480 clinical professionals, are on staff at 24 clinics in Minneapolis and the surrounding suburbs.

Health care services are organized in five service lines: inpatient care, primary care, surgery, medical specialties, and administration/support. Since 2003, PNHS has used a single electronic medical record (EMR) system in its inpatient and outpatient settings, making clinical information available across sites of care and for sharing information with independent

practitioners who refer patients to PNHS. The teaching program is small; residents receive training in four specialties and fellows are employed in just three specialties.

Park Nicollet Institute is the research and education division of Park Nicollet Health Services. In 2008, it coordinated over 350 educational programs, classes, and conferences for patients and health professionals, reaching 11,000 people. Researchers and patients participated in more than 200 research studies, including clinical evaluation of new medicines and medical devices.

PNHS has about 25 percent of market share in the Minneapolis– St. Paul region. Its revenues were $1.1 billion in 2008, with expenses exceeding revenues by $148 million. It was a difficult financial year because of stock market losses the prior year as well as higher levels of charity care and a shift in payer mix away from employer-sponsored coverage to Medicare, which pays lower rates. After a series of layoffs, leaders are now trying to restore morale and rebuild relationships among the staff.

Park Nicollet has sought to be transparent with pricing, posting on its Web site charges for most procedures and related expenses. In addition, it has publicly disclosed all of its staff clinicians' financial relationships with pharmaceutical companies, medical device manufacturers, and other industry representatives.

The Environment

Both health care payers and providers in the Minneapolis–St. Paul region have sought to promote efficiency. Provider-driven delivery systems have been active in setting care standards and measuring and improving care. Most participate in the Institute for Clinical Systems Improvement's development of clinical standards. Purchasers have used performance data to guide health plan design and create incentives for improvement. Payers have also agreed to use a common set of standards for measuring and rewarding high performance for diabetes care and other conditions.

According to The Commonwealth Fund's 2009 State Scorecard on Health System Performance, Minnesota performs well on measures of health care access, quality, and cost—ranking fourth in the nation.[2] State policymakers have encouraged public reporting of quality and price data to assist consumers in selecting providers.[3] The state also publishes data on the incidence of adverse health events, including "never events."[4]

Within this highly evolved marketplace, leaders at PNHS believe their system is more integrated than most of their competitors because all of the providers, who are employees, are aligned with the Park Nicollet "brand" and the system fosters collaboration and communication between hospital and community clinicians. PNHS is preparing to enter into relationships with payers that reward quality. Although the health system's first foray into this work, as part of the Medicare Physician Group Practice demonstration, did not yield bonus payments, leaders believe that rewards for achieving high-quality, efficient care will be essential to its long-term success.[5]

ORGANIZATIONAL/CULTURAL FACTORS THAT MAY CONTRIBUTE TO EFFICIENCY

PNHS aims to promote population health, improve the patient experience, and lower costs. Its five-year goals are to:

- *Measure and publish health care outcomes*. Even if patients do not use this performance information, public reporting will spur changes in the health system.
- *Raise the percentage of hospital and clinic patients saying they would "definitely recommend" the organization to family and friends from 69 percent to 95 percent.* The national average is 68 percent, but the Minnesota average is 71 percent.
- *Reduce the total cost of care per diagnosis-related group (DRG) to below the state average.*

According to David Abelson, M.D., the health system's CEO since January 2010, "looking at hospital efficiency is potentially misleading. We need to look at the efficiency of caring for a population." In planning for growth, administrators aim to expand market share across the health system's clinics—not to increase the hospital's market share.

Integrated Care Delivery

PNHS seeks to align inpatient and outpatient services. It has a virtually closed provider panel; about 96 percent of the hospital's admissions are patients served by the system's multispecialty group practice. Physician-led teams are now working to improve the continuum of care needed by bariatric and pulmonary patients. Rather than each clinician providing a component of the treatment, clinicians will follow integrated care plans that meet all of a patient's needs. Another group of providers is working to streamline consultations between primary care physicians and specialists. In the past, primary care physicians have been faulted for providing inadequate information about patients' conditions upon referral and specialists have been faulted for failing to return information to the primary care doctor on their diagnosis and treatment plan. Primary care doctors will provide more complete information on their patient's symptoms and history, starting with cardiology patients, and specialists will guarantee a timely consult based on the urgency of a patient's condition. The improved process will be carried out through paper and phone initially, but the new EMR system will eventually enable electronic collaboration.

Culture

PNHS has had a long-term commitment to improvement, illustrated through its adoption of Lean methodologies in the early 2000s and other quality improvement methods before then. It also has a history of collaboration between physicians and administration, according to Abelson. PNHS also has been working to shift from a top-down management approach to a bottom-up, team-based approach.

> *Looking at hospital efficiency is potentially misleading. We need to look at the efficiency of caring for a population.*
>
> David Abelson, M.D., chief executive officer

After making layoffs in 2009, health system leaders are working to improve staff morale by focusing on increasing transparency, for example by sharing information on financial and quality measures. Though leaders know employees' satisfaction has suffered as a result of layoffs, they believe that, overall, hospital staff are satisfied with their work—evidenced by the low turnover rate of just 9 percent in 2009.

Alignment of Priorities

PNHS uses a performance matrix to align its long-term goals with each service line and each unit's one-year goals. In use for two years now, the matrix links quality, financing, and accountability. Its comprehensive format has helped promote adoption throughout the system in a relatively short period of time. Every unit's matrix is available to all staff via the health system intranet. Each service line is managed by a clinical and an administrative dyad, which jointly sets priorities and discusses resource use to achieve the goals. Paired management means that quality and efficiency are linked at every phase of decision-making.

PRACTICES THAT IMPROVE EFFICIENCY

Health Information Technology

The health system's current EMR system captures valuable information about individual patients, and its quality department distributes performance reports for all inpatient and outpatient units. These reports include the measures that are used to populate the performance matrices shown in Exhibits 1 and 2, as well as CMS core measures and patient safety data. Efficiency measures such as resource use per inpatient day are an element of the information shared. To set goals and identify opportunities for improvement, Methodist compares its data with data provided in the Premier quality

PNHS Performance Matrix Aligns Tactics, Process Improvement Priorities, and Strategic Themes

To illustrate the alignment between tactics, process improvement priorities, and strategic themes, Exhibit 1 shows the Inpatient Service Line (IPSL) alignment matrix, one of dozens of such matrices used at PNHS. On the far left are the system's strategic themes: to be number one regionally in quality and safety, to get the patient satisfaction response "Everything I want and need is provided," and to reduce the overall cost of treating medical conditions. Across the top are the tactics that will be used this year to accomplish each, and in the middle are the process improvements that will be made to address each tactic. The colored boxes link the tactics to the process improvements. For example, the first tactic, "design and implement a patient-centered team on 5W (an inpatient unit) to improve results and outcomes," is followed by pink, yellow, and blue boxes. The pink boxes indicate the process improvement steps that have the strongest correlation with that tactic; the yellow are those measures with important correlations, the blue have weak correlations, and the white have no correlations. In the far right, the same colors are used to connect the team leader and members with specific tactics. Finally, in the lower left corner are the financial results sought across all inpatient service lines.

The matrix shown in Exhibit 2 outlines the goals, strategic initiatives, measures, and financial results for developing and promoting the "Park Nicollet Experience," to reach the higher patient satisfaction goals set for the year. In this case, leaders have translated what might be seen as an intangible outcome to a quantifiable set of actions and measures.

databases. The hospital has also participated in the Crimson Initiative, a product of the Advisory Board to profile physicians and engage them in performance improvement. Care provided by PNHS physicians is compared with care from over 130,000 other doctors to compare type of care delivered and the use of resources. According to Steve Connelly, M.D., chief medical officer, "We are not giving them the data yet to move them. We need to give them targeted data to play on their competitive nature." Comparative data can help motivate needed redesign.

Clinical and administrative leaders have been building a new information system that will help them manage individual patient care and look across patients at their cumulative performance. Launched in early 2011, the platform is the Epic electronic medical record systems, with tailoring to allow longitudinal tracking of patients and tracking information related to each unit's goals. The enhancements will allow them to track the impact of their quality efforts.

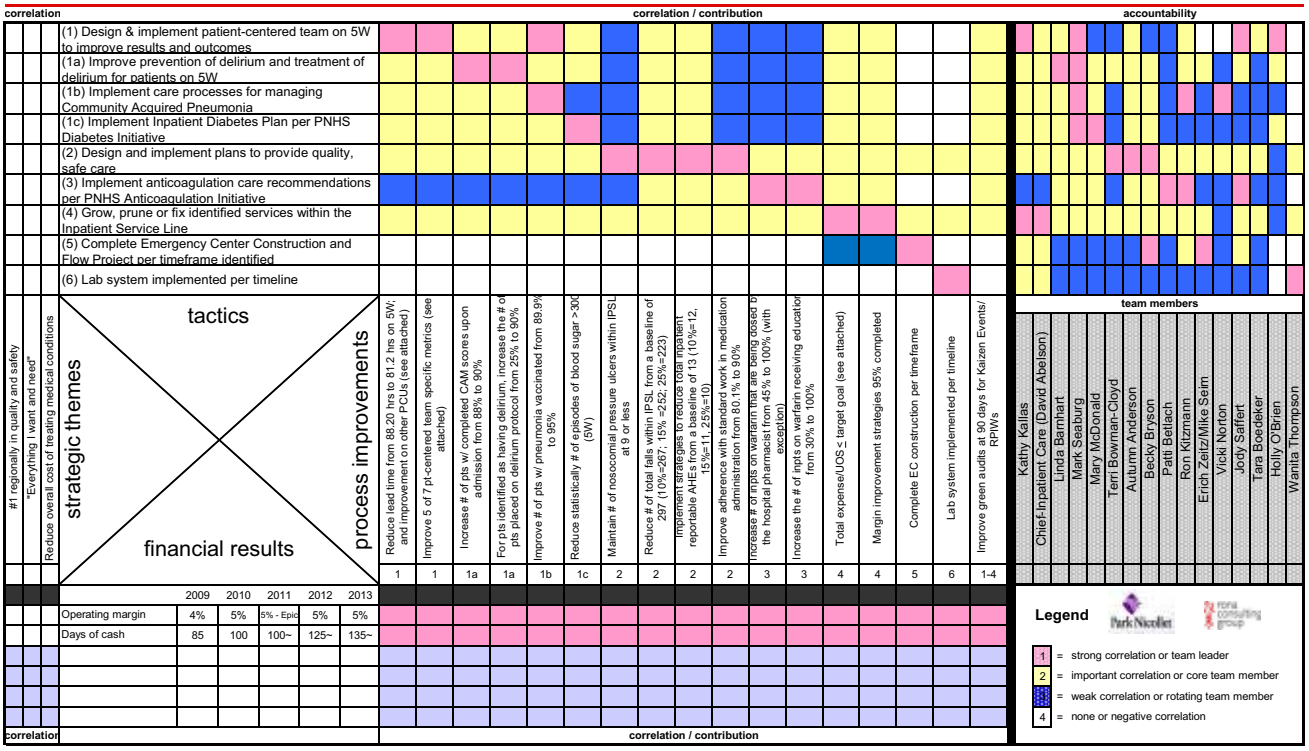
Lean Approach to Improvement

PNHS has used the Lean methodology for about six years to increase value and decrease waste in administrative processes, and has more recently used it in clinical processes as well.[6] All senior leaders, including the clinical and administrative heads of each service line, receive training in Lean methodology. The service line heads identify priorities for improvement and then deploy five-person operation teams for each improvement project. The teams map an existing process (using a flowchart, in most cases), look for ways to streamline it, implement a new process, and monitor the results to assess its impact. At Methodist, the inpatient service line is focusing particularly on reducing falls, pressure ulcers, and medication-related delirium—in part because of Minnesota's emphasis on reporting such adverse events, and in part because eliminating unnecessary care reduces overall costs per admission.

We are not giving them the data yet to move them. We need to give them targeted data to play on their competitive nature.

Steve Connelly, M.D., chief medical officer, about the potential to see rapid improvement in inpatient-outpatient care redesign

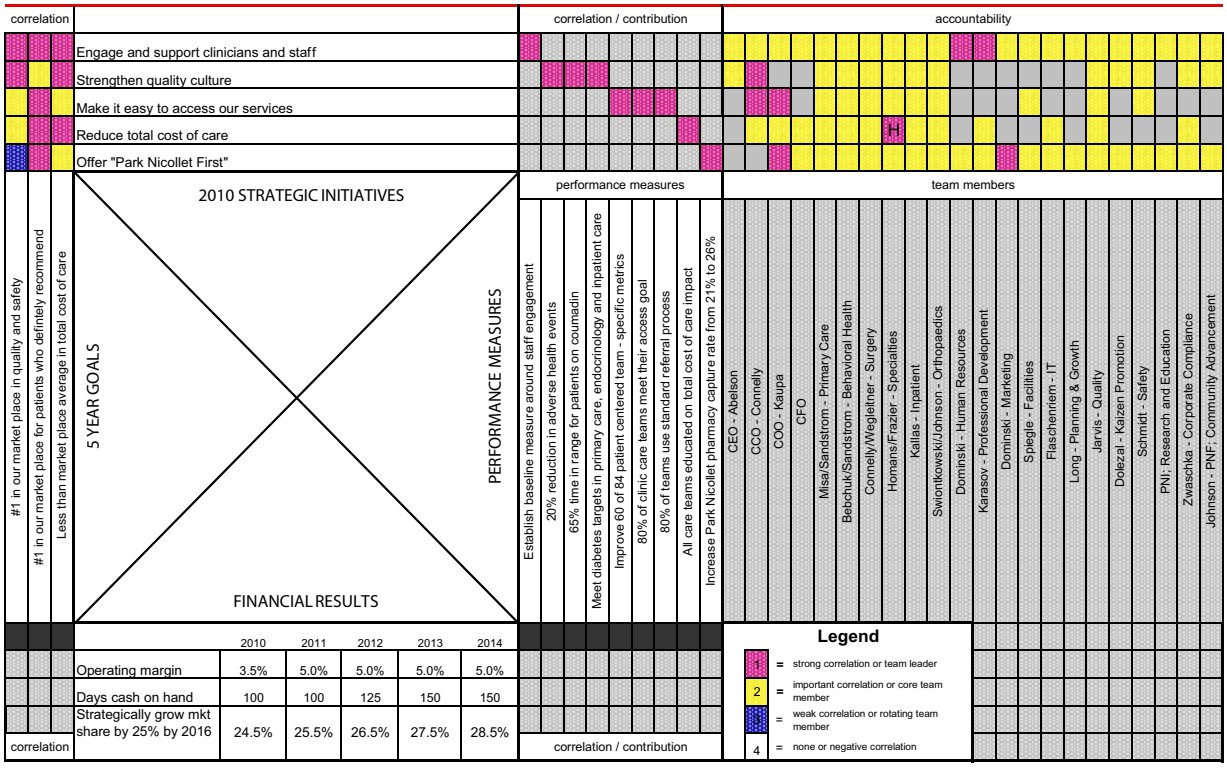
Exhibit 1. Inpatient Service Line (IPSL) Alignment Matrix



Source: Park Nicollet Health Services, 2009.

Exhibit 2. The Park Nicollet Experience

DEVELOP AND PROMOTE THE PARK NICOLLET EXPERIENCE: 2010 Organization Alignment Matrix



Source: Park Nicollet Health Services, 2010.

In cases where there is a need to make a change across a large group, hospital leaders will hold a Rapid Process Improvement Workshop to teach staff about a new care standard and strategies for improvement.

Managing Patient Flow

Methodist has undertaken several initiatives to improve patient flow. Adding an operating room staff "huddle" prior to starting surgery, for example, has saved time for individual procedures and reduced delays throughout the day. The huddle brings together all clinicians participating in the surgery (e.g., surgeon, anesthesiologist, nurses, and other staff) to discuss the procedure, equipment, and supplies, and to eliminate uncertainty which can delay the surgery and contribute to cancellations and wasted time throughout the day. Huddles also reduce errors which can lead to higher costs. Since adding the huddle, overtime costs, just one measure of inefficiency, have decreased by $30,000 to $60,000 per month. Surgeons who continue to experience delays are asked to explain why, and action plans are developed to foster further improvement.

Another major change has been the relocation of observation beds from the inpatient units to the emergency department (ED). Staff were having difficulty completing needed care within Medicare's 23-hour time constraint, resulting in some unreimbursed admissions. Having these short-stay patients in a special section of the ED and refining their care protocols has enabled staff to better manage their care and change their expectations about needing to be admitted.

Further improvements in patient flow are being planned, particularly related to handoffs from the hospital to nursing homes or patients' homes. For example, a Care Progression sheet, which the hospital uses to identify milestones and highlight next steps, will be improved to facilitate care and discharge planning.

Nurse practitioners have begun rounding at local nursing homes to check on patients after their discharge, and primary care clinics are increasingly following up to schedule patient visits after discharge.

Strategically Deploying Staff

Methodist manages the schedules and work assignments of frontline staff and physicians to ensure productivity and quality care. For example, many of the surgical service line's 60 quality improvement projects are related to staff productivity and role changes. Through careful deployment of personnel, the hospital has nearly eliminated the need for temporary workers and overtime. In the past, the health system measured units of service per full-time equivalent (FTE) employee. They now examine units of service by the price of that FTE to determine if they have the right people doing the right level of work.

Methodist has also embraced the use of hospitalists; it was one of the first in the region to do so. More than 60 percent of inpatients are now seen by hospitalists. Surgeons also help manage surgical patients throughout the stay, which used to be managed by other clinicians on the floor.

PNHS also has been introducing performance bonuses for physicians, starting with bonuses for doctors who meet goals for timely availability for office visits.

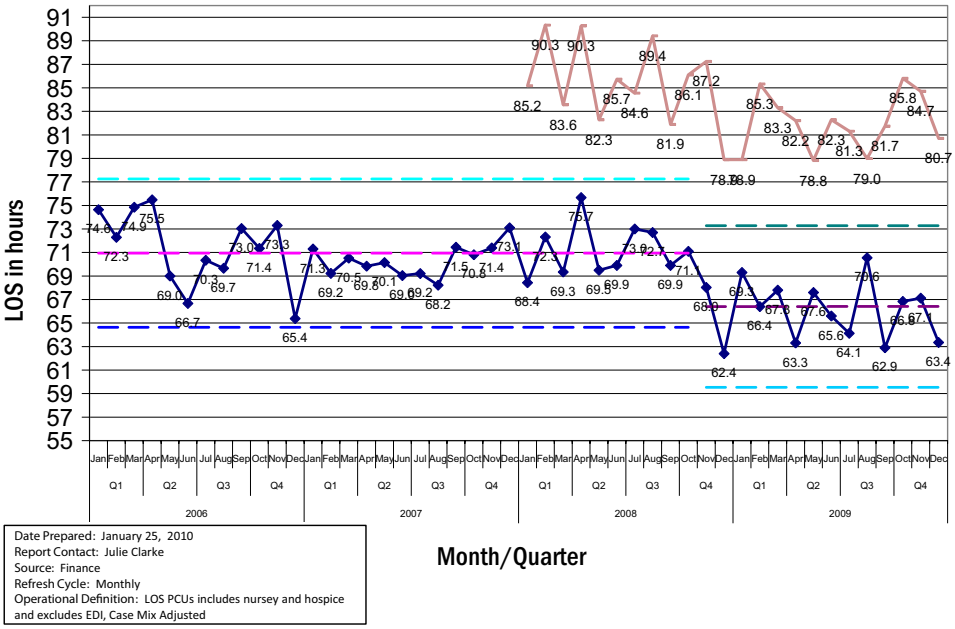
RESULTS

As noted above and detailed in Appendix A, a 2008 Leapfrog Group survey designated Methodist among 13 Highest Value Hospitals in the nation based on a combination of quality measures, length of stay, and readmissions.

Exhibit 3 shows Methodist's progress in reducing length of stay, measured in hours, from January 2006 to December 2009. The top line is not adjusted for patient case-mix (a proxy for severity of illness), while the bottom line is case-mix adjusted. Average case-mix adjusted length of stay dropped from 72.3 hours to 66.4 hours during this time period. In addition, in 2009 the cost per unit of service declined from $1,934 to $1,750—exceeding the goal set for that year.[7]

From 2008 to 2009, PNHS reduced costs per unit of service for four of its six service lines. For example, changes in the surgical service line resulted

Exhibit 3. Inpatient Lead Time Control Chart*, 2006–2009



*Case Mix Adjusted
Source: Park Nicollet Health Services, 2010.

in increased efficiency without loss of quality. The amount of time in which operating rooms are actively in use now exceeds national averages, and the cost per case in the operating room declined 1.2 percent. Productivity increased by 3 percent, and the cost of inventory was reduced by $1 million by going from having 15 days to five days of surgical supplies on hand.

Methodist has also been able to make improvements to health care processes. Each inpatient and outpatient unit tracks a set of quality measures related to its own goals for the year. For example, Exhibit 4 displays progress on one inpatient service line (IPSL). Its priorities for improvement that year related to pneumonia, delirium assessment prior to surgery, delirium care protocols, falls, length of stay, cost per unit of service, and blood sugar monitoring for diabetes patients. In four of these areas, the unit exceeded goals for the year, in two areas they nearly met them, and in one area they did not improve.

Meanwhile, the health system has improved care across the organization. For example, in 2010 one-third of PNHS patients achieved compliance with the five goals of diabetes care, associated with reducing the risk of stroke and heart attack, up from 29 percent in 2009. Across all clinics reporting this information to the state, average performance was 25 percent in 2010.[8]

Methodist performs well on some of the CMS core measures but achieves only average performance on others (Appendix B). Its patient satisfaction scores lag behind national averages on all but one key measure: the percentage of patients who would definitely recommend the hospital to friends or family.

Methodist has been working to track, understand, and reduce its readmission rate. As shown in Exhibit 5, the hospital flags patients with certain conditions whose readmission rates exceed targets and plans follow-up actions. Data from WhyNotTheBest.org show that Methodist's readmission rates are in the top 10 percent of hospitals for heart failure and heart attack, but worse than the national average for pneumonia.

Exhibit 4. Inpatient Service Line (IPSL) Goals, 2009

2009 IPSL 5West Teaming Goals				REVISED 2009 Data												
Goal	Description	2008 Actuals	2009 Goals	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Last Data Point or Annualized
Community Acquired Pneumonia	Age 65 and older who were screened for pneumovax status and administered the vaccine prior to discharge if indicated.	88.73%	≥ 97%	95.7% 22/23	95% 19/20	100% 18/18	80% 12/15	97% 28/29	100% 21/21	100% 19/19	93% 14/15	100% 9/9	93.8% 15/16	100% 15/15	96% 26/27	96% 218/227
Delirium- CAM Scores	Increase the number of patients with documented CAM scores upon admission.	88%	≥ 90%	NA	88%	88%	88%	92%	92%	94%	96%	100%	84%	91%	97%	97%
Delirium- Protocol	Increase the number of delirium diagnosed patients on the delirium protocol.	25%	≥ 90%	NA	25%	20%	70%	50%	20%	83%	100%	100%	100%	94%	100%	100%
Falls	Reduce the number of falls by 25%.	70	53	3	3	4	3	2	5	2	3	3	5	1	2	36
Length of Stay (LOS)	Reduce the length of stay for patients. 7.9% reduction	79.21 hours	72.95 hours	79.78	70.76	74.14	71.68	79.08	67.00	74.67	80.70	67.38	80.04	86.06	71.11	75.04
Cost per Unit of Service ($/UOS)	Reduce the cost per relative admission. 3% reduction	$1,433	$1,390	$1,390	$1,168	$1,272	$1,171	$1,335	$1,128	$1,296	$1,461	$1,300	$1,353	$1,512	$1,254	$1,300
Diabetes	Decrease the number of blood sugars > 300 per 1000 Patient Days. Age ≥ 18 years. BGSs within 12 hours of admission or within 60 minutes of a previous reading are excluded.		25	53.1	48.6	63.0	49.3	71.6	48.1	46.5	22.0	23.8	51.0	39.4	33.2	33.2
Last Date Updated 1/25/10 by Bev Ryther																

4 of 7 exceeded 2009 goal
2 of 7 significant improvement from 2008 but not to 2009 goal
1 of 7 not improved

Source: Park Nicollet Health Services, 2009.

LESSONS

Park Nicollet Methodist Hospital's accomplishments result from the strategies followed by its leaders and staff that have enabled it to succeed in a competitive health care marketplace in which payers demand high-quality, efficient care. A number of lessons emerge from Methodist's experience that may help other hospitals seeking to enhance efficiency and value.

Better care will lead to improved health care outcomes and lower costs.

Hospital leaders believe that better care will bring financial rewards in the long term. Methodist has invested in quality measurement, information technology systems, and improvement strategies across the board, not just for those areas of care for which performance measures are publicly reported. It has also invested in comparative data for tracking and benchmarking unit costs, which enables staff to target opportunities for improvement.

Use data and incentives to engage physicians in improving quality and efficiency.

Performance data, peer benchmarking, and financial incentives are strong tools for changing physician behavior.

At Methodist, many physician leaders are committed to achieving the hospital's quality and efficiency objectives. To encourage other physicians to join improvement efforts, the hospital uses the performance matrices as well as financial incentives. It has also designated physician leaders in each unit to create more opportunities for peer influence.

Partner administrators and clinical leaders in each service line and provide support for performance improvement.

PNHS believes the paired management model—in which an administrator and clinical leader head each service line—has promoted change. Having shared responsibility for achieving performance targets serves to align administrative and clinical priorities. The health system will continue to use the performance matrix tools to ensure institutional, unit, and individual goals are mutually supportive. They also support

Exhibit 5. Park Nicollet Methodis Hospital Inpatient Readmissions Rates

PNMH Inpatient Readmissions

2008: Premier Data				= action in process			= >1 Check & Act
2009: Jan - Jun Premier							= <1 Good
2009: Jul - Nov							
Condition	**APR DRG**	**Period** *(Most recent on top)*	**# of Cases with this DRG**	**LOS Index***	**Readmit Index***	**Actual # of Readmits**	**Action**
Chemo	693	2009 Q3 + Oct & Nov	51	1.35	0.66	22	*No planned action as of 3/15/10*
		2009 Q1 and 2	74	1.31	0.90	43	
		2008 Q 1-4	149	1.40	1.09	101	
Sepsis	720	2009 Q3 + Oct & Nov	227	0.84	0.84	32	*As of 3/18/10: Follow up phone calls from Homecare Staff for all Methodist pts with a sepsis diagnosis discharged to home. Checking to reduce 30 Readmits*
		2009 Q1 and 2	242	0.83	1.14	47	
		2008 Q 1-4	511	0.82	1.06	92	
CHF	194	2009 Q3 + Oct & Nov	162	0.73	0.84	30	*No planned action as of 3/15/10*
		2009 Q1 and 2	219	0.74	0.86	41	
		2008	418	0.79	0.97	86	
Pneumonia	139	2009 Q3 + Oct & Nov	251	0.76	0.66	19	*No planned action as of 3/15/10*
		2009 Q1 and 2	314	0.77	0.88	36	
		2008	618	0.80	0.95	73	
Arrhythmia	201	2009 Q3 + Oct & Nov	165	0.62	0.81	16	*No planned action as of 3/15/10*
		2009 Q1 and 2	197	0.68	1.10	26	
		2008	493	0.82	1.16	63	
Antepartem DX	566	2009 Q3 + Oct & Nov	69	1.08	1.26	30	*3/15/10: Obstetrics leadership to analyze and report back to the committee within 30 days.*
		2009 Q1 and 2	70	1.06	0.99	24	
		2008	151	0.87	1.19	54	
Renal Failure	460	2009 Q3 + Oct & Nov	98	0.68	0.49	9	*No planned action as of 3/15/10*
		2009 Q1 and 2	127	0.74	1.15	27	
		2008	294	0.85	0.91	49	
PCI No AMI	175	2009 Q3 + Oct & Nov	158	1.06	0.83	12	*No planned action as of 3/15/10*
		2009 Q1 and 2	178	1.08	0.85	15	
		2008	421	1.00	1.03	44	
Cellulitis	383	2009 Q3 + Oct & Nov	179	0.85	0.76	12	*No planned action as of 3/15/10*
		2009 Q1 and 2	140	0.73	1.02	12	
		2008	352	0.83	0.91	44	
COPD	140	2009 Q3 + Oct & Nov	84	0.67	1.10	17	*No planned action as of 3/15/10*
		2009 Q1 and 2	137	0.69	0.76	19	
		2008	278	0.73	0.82	44	
Major Respiratory Infection	137	2009 Q3 + Oct & Nov	83	0.69	0.64	10	*No planned action as of 3/15/10*
		2009 Q1 and 2	128	0.74	1.09	26	
		2008	251	0.84	0.91	42	
Knee Replacement	302	2009 Q3 + Oct & Nov	381	1.01	0.95	15	*3/15/10: Dr. S. to analyze and report back to Readmissions Steering Team within 30 days.*
		2009 Q1 and 2	426	0.98	1.15	20	
		2008	798	0.92	1.14	41	
Hip Replacement	301	2009 Q3 + Oct & Nov	187	0.95	1.09	14	*3/15/10: Dr. S to analyze and report back to Readmissions Steering Team within 30 days.*
		2009 Q1 and 2	217	0.94	0.85	13	
		2008	454	0.95	1.02	37	
C Section	540	2009 Q3 + Oct & Nov	379	1.08	1.00	6	*3/15/10: Obstetrics leadership to analyze and report back to the committee within 30 days.*
		2009 Q1 and 2	474	1.08	1.05	8	
		2008	887	1.07	1.87	26	
***Updated as of 3/18/10**							

*LOS Index is the ratio of actual to expected length of stay. Readmit index compares the actual to the expected rate of readmission. A number over 1 needs attention.

Source: Park Nicollet Health Services, 2010.

service line leaders by providing data, training, and improvement teams with skilled facilitators.

Adapt to environmental changes.

An aging population, changing reimbursement models, growing levels of charity care, and rising labor costs are forcing health care leaders to focus on efficiency. According to Abelson, PNHS loses 20 cents on the dollar on public payers, so a 1 percent shift from private to public payers results in a 5.6 percent loss in revenue. To keep up with the loss resulting from commercial patients becoming Medicare patients, they need to reduce their costs by 3 percent a year. To do so, the hospital intends to use more midlevel staff, and the health system's goal is to increase the number of patients and patient visits in their clinics. This reflects Lean's emphasis on increasing units of service and improving patient flow while working to reduce unit costs.

Prepare for new payment and delivery models. Abelson believes that the fee-for-service payment model fails as a business model. To thrive, he argues that PNHS must partner with purchasers to design and test methods that reward the health system for keeping patients healthy and out of the hospital. He is in discussions with two local health plans to bundle payments for certain conditions/episodes of care, which is an initial step in a path that could lead them to be an accountable care organization (ACO). Further, the health system is starting a new pay-for-performance program, initially for with inpatient physicians.

To be ready for new payment and delivery models, health care leaders need to shift their focus from hospital efficiency per se to efficiently caring for a population. This means caring for patients across sites, supported by appropriate payment mechanisms and data systems.

FOR FURTHER INFORMATION

For further information, contact Thomas A. Schmidt, M.D., medical director, patient safety, Thomas.Schmidt@ParkNicollet.com.

Notes

1 A. Gauthier and A. Cullen, *Reforming Health Care Delivery Through Payment Change and Transparency: Minnesota's Innovations* (New York and Portland, Maine: The Commonwealth Fund and National Academy for State Health Policy, April 2010).

2 D. McCarthy, S. K. H. How, C. Schoen, J. C. Cantor, and D. Belloff, *Aiming Higher Results from a State Scorecard on Health System Performance, 2009* (New York: The Commonwealth Fund Commission on a High Performance Health System, Oct. 2009).

3 Minnesota Community Measurement is a community-based nonprofit organization dedicated to improving the quality of health care in Minnesota and surrounding border communities. It collects and publicly reports health care clinic performance data, including for diabetes, asthma, cancer screening, children and women's health, and cardiovascular disease. This information is also used by consumers, policymakers, employers, and others who are concerned with the quality and costs of health care. The data are submitted by participating clinics and independently audited to ensure accuracy. See http://www.mnhealthscores.org/.

4 www.health.state.mn.us/patientsafety/publications/2010ahe.pdf.

5 In April 2005, the Centers for Medicare and Medicaid Services (CMS) initiated the Physician Group Practice demonstration, which offered 10 large practices the opportunity to earn performance payments for improving the quality and cost-efficiency of health care delivered to Medicare fee-for-service beneficiaries. See M. Trisolini, J. Aggarwal, M. Leung et al., *The Medicare Physician Group Practice Demonstration: Lessons Learned on Improving Quality and Efficiency in Health Care* (New York: The Commonwealth Fund, Feb. 2008).

6 Lean, first used in the Japanese automotive industry and now translated for use by the U.S. health care sector, focuses on increasing value and decreasing waste in administrative and clinical processes.

7 The inpatient care cost per unit service is calculated by multiplying the number of admissions and observation stays by the case-mix index, then dividing by the length of stay. Source: PNHS, Jan. 6, 2010.

8 Minnesota Community Measurement, http://www.mncm.org/site/.

Appendix A. Selection Methodology

The selection of hospitals for inclusion in the case study series on efficiency is based on their designation by the Leapfrog Group as a "Highest Value Hospital." To be eligible for this recognition, a hospital must have completed and submitted a Leapfrog Hospital Survey to the Leapfrog Group during the 2008 survey cycle.* During this cycle, 1,282 hospitals voluntarily submitted surveys, with a majority participating at the request of local employers and/or regional business coalitions.

Leapfrog's efficiency scoring methodology takes into consideration both resource use and quality of care for a subset of all hospital patients: those undergoing a coronary artery bypass graft (CABG) or a percutaneous coronary intervention (PCI), or being treated for an acute myocardial infarction (AMI) or pneumonia. The resource use measure for a procedure or condition is a comparison of a hospital's actual length of stay compared with their risk-adjusted expected length of stay, further adjusted for readmission. If a patient is readmitted for any reason within 14 days of discharge, the resource utilization is considered higher. The quality measures for CABG and PCI are based on a hospital's case volume; their risk-adjusted mortality rates as reported by national or regional registries or public state reports; and adherence to nationally endorsed process-of-care measures. The quality measures for AMI and pneumonia are those voluntarily reported by hospitals to the Centers for Medicare and Medicaid Services (CMS), known as the core measures. A hospital whose relevant patients have higher-quality care, a shorter than expected length of stay, and are without a readmission within 14 days for any reason are scored as highly efficient.

Leapfrog's detailed scoring algorithms are available at: http://www.leapfroggroup.org/media/file/Leapfrog_Resource_Utilization_Risk-Adjustment_Model_White_Paper.pdf.

For a hospital to be deemed "Highest Value," it needed to be in the top performance category for efficiency for at least three of the four procedures and conditions.

The Leapfrog methodology has some limitations. It does not take into account the care provided to patients with other conditions, nor does it examine resource use other than length of stay (adjusted for readmissions). Further, participation is voluntary on the part of hospitals. Therefore, hospitals included in this case study series may not be representative of all hospitals considered efficient using other metrics. However, the Leapfrog Group's resource use measure has been endorsed by the National Quality Forum and appears to be the only national source for efficiency data.

While designation as a "Highest Value Hospital" by the Leapfrog Group was the primary criterion for selection in this series, the hospitals also had to meet the following criteria: ranked within the top half of hospitals in the U.S. on a composite of Health Quality Alliance process-of-care (core) measures as reported to CMS; full accreditation by the Joint Commission; not an outlier in heart attack and/or heart failure mortality rates; and no major recent violations or sanctions.

Since 2009, the Leapfrog Group has been using a different efficiency measurement to designate "Top Hospitals," rather than "Highest Value Hospitals." The main difference is that the new methodology looks at measures of efficiency at the hospital level, rather than at the condition level. Details can be found at the Leapfrog Group Web site, http://www.leapfroggroup.org/media/file/2010LHRPScoringMethodology.pdf.

The Commonwealth Fund's WhyNotTheBest.org Web site does not post these Leapfrog data, though it does include some indicators of efficiency such as readmission rates.

* Leapfrog had not yet completed its analysis of 2009 survey data when we began our hospital selection process.

Appendix B. Performance Data from WhyNotTheBest.org for Park Nicollet Methodist Hospital, CY 2009

	Top 10% of U.S. Hospitals	National Average	Park Nicollet Methodist Hospital
Overall Recommended Care	98.42%	95.65%	96.81%
Overall Heart Attack Care	99.89%	97.50%	99.40%
Aspirin on arrival	100%	98.32%	100%
Patients given aspirin at discharge	100%	98.06%	100%
ACEI or ARB for LVSD[1]	100%	96.02%	98%
Adult smoking cessation advice/ counseling	100%	99.52%	100%
Beta-blocker prescribed at discharge	100%	98.09%	99.11%
Fibrinolytic therapy received within 30 minutes of hospital arrival	85.37%	76.02%	N/A
Primary PCI Received Within 90 Minutes of Hospital Arrival	100%	90.67%	94.34%
Legacy: beta blocker on arrival	N/A	89%	98.12%
Overall Pneumonia Care	98.37%	93%	96.65%
Pneumococcal vaccination	100%	91.91%	96.94%
Blood cultures performed in the emergency department prior to initial antibiotic received in hospital	100%	95.26%	96.04%
Adult smoking cessation advice/counseling	100%	97.9%	100%
Pneumonia patients given initial antibiotic(s) within 6 hours of arrival	100%	95.12%	97.14%
Initial antibiotic selection for community-acquired pneumonia (CAP) in immunocompetent patients	98.08%	91.38%	92.17%
Influenza vaccination	100%	90.53%	98.15%
Legacy: pneumonia patients given initial antibiotic(s) within 4 hours of arrival	N/A	81%	83.94%
Legacy: pneumonia patients given oxygenation assessment	N/A	99%	100%
Overall Heart Failure Care	99.29%	92.34%	96.22%
Discharge instructions	100%	87.53%	91.07%
Evaluation of LVS function	100%	95.99%	98.96%
ACEI or ARB for LVSD	100%	94.55%	97.74%
Adult smoking cessation advice/counseling	100%	99.07%	100%

Overall Surgical Care	98.58%	95.08%	96.20%
Pre-surgical antibiotic given at the right time	100%	95.83%	99%
Surgical patients who were given the right kind of antibiotic	100%	96.80%	99.02%
Preventive antibiotics stopped at right time	98.96%	93.73%	98.02%
Cardiac surgery patients with controlled 6 a.m. postoperative blood glucose	98.78%	92.99%	97.14%
Surgery patients with appropriate hair removal	100%	99.22%	100%
Surgery patients with recommended venous thromboembolism prophylaxis ordered	99.26%	93.01%	89.06%
Surgery patients who received appropriate venous thromboembolism prophylaxis within 24 hours prior to surgery to 24 hours after surgery	98.91%	91.39%	90.91%
Surgery patients on a beta blocker prior to arrival who received a beta blocker during the perioperative period	100%	92.47%	90.85%
Patient Experience (HCAHPS) - Rating 9 or 10			
Percent of patients highly satisfied	78%	67.16%	54%
Doctors always communicated well	87%	80.18%	75%
Nurses always communicated well	83%	75.82%	65%
Patients always received help as soon as they wanted	76%	63.92%	51%
Staff always explained about medicines	68%	60.30%	58%
Pain was always well controlled	76%	69.23%	64%
Patient's room always kept quiet at night	71%	57.98%	44%
Patient's room and bathroom always kept clean	82%	71.13%	57%
Patients given information about recovery at home	88%	81.78%	76%
Patients would definitely recommend this hospital to friends and family	82%	69.31%	65%
Readmission			
Hospital 30-day readmission rates for pneumonia	16.50%	18.34%	19.30%
Hospital 30-day readmission rates for heart failure	22.40%	24.73%	20.60%
Hospital 30-day readmission rates for heart attack	18.40%	19.97%	17.60%
Mortality			
Heart attack 30-day mortality rate	14.10%	16.17%	12.60%
Heart failure 30-day mortality rate	9.40%	11.28%	10.70%
Pneumonia 30-day mortality rate	9.50%	11.68%	8.20%

[1] Angiotensin Converting Enzyme Inhibitor (ACEI) or Angiotensin Receptor Blockers (ARB) for Left Ventricular Systolic Dysfunction (LVSD).
Source: www.whynotthebest.org, accessed June 29, 2011.

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