



Case Study

Organized Health Care Delivery System • January 2010

Scott & White Healthcare: Opening Up and Embracing Change to Improve Performance

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ABSTRACT: Founded in 1897 in Temple, Texas, Scott & White is the largest multispecialty health care system in the state, and delivers a comprehensive continuum of care to its health plan members and constituents. Along with a tradition of supporting scholarship in medicine, the system's mission includes contributing professionally to advancements in the domains of medical research and education. Evolving network composition and provider reimbursement strategies have been associated with reported improvements in productivity as well as quality and patient satisfaction outcomes. These quality improvements are linked to greater system efficiency through oversight by physician and administrator leadership teams. Scott & White espouses a shared culture and values, characterized by the vision and expectation of continuous quality improvement, collaboration and peer accountability, the ability to look at the totality of patient care, and a willingness to embrace systemic change when necessary to help the organization achieve success.



OVERVIEW

In August 2008, The Commonwealth Fund Commission on a High Performance Health System released a report, *Organizing the U.S. Health Care Delivery System for High Performance*, that examined problems engendered by fragmentation in the health care system and offered policy recommendations to stimulate greater organization for high performance.¹ In formulating its recommendations, the commission identified six attributes of an ideal health care delivery system (Exhibit 1).

Scott & White is one of 15 case-study sites that the commission examined to illustrate these six attributes in diverse organizational settings. Exhibit 2 summarizes findings for Scott & White. Information was gathered from Scott & White health system leaders and from a review of supporting documents.² The case-study sites exhibited the six attributes in different ways and to varying

Exhibit 1. Six Attributes of an Ideal Health Care Delivery System

- **Information Continuity** Patients' clinically relevant information is available to all providers at the point of care and to patients through electronic health record (EHR) systems.
- **Care Coordination and Transitions** Patient care is coordinated among multiple providers, and transitions across care settings are actively managed.
- **System Accountability** There is clear accountability for the total care of patients. (We have grouped this attribute with care coordination, since one supports the other.)
- **Peer Review and Teamwork for High-Value Care** Providers (including nurses and other members of care teams) both within and across settings have accountability to each other, review each other's work, and collaborate to reliably deliver high-quality, high-value care.
- **Continuous Innovation** The system is continuously innovating and learning in order to improve the quality, value, and patients' experiences of health care delivery.
- **Easy Access to Appropriate Care** Patients have easy access to appropriate care and information at all hours, there are multiple points of entry to the system, and providers are culturally competent and responsive to patients' needs.

degrees. All offered ideas and lessons that may be helpful to other organizations seeking to improve their capabilities for achieving higher levels of performance.³

ORGANIZATIONAL BACKGROUND

Scott & White, based in central Texas, is the largest multispecialty health care system in the state, with three hospitals that admit 30,000 inpatients annually, nearly 50 regional primary and specialty care clinics receiving 1.7 million annual outpatient visits, and a 200,000-member health plan (Exhibits 3 and 4). It also serves as the clinical residency site for the Texas A&M Health Science Center College of Medicine. Founded in Temple, Texas, in 1897, the physician-led nonprofit system employs more than 7,000 staff, including more than 700 physicians and scientists. A major growth initiative culminated in 2007 with the replacement, in Temple, of the Scott & White Memorial Hospital by the new 500-bed Center for Advanced Medicine, and the openings of a new long-term acute-care hospital, also in Temple, and a new 70-bed multispecialty hospital in Round Rock. Scott & White enjoys a market share of approximately 70 percent in the Temple area. Supported by double-digit relative growth in the volume of inpatient and outpatient services, Scott & White reported over \$1 billion in revenue in 2008.⁴

Because Texas law prohibits the corporate practice of medicine, Scott & White was organized as three distinct legal entities: the clinic, the hospital and foundation, and the health plan, each with its own physician-leader and chief administrative officer, all of whom met weekly in committee to promote "integration through cooperation." In 2000, Texas law changed, permitting a merger of the hospital and the clinic. At the same time, a single chief executive was appointed to lead the entire system (the health plan remains a separate nonprofit legal entity under his leadership).

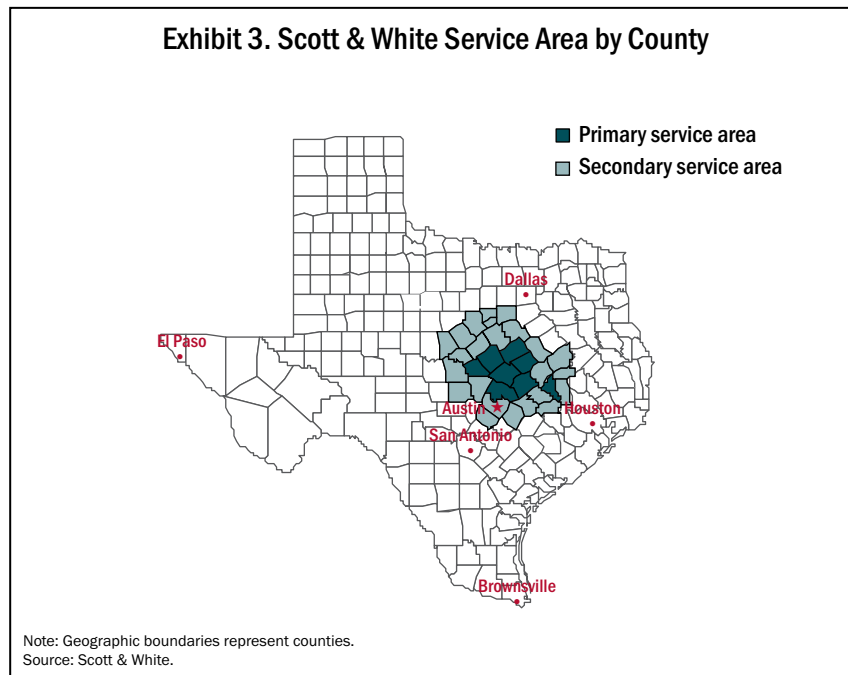
The system functioned much like a group model health maintenance organization until recent years, when, in response to increasing market competition and purchaser demands, it moved from a closed capitated model to an open fee-for-service network model. Nearly simultaneously, the health system began pursuing contracts with national health insurance providers, the health plan began to contract with independent providers, and salary-based compensation for physicians evolved to include productivity expectations along with their patient care, teaching, research, community service, and professional contributions. Referrals to the system increased 22 percent during 2008, according to the organization's annual report. Currently, Scott & White Clinic physicians render about 75 percent of services provided under the Scott & White Health Plan.

Exhibit 2. Case-Study Highlights

Overview: Scott & White is the largest integrated multispecialty health care system in Texas, employing more than 700 physicians who practice in three hospitals, including a new long-term acute care facility, and in almost 50 regional primary and specialty care clinics in central Texas, providing 1.7 million outpatient visits and more than 30,000 inpatient admissions annually. Scott & White Health Plan enrolls 200,000 members in group, individual, and Medicare coverage programs and contracts with both Scott & White and independent providers. Scott & White also serves as a clinical educational site for Texas A&M Health Science Center College of Medicine.

Attribute	Examples from Scott & White
Information Continuity	<p>An EHR links main hospital and community clinics, facilitating communication across the care continuum. Hospital nurses use mobile computers for electronic medication administration at bedside.</p> <p>Primary care physicians receive e-mail notifications of specialist consultations for their patients and e-mails to reconcile medication following hospital discharge.</p> <p>An online portal allows patients to find a doctor, schedule appointments, request prescription refills, make payments, and learn about health topics.</p>
Care Coordination and Transitions; System Accountability*	<p>Nurse care managers are embedded in two large clinics to work with primary care physicians on patient chronic disease management.</p> <p>Health plan–sponsored nurse care managers provide telephonic support for chronic disease education, monitoring, and follow-up after hospital discharge, and refer patients for clinic appointments as needed.</p> <p>New mothers receive phone follow-up and transitional support following birth.</p> <p>Anticoagulation clinics staffed by pharmacists or nurses monitor patients outside the hospital using standardized protocols.</p>
Peer Review and Teamwork for High-Value Care	<p>Physicians are evaluated through annual credentialing and performance reviews including patient care, teaching, research, and community service.</p> <p>The EHR facilitates informal peer review and feedback. Some departments perform formal blinded peer review with feedback to physicians.</p> <p>Divisions/departments can earn a 20 percent bonus by scoring 90 percent or higher on quality targets and goals.</p> <p>The Patient Panels program invites patients to share personal stories of negative experiences; lessons learned are shared across the organization to improve quality and service.</p>
Continuous Innovation	<p>Every major facility has a director of quality and a Quality and Patient Safety Council; the System Quality and Patient Safety Council monitors systemwide quality measures; any core measure not achieving a 90 percent score becomes an organization-wide quality improvement initiative with a formally chartered team led by a physician and an operational leader.</p> <p>The Clinical Simulation Center designs and tests new processes and promotes continuous learning for human error prevention.</p>
Easy Access to Appropriate Care	<p>Clinic “ambassadors” greet patients at the door, direct them to appointments, and generally facilitate patient comfort and access.</p> <p>The Office of International Affairs serves non–English-speaking patients (primarily from Mexico and Korea) with 24-hour interpretation and bilingual providers.</p> <p>A telemedicine program for select specialties reduces geographic barriers for patients in remote areas.</p> <p>HealthExpress clinic offers walk-in urgent-care access seven days a week.</p> <p>Group visits are offered for chronic disease education.</p>

* System accountability is grouped with care coordination and transitions, since these attributes are closely related.



INFORMATION CONTINUITY

Scott & White’s internally developed electronic health record (EHR) system, called Sequoia, has evolved over the past 13 years into a unified clinical information system linking the main hospital and outpatient clinics (Scott & White physicians also have access to the system from their homes) and is accessible both by computer and mobile device. Clinical guidelines embedded in the EHR promote evidence-based treatment at the point of care. The EHR enables a standardized medication reconciliation process across care settings within the system. Scott & White is implementing third-party software, called NextGen, to complement its legacy systems with additional functionality including appointment scheduling, patient communication, workflow management, medication management, and referral tracking.

The new Center for Advanced Medicine (the main replacement hospital) features state-of-the-art digital imaging and technology to facilitate communication between patients and providers and to enhance patient safety. Inpatients can immediately reach their personal nurse through a digital call system. Physicians can access real-time clinical data on their patients through wireless devices from anywhere in the hospital. Nurses use wireless “computers on wheels” at the

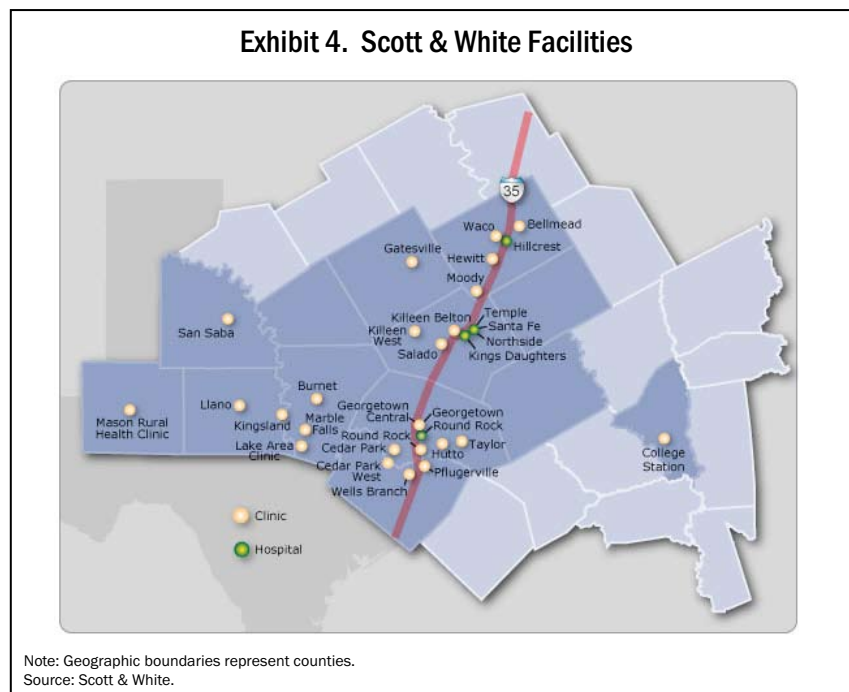
patient bedside for electronic medication management, scanning a drug and the patient’s identification bracelet to ensure that the right patient receives the right medication and dose at the right time.

The Scott & White Web site offers patients the opportunity to find a doctor or clinic, schedule an appointment, request a prescription refill, make a payment, and learn about health-related topics, support groups, and clinical research trials in which they may be eligible to participate.

CARE COORDINATION AND TRANSITIONS: TOWARD GREATER ACCOUNTABILITY FOR TOTAL CARE OF THE PATIENT

The EHR, enhanced by next-generation technology, promotes coordination of care among Scott & White facilities and clinicians. For example, a primary care provider or referring physician will automatically receive an e-mail notification within two days of a patient’s clinic visit or hospital dismissal, advising of changes to the patient’s medication regimen, plans of care, and recommendations from other providers.

Scott & White offers several forms of care management that follow evidence-based clinical guidelines and protocols to help improve the care and outcomes of patients in need of monitoring, education, and support.



- Nurses employed by the Scott & White Health Plan are embedded in some of the system's larger primary care clinics to assist in the management of patients with diabetes and heart disease. Nurses work with physicians to communicate with, educate, and (through a computerized registry) monitor patients. An evaluation found this program was associated with 32 percent to 35 percent lower hospital use (days per 1,000) and 15 percent to 17 percent lower total costs per member among patients with diabetes at pilot sites compared with other practice sites.⁵ The program has, however, proven to be a challenge to sustain from a staffing perspective.
- Nurses employed by a third-party vendor staff "HealthConnect" care management programs for health plan members with chronic conditions such as asthma, diabetes, heart disease, and chronic obstructive pulmonary disease. Care managers contact patients by telephone to check on their status after hospital discharge, monitor their medication adherence, provide self-care education and resources, and make referrals to the clinic for follow-up care as needed.
- Anticoagulation clinics in operation at several Scott & White facilities are staffed by nurses

and pharmacists who use physician-approved standardized protocols to monitor patients on warfarin (a blood thinner), make needed dosing adjustments, and maintain close communication with primary care providers.

- New mothers receive telephone follow-up from MOMS (Maternal Options Maintenance Support) nurses, who check on the status of both mother and baby after discharge, facilitate insurance enrollment for the newborn, and make referrals for follow-up care as recommended or needed.

Specialty clinics offer patients with conditions such as heart failure, diabetes, and cleft palate an opportunity to see multiple specialists who work as a team to provide comprehensive and coordinated care in a single setting. For example, a patient in the heart-failure clinic may see a cardiologist, cardiac nurse specialist, dietitian, and exercise physiologist at the same visit. The diabetes clinic has begun to test group appointments in which 10 to 12 patients see an endocrinologist, a diabetes nurse specialist, and a dietician to learn how to better control their diabetes and reduce complications. Care is coordinated with the primary care physician and communicated via the integrated EHR. Specialist providers in these clinics are also

available by secure e-mail to primary care providers across the system. These types of communications facilitate access to formal and informal consultation services, regardless of location.

The Cancer Treatment Center at Scott & White brings together eight multidisciplinary care teams of oncologists, surgeons, pathologists, and other hospital staff who meet on a regular basis to plan and deliver a coordinated program of care to patients with cancer. A nurse coordinator assists with referrals and scheduling, facilitates communication between providers, and serves as a point of contact for patients. Patients receive “bio-cards” containing background information and pictures of the providers who will be working as part of their care team. Planned renovation of the treatment center will centralize the multispecialty teams and update facilities to promote an easily accessible and more comfortable treatment experience for patients.

PEER REVIEW AND TEAMWORK FOR HIGH-VALUE CARE

Scott & White employs multiple mechanisms to promote high-value care:

- A multifaceted evaluative process for physicians includes the granting of hospital admitting privileges and credentialing for health plan participation, annual performance reviews, and ongoing informal peer review facilitated by group practice and information-sharing through the EHR. The radiology and family medicine departments are pilot-testing a formal “blinded” (confidential) peer review process with feedback to physicians.
- Compensation is linked to quality improvement efforts by a bonus program whereby an entire division or department can earn a 20 percent bonus in pay if they score 90 percent or higher on core measures and 90 percent or higher on tracer measures based on national patient safety goals and on the Scott & White quality improvement initiatives.

To cultivate the spirit of teamwork, nearly all Scott & White physician-administrators maintain active practices with patient care responsibilities. Dr. James Rohack describes the rationale this way: “In a multi-specialty group everyone starts out pulling the wagon together. When you are assigned to administration, you get up on the wagon and take the reins and everyone else is pulling you. So at least if you can get off the wagon once in a while and help pull a bit, it makes the horses feel better.” In addition, outpatient primary and specialty care providers have the opportunity to serve a scheduled inpatient hospital in rotation. The organization has found that having physicians rotate as hospitalists keeps everyone’s skills current, helps with continuity of care, and improves efficiency.

Scott & White researchers recently implemented a pilot intervention targeting medication reconciliation and physician feedback in four of their outpatient clinics. In this pilot, participants age 65 years and older were queried about their medication use at home, and the information was compared with their medical record. Any discrepancies were documented and reported to the patient’s physician in writing, along with an adhesive label of patient-reported medications for easy inclusion in the medical record. Documented discrepancies included not taking medications as prescribed, taking medications not documented in the patient chart, and a difference in dosage and/or schedule. Physician response to this intervention was overwhelmingly positive, with over 90 percent of participating physicians surveyed reporting the written feedback and the labels as helpful.⁶

Each quarter, the Patient Panels program identifies three of the patients who have experienced the most Scott & White services—such as inpatient and outpatient care, radiology, and the ER—and who have had either a positive care experience or a negative experience (such as an adverse event). These patients are given an opportunity to tell their stories to physician and nurse leaders in the system. Resident physicians also attend these feedback sessions, reinforcing their competency in listening to what their patients tell them. (This pedagogical approach has been recognized

for educational innovation by the Association of Program Directors in Internal Medicine.) After each panel presentation, the providers debrief and discuss how that patient’s experience could have been improved. Each patient panel is videotaped and key excerpts are shared at staff meetings in each facility to promote systemwide learning and change.

CONTINUOUS INNOVATION

Every Scott & White facility names a Director of Quality who is assigned to one of 10 primary Quality and Patient Safety Councils that oversee quality improvement efforts in the system. These councils are responsible for monitoring standard quality measures such as HEDIS (Healthcare Effectiveness Data and Information Set) that are widely used among managed care plans. Any core measure not achieving a level of 90 percent or higher becomes the subject of an organization-wide quality improvement initiative that is assigned a physician leader, an operational leader, a chairperson, and a team. Each initiative is then formally chartered to include expected outcomes, resources, care bundles used, a timeline, and decision-making authority.

The chairperson of each quality initiative team, together with the Quality and Patient Safety Council leader and quality program director, participates in the System Quality and Patient Safety Council, which includes the system’s CEO, the chief medical officer, the chief of hospital operations, and three members of the Board of Trustees. During monthly systemwide quality improvement accountability meetings, three chartered quality improvement initiatives are discussed on a rotating basis. Each initiative process results in the development of a new action plan and timeline if the measure is still below the 90th percentile. Occasionally, when no improvement has been shown over time, a team’s leadership will be changed. The council structure provides consistent improvement strategies and results in practice-sharing between providers as well as “friendly” competition between facilities to improve quality and patient safety (Exhibit 5).

- Quality “tracers” on each unit are monitored once every quarter. Facilities are evaluated through direct observation by trained quality management nurses on such core measures as hand hygiene and “crash cart” checking. Clinic managers are informed of the results the

Exhibit 5. Scott & White Quality and Patient Safety Program

Operational Strategies	Communication and People Strategies	Support Infrastructure Strategies
<p>Quality improvement goals <i>Examples:</i> National Surgical Quality Improvement Program, Five Million Lives Campaign, preventing patient falls</p> <p>Action model <i>Examples:</i> implementation tools such as rapid improvement process teams, quality management programs such as medical staff peer review</p>	<p>Effective communication <i>Examples:</i> structured and critical language</p> <p>Problem analysis tools <i>Examples:</i> human error and reliability, team dynamics</p> <p>Frontline involvement <i>Examples:</i> root cause analysis, safety culture survey, senior staff rounds</p> <p>Patient involvement <i>Examples:</i> Patients as Partners program, patient panels</p>	<p>Resources <i>Examples:</i> data and staff</p> <p>Organizational culture <i>Examples:</i> engaged leadership, fair and just policy and practice</p>

Source: Excerpted and adapted from Scott & White internal documents.

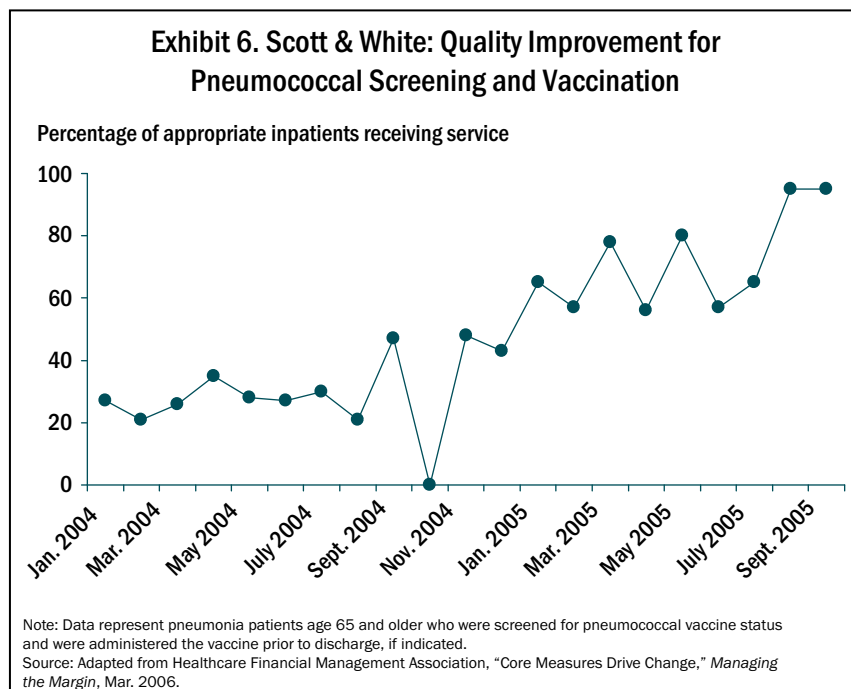
same day and given a suggested action plan for improvement.

- A quarterly Quality and Patient Safety Day has recently been added to the quality improvement process. Council members, together with any staff they would like to invite, participate in educational presentations, open discussion, and best-practice sharing on each of that year’s quality initiatives.
- The Quality and Patient Safety Councils also help determine systemwide process improvements to standardize equipment purchases, leverage economies of scale, and improve quality of care. The organization has adopted the Toyota “lean” philosophy to reduce waste and redundancy in the system, with a patient safety focus. Scott & White sponsored training in lean methodologies for physician leaders to facilitate engagement in quality improvement processes.

Scott & White’s executive director of safety and quality, Gail VanZyl, distinguishes the system’s quality improvement initiatives as either internally or externally driven. Internally driven initiatives are selected by Scott & White’s Quality and Patient Safety Councils. Recent examples include pneumonia

vaccination, nurse response time, and medication reconciliation. Externally driven initiatives are developed in response to mandates arising from accreditation and regulatory requirements. Examples of such mandates include Medicare hospital quality indicators, recent Texas legislation requiring public reporting of hospital-acquired infections, and Medicare’s new policy of disallowing payment for “never events” in which one of the selected conditions was not present upon admission.

Scott & White has made the Joint Commission’s core performance measures a feature of its continuous quality improvement efforts. A dedicated quality coordinator oversees each major hospital service line to facilitate compliance with core measures for heart attack, heart failure, pneumonia, prevention of surgical infection, and pregnancy-related conditions. Coordinators work in conjunction with physician-led multidisciplinary teams to monitor and abstract data, then report and disseminate information on opportunities for improvement. As a result of these efforts, the pneumococcal vaccination rate, for example, rose from 20 percent to 95 percent in just over two years (Exhibit 6). Scott & White captures additional data elements within each domain to improve internal performance and to participate in voluntary external measurement



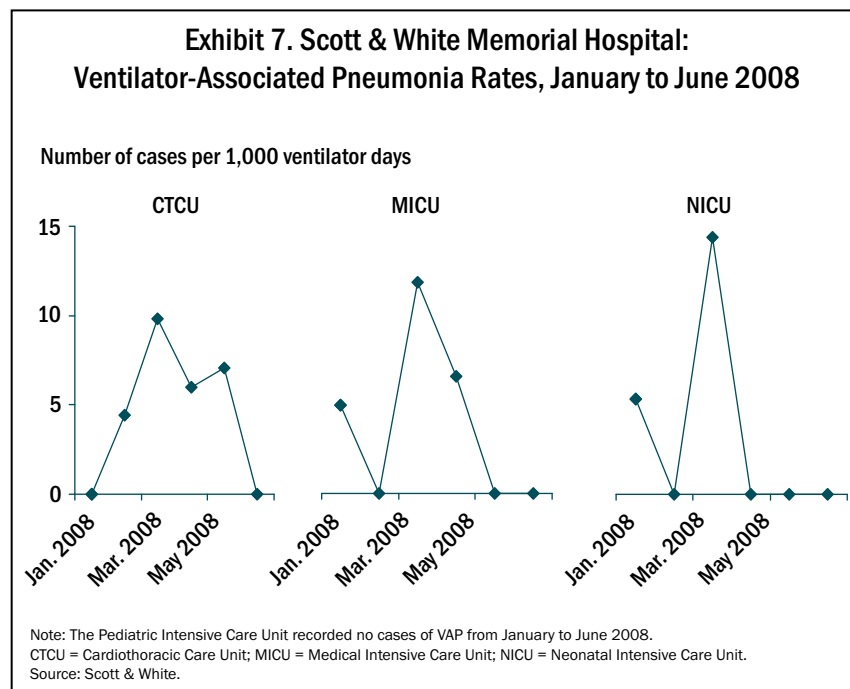
initiatives. This allows the system to make process improvements before public data reporting is required.

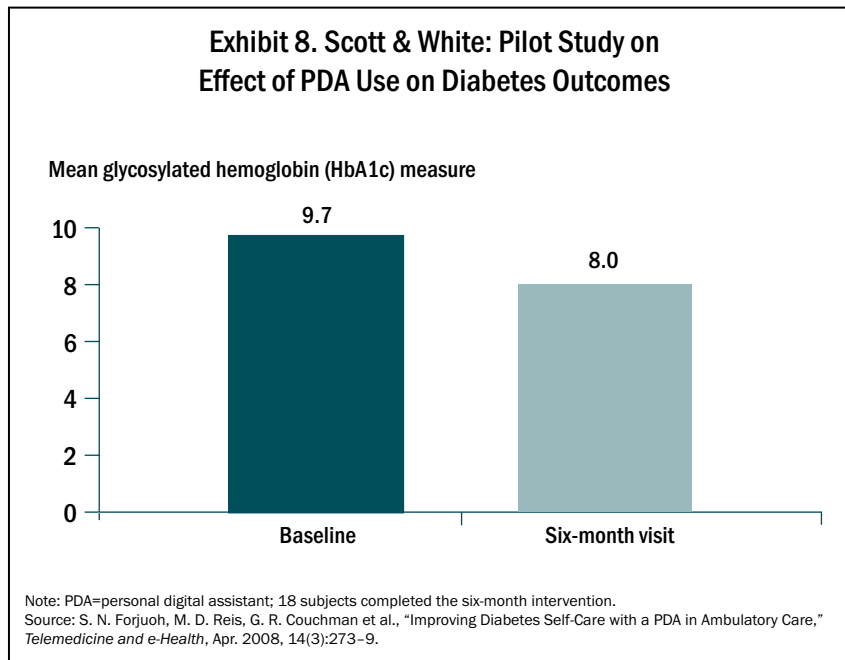
Scott & White manages the Clinical Simulation Center (located on its Temple campus) in partnership with Temple Community College and Texas A&M University. The center includes four high-fidelity simulation rooms: two intensive-care rooms, a labor and delivery room, and an operating room. All feature high-technology manikins with simulated veins, arteries, heart beat, pulse, breathing, and speech controlled remotely. Scott & White uses the simulation center to train residents, to design new processes and test them before they are implemented with patients, and to promote continuous learning and human error prevention for physicians and other providers. The Agency for Healthcare Research and Quality recently funded a simulation project to determine whether a curriculum for training multidisciplinary rapid-response teams in better communication methods using high-fidelity simulations will improve safety in a rural tertiary-care hospital.

In an effort to reduce hospital-acquired infections from methicillin-resistant *Staphylococcus aureus* (MRSA), every patient admitted to a Scott & White hospital receives a nasal swab MRSA screening using rapid DNA testing, which has reduced the turnaround

time for receiving test results from 72 hours to two hours. Subsequent isolation procedures are instituted as indicated to prevent the spread of infections. The system is spending close to \$1 million annually on its MRSA prevention efforts, which were associated with a 25 percent reduction in positive MRSA cultures during 2008. Similar improvement efforts are under way to reduce rates of ventilator-associated pneumonia in critical care units across the Scott & White system (Exhibit 7).

In September 2007, Scott & White Health Plan partnered with American Imaging Management (AIM) to implement a Radiology Quality Initiative Program, which evaluates outpatient radiology orders for appropriateness and timeliness. The system uses a call center and an Internet-based patient portal, where referring physicians enter orders for imaging services. A tiered system reviews the orders for compliance with nationally recognized clinical guidelines. If necessary, the ordering provider can speak with a nurse or physician reviewer to provide additional information to guide the utilization review process. AIM also works with Scott & White Health Plan to design and implement provider education and communication programs and to promote adherence to the guidelines.





Scott & White's Department of Family and Community Medicine conducts research to improve patient care and prevent disease. For example, it coordinates the Central Texas Primary Care Research Network, a practice-based research consortium funded by the Agency for Healthcare Research and Quality that conducts research in primary care settings and translates findings into practice. Other research has examined the benefits of a migraine disease management program, the use of e-mail communications with physicians, and the effects of "open-access" scheduling on appointment availability.

A recent pilot study from the Department of Family and Community Medicine looked at the effect of a personal digital assistant (PDA) on self-care activities by patients with diabetes. In that study, 43 patients with type 2 diabetes and a most recent hemoglobin A1c measure of at least 8.0% were furnished with training and the use of a PDA loaded with software designed to improve and enhance diabetes monitoring by providing reminders and by recording and trending information on glucose measurements, medication administration, food intake, and other self-care activities. The 18 subjects who completed the six-month intervention achieved a 17.5 percent decrease in their mean hemoglobin A1c measurement, from 9.7% to 8.0% (Exhibit 8), with greater reductions seen in those who used the

PDA more frequently. Although limited in size, the study appears to confirm the potential benefit of personalized health information technology in improving self-care activities among motivated individuals.⁷

EASY ACCESS TO APPROPRIATE CARE

Scott & White patients needing after-hours or urgent care are accommodated through such mechanisms as a HealthExpress Clinic, a walk-in urgent-care clinic open every day of the week. Scott & White Clinic also offers specialized clinics to handle seasonal needs, such as Saturday vaccination clinics for children needing immunizations in advance of the new school year. The Department of Family Medicine has championed the "open access" approach to appointment scheduling, which seeks to reduce waits for appointments by matching daily supply to demand. However, this approach is challenged by physician absences during inpatient rotations and has met with mixed acceptance.

Clinic "ambassadors" greet patients at the door, direct them to clinic, lab, or radiology services, get them tea or coffee and otherwise act to make their visit as stress-free and comfortable as possible. Patient "navigators" facilitate access to care for patients with cancer and act as a liaison with multidisciplinary cancer care teams. The navigators help guide the patient through the health care system while providing

emotional, informational, and technical support. At four of Scott & White’s busiest outpatient clinics, an automated kiosk enables patients to check themselves in, update their contact and insurance information, and even process a credit card payment for insurance copays. The first system was installed in September 2007, and additional kiosks may be installed at other clinic sites. Although the kiosks do not replace the regular check-in desk, many patients find it convenient to use the automated system.⁸

The Office of International Affairs serves non-English-speaking patients (primarily from Mexico and Korea) with 24-hour access to medical interpretation services. In an effort to monitor the ongoing needs of

its patients, the Scott & White Health Plan reviews the use of interpreting services periodically to guide the development of patient materials in languages other than English. The Scott & White Web site lists bilingual providers.

Scott & White provides medical services throughout its local and extended communities. For example, the system provided medical care to individuals evacuated to Central Texas after a hurricane, offers a free heart disease risk assessment, and conducts vaccination clinics for schoolchildren and health clinics for people who are homeless and those with chronic conditions who lack health insurance.

Exhibit 9. Selected Externally Reported Results and Recognition*

<p>Inpatient Care Quality¹⁰ (CMS Hospital Compare Jan.–Dec. 2007)</p>	<p><i>Four-topic clinical composite</i> (24 measures): Scott & White Memorial Hospital ranked in the top quartile of U.S. hospitals evaluated.</p> <p><i>Heart attack treatment</i> (8 measures): Scott & White Memorial Hospital ranked in the top quartile of U.S. hospitals evaluated.</p> <p><i>Heart failure treatment</i> (4 measures): Scott & White Memorial Hospital ranked in the top decile of U.S. hospitals evaluated.</p> <p><i>Surgical care improvement</i> (5 measures): Scott & White Memorial Hospital ranked in the top quartile of U.S. hospitals evaluated.</p>
<p>Ambulatory Care Quality (NCQA Quality Compass 2008)</p>	<p><i>Clinical quality</i> (33 measures): Scott & White Health Plan ranked in the top quartile of commercial health plans nationally or regionally on 11 measures, and in the top decile on 5 of those measures.</p> <p><i>Patient experience</i> (9 measures): Scott & White Health Plan ranked in the top quartile of commercial health plans nationally or regionally on 5 measures, and in the top decile on 4 of those measures.</p>
<p>National Recognition and Ratings</p>	<p><i>Verispan Top 100 Integrated Health Networks</i> (2006–2008).</p> <p><i>Thomson/Solucient 100 Top Hospitals: National Benchmarks for Success</i> (Scott & White Memorial Hospital, 2003–2008).</p> <p><i>HealthGrades Distinguished Hospital for Clinical Excellence</i> (Scott & White Memorial Hospital in 2006).</p> <p><i>National Research Corporation’s Consumer Choice Award</i> (Scott & White Memorial Hospital in 2004/2005–2007/2008).</p> <p><i>National Committee for Quality Assurance: Commercial and Medicare Health Plan Excellent Accreditation.</i></p> <p><i>US News & World Report Best Health Plans: Scott & White ranked among the top 25 Medicare plans in 2005 and 2006.</i></p>

* Note: These data reflect a time period used across all case studies in the series. See the *Series Overview, Findings, and Methods* for analytic methodology and explanation of performance recognition. CMS = Centers for Medicare and Medicaid Services; NCQA = National Committee for Quality Assurance (Quality Compass 2008 represents the 2007 measurement year).

Nurses employed by a third-party vendor staff the 24-hour HealthConnect answer line, offering information on self-care needs and advice on whether a doctor's appointment, urgent care, or ER visit is appropriate. Scott & White Health Plan members have access to wellness programs (provided by a third-party vendor) that evaluate members' health needs and create a personal health improvement plan with tools for stress management, nutrition and weight, smoking cessation, and depression management. The programs include financial incentives for participation.

Telemedicine technology enables specialties such as cardiology, mental health, plastic surgery, and pediatric neurology to reach patients who live in outlying communities. Telemedicine facilitates specialty consultations by overcoming barriers such as provider shortages and significant travel distances. The Sleep Disorders Center, for example, uses telemedicine technology to diagnose and treat patients who are located more than 100 miles away, while permitting visual contact and open communication between the patient and the provider.

The Center for Diagnostic Medicine facility was designed "with an eye focused on patient care." The building promotes a pleasant experience for patients and staff, with accessible waiting areas, conference rooms for support groups and continuing medical education, a deli and garden patio, and a pharmacy. It also incorporates "green" strategies for energy efficiency and patient-centered design aspects, such as rheumatology and geriatric clinics located on the first floor.

RECOGNITION OF PERFORMANCE

In addition to the results of the specific interventions described above, Scott & White has achieved notable results on selected externally reported performance indicators and has received recognition for its performance in several national benchmarking or award programs (Exhibit 9). In terms of efficiency, data from the *Dartmouth Atlas of Health Care*, which examined care at the end of life for Medicare patients with chronic illness, indicate that those who received the majority of their care at Scott & White Memorial Hospital from

2001 to 2005 had relatively lower Medicare spending per person (83% of the U.S. average) and fewer hospital days (68%) and physician visits (64%) as compared with the U.S. average. Among 93 academic medical centers, Scott & White had the lowest Medicare inpatient costs (reimbursements) per person during this time period.⁹

The identification of areas of excellence does not mean that Scott & White has achieved perfection, however. Like the other organizations in this case-study series, Scott & White has room for improvement in several areas of care. Scott & White's track record of improvement suggests that the organization will learn from such deficiencies and continue to innovate so as to achieve higher performance.

INSIGHTS AND LESSONS LEARNED

Scott & White is a thriving, integrated multispecialty system in a state known for independence and autonomy. While it once enjoyed the market share and cost insulation benefits afforded by a capitated and closed-network model, its recent change to an open-network model is increasing community trust and resulting in unexpected improvements in productivity, quality, and patient satisfaction in addition to greater financial stability and organizational self-awareness, according to its leaders. Various system functions, such as specialty consults, have had to adapt within the new reimbursement structure, but are facilitated by a shared EHR and electronic communication tools. As James Rohack, M.D., director of Scott & White's Center for Healthcare Policy, puts it, "We moved from a closed-group 'push' model to an open 'pull' concept where the patients now have a choice, and that has provided increased incentive to improve service."

Within this culture of independence, systemic dynamics in the Scott & White organization over the last decade have had an impact on policies related to provider management. While not without its challenges, moving from a salary-based physician compensation system to one tied to productivity- and quality-based outcomes has increased productivity. Developing and implementing uniform, evidence-based standards

and a more formal and systemwide peer review process aim to reduce practice variation and improve quality and, ultimately, outcomes. Furthermore, implementing an open-access model to promote improved access to providers becomes complicated when physicians spend weeks out of their clinics serving an inpatient rotation in the hospital setting. The implementation of these processes was facilitated by the integrated nature of Scott & White. As Dr. Rohack notes, “The best system is a system. And if we’re going to improve quality and safety and reduce costs, having everyone in the system aligned to do the right thing, so there’s no incentives to do wasteful things or things that don’t add value to the system, then that’s going to...allow American health-care to evolve.”

I think there are tremendous opportunities for process improvement in evidence-based medicine, decreasing variation, all the things we all know about that we as a very complex industry basically ignore. We have tremendous opportunity at every level to do things better.

*Alfred Knight, M.D.
president and CEO of Scott & White*

With a robust culture of organizational improvement, Scott & White is developing and testing various quality improvement strategies. The organization is physician-led, and physicians are integral to its functioning, not on an “ownership” basis but through active, collegial involvement with shared responsibility and accountability. “It’s incorporating physicians throughout every level of governance and leadership and every committee. It is a fundamentally different structure,” says Alfred Knight, M.D., president and

CEO of Scott & White. For example, physicians lead every key quality initiative, and regularly review quality data at Scott & White facilities. Under physician leadership, interdisciplinary teams plan and monitor progress toward quality goals. The CEO, several board members, and a lay individual participate in the System Quality and Patient Safety Council, and even when rates are approaching their targets, leadership “keep[s] us challenged to not be satisfied” with the status quo, according to Gail VanZyl, R.N., executive director of safety and quality.

A shared vision and expectation of continuous quality improvement, a culture of collaboration and peer accountability, the ability to look at the totality of patient care, and a willingness to embrace organizational change when circumstances require it have helped the organization achieve its success, its leaders say. Potential recruits undergo a rigorous screening process to ensure that they are a good fit for the group-practice model and organizational mission. Physicians are not bound by contract, allowing graceful exits when appropriate. Quality and Patient Safety Councils, at both the unit and the system level, create a formal charter for internally and externally driven initiatives. Physician and administrator leadership teams function to ensure that quality improvements are linked to greater system efficiency. That philosophical foundation has helped Scott & White to achieve substantial improvements in quality and efficiency, but, as Dr. Knight points out, “I think there are tremendous opportunities for process improvement in evidence-based medicine, decreasing variation, all the things we all know about that we as a very complex industry basically ignore. We have tremendous opportunity at every level to do things better.”

For a complete list of case studies in this series, along with an introduction and description of methods, see *Organizing for Higher Performance: Case Studies of Organized Health Care Delivery Systems—Series Overview, Findings, and Methods*, available at www.commonwealthfund.org.

NOTES

- 1 A. Shih, K. Davis, S. Schoenbaum, A. Gauthier, R. Nuzum, and D. McCarthy, *Organizing the U.S. Health Care Delivery System for High Performance* (New York: The Commonwealth Fund Commission on a High Performance Health System, Aug. 2008).
- 2 Information on Scott & White was obtained from interviews with Alfred Knight, M.D., president and CEO; James Rohack, M.D., director of the Center for Healthcare Policy and medical director for system integration at Scott & White Health Plan; and Gail VanZyl, R.N., executive director of safety and quality. Background information was obtained from internal documents, the organization's Web site (www.sw.org), and other sources noted below.
- 3 A summary of findings from all case studies in the series can be found in D. McCarthy and K. Mueller, *Organizing for Higher Performance: Case Studies of Organized Health Care Delivery Systems—Series Overview, Findings, and Methods* (New York: The Commonwealth Fund, 2009).
- 4 Scott & White announced on Nov. 23, 2009, that it had signed a letter of intent to merge with Trinity Health Services Corporation, based in Brenham, Texas. Under the agreement, "Scott & White Healthcare would become the sole corporate member of the newly formed health system," according to a press release. Trinity Health Services Corporation serves an eight-county area with facilities consisting of a 60-bed acute care hospital, a 128-bed long-term care facility and a Foundation (http://www.sw.org/web/patientsAndVisitors/iwcontent/public/newsroom/en_us/html/newsroom_PRTTrinityAnnouncement20091123.html).
- 5 L. Gamm, J. Nelson, and B. A. Kash, "Organizational Technologies of Chronic Disease Management Programs in Large Rural Multispecialty Group Practice Systems," *Journal of Ambulatory Care Management*, July/Sept. 2005 28(3):210–21; J. N. Bolin, L. D. Gamm, M. A. Zuniga et al., *Chronic Disease Management in Rural and Underserved Areas: Patient Responses and Outcomes* (College Station, Texas: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center, Nov. 2003).
- 6 S. N. Forjuoh, M. D. Reis, G. R. Couchman et al., "Physician Response to Written Feedback on a Medication Discrepancy Found with Their Elderly Ambulatory Patients," *Journal of the American Geriatrics Society*, Dec. 2005 53(12):2173–77.
- 7 S. N. Forjuoh, M. D. Reis, G. R. Couchman et al., "Improving Diabetes Self-Care with a PDA in Ambulatory Care," *Telemedicine and e-Health*, Apr. 2008 14(3):273–79.
- 8 C. V. Culp, "Local Clinic Has Installed Automated Kiosk to Speed Check-In," *Waco Tribune-Herald*, Nov. 25, 2008.
- 9 J. E. Wennberg, E. S. Fisher, D. C. Goodman et al., *Tracking the Care of Patients with Severe Chronic Illness: The Dartmouth Atlas of Health Care 2008* (Hanover, N.H.: The Dartmouth Institute for Health Care Policy & Clinical Practice, 2008). The analysis focused on the last two years of life among Medicare patients with one of nine chronic conditions who died between 2001 and 2005, controlling for differences in patients' age, sex, race, and primary chronic diagnosis. Data on Scott & White Memorial Hospital are available online at www.dartmouthatlas.org.
- 10 Rankings for CMS Hospital Compare clinical topics (heart attack, heart failure, pneumonia treatment, and surgical care improvement) included hospitals that reported on all measures and recorded at least 30 patients in each topic (only results in the top quartile are noted). Scott & White Hospital was evaluated and reported on the four clinical topics, but did not rank in the top quartile on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) overall patient rating of care measure (patient rating of 9 or 10 on a 10-point scale).

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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.

