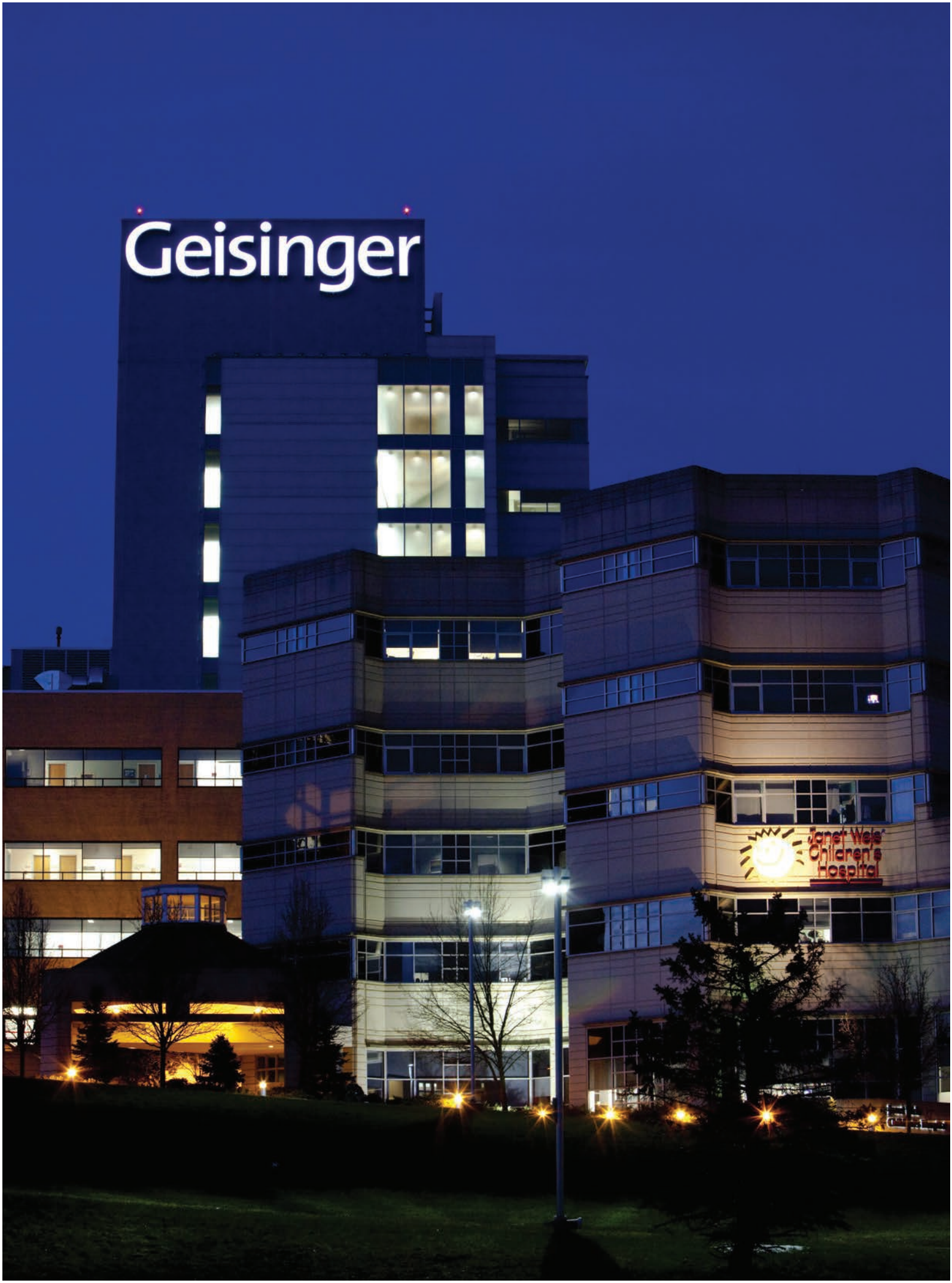

Geisinger
Janet Weis
Children's
Hospital

Transforming Care Delivery: Patient-centric, Value-driven Innovation

Part One: Geisinger Health System: Make It the Best

BY FREDERICK J. BLOOM, JR., M.D., M.M.M.

Editor's Note: In September 2011, Geisinger Health System was named the recipient of the American Medical Group Foundation's 2011 Acclaim Award for its "Transformative Care Delivery" initiative.

As my office nurse and I were caring for a patient today, I noticed again the words below her employee ID badge: "Make it the Best." These words were a directive from our founder, Abigail Geisinger, nearly 100 years ago when she stated "Make my hospital right, make it the best." Her vision was to provide quality health care that was accessible and affordable for her neighbors, friends, and family in rural Pennsylvania. Geisinger Health System has grown from a 70-bed hospital in 1915 to a large, integrated health system, but Abigail's passion for quality and innovation continues to drive our efforts today. We continue to provide high-quality, high-value health care to all who need it, when they need it, without regard for their ability to pay. Local families know that they don't have to travel to a large city to access the latest advances in health care, translational research, or cutting-edge clinical trials. In everything we do, we are always intent upon improving the health status and outcomes of the individuals and families we serve.

In 2001, our leadership took a critical, strategic look at the state of U.S. health care and saw an opportunity to redesign care based on innovative, value-driven approaches.

Value is the relationship between quality and cost, and previously it was thought that high-quality outcomes required costlier care. There are many examples in our country that show this is not true. In fact, high cost is often a marker for poor quality. We have built nationally recognized, evidence-based care delivery models yielding measurable improvements in patient outcomes and quality of life while reducing costs.

> The goal of our redesign was to enhance value for all parties involved in health care.

Geisinger Health System has grown to more than 900 physicians, 3 hospital campuses, and a 298,000-member health plan. We are one of the nation's largest and most comprehensive rural healthcare systems, providing care to more than 2.6 million residents in 43 counties of central and northeast Pennsylvania. As the largest employer in the area with more than 14,000 employees, we have a significant positive economic impact on many communities. Geisinger is a physician-directed system, grounded in the concepts of group practice and the interdisciplinary team approach to patient care. Our mission includes a dedication to educational and research programs to support patient care.

The goal of our redesign was to enhance value for all parties involved in health care: patients, providers, payers, and purchasers of care. Physicians and teams were feeling frustrated with their practices. They felt they had an impossible task: to see more and more patients in less and less time. They were spending too much time on documentation, prior authorization, and other tasks of little clinical value. Patients were also frustrated with care. Many did not have access to their physician when they wanted and needed it. They were being asked to pay more and more of the spiraling cost of their care. And they did not feel they had a physician who understood them personally. Finally, payers and purchasers of health care were spending more each year with no proof of improved quality and outcomes.

Our transformation began with the leadership's commitment to invest in superior infrastructure—people, facilities, and health information technology. The Geisinger Quality Institute provided a common language and framework for our redesign efforts. The transformation continued with a redesigned care delivery model that integrated technology into clinical care, involved the patient and family, ensured total accountability through aligned incentives, and reduced variability through performance feedback. The goal was to eliminate unjustified variations in care, fragmentation of care-giving, perverse payment incentives, and treatment of patients as passive recipients of care.

Our redesign has resulted in many successful new models including a patient-centered medical home

model program, ProvenHealth Navigator®, and a bundled payment model for care improvement called ProvenCare®. ProvenHealth Navigator incorporates primary care redesign, integrated case management, value-based partnerships in the medical neighborhood, and quality outcome measurement into a sustainable business model. ProvenCare redesigns defined episodes of care into more-reliable, safer, more satisfying experiences with better outcomes at a lower cost.

We have learned that quality and efficiency are inextricably linked: efficiency emerges during process redesign to improve quality. We have transformed ourselves into a functionally and culturally different healthcare system, but have only begun to achieve true value in health care. Our near-term objectives include continuing to pursue transformational innovation that will define an accountable care organization (ACO), further transforming health care through more patient involvement, and pioneering personalized medicine.

Our next step in redesigning health care is assisting other health systems nationally and internationally to implement transformative, leading-edge healthcare innovations. These efforts are based on the demonstrated ability of our models to improve outcomes, reduce costs, and improve health status for our population. These programs have been shown to improve satisfaction both for patients and the providers that serve them. To succeed, to "Make it the Best," all members of the health system must expect the best of themselves, give their best to patients, and engage patients to give their best in return.

Frederick J. Bloom, Jr., M.D., M.M.M., *is associate chief quality officer at Geisinger Health System.*

Transforming Care Delivery: Patient-Centric, Value-Driven Innovation

PART TWO: 2011 ACCLAIM AWARD RECIPIENT GEISINGER HEALTH SYSTEM

Geisinger Health System, a physician-directed organization and one of the country's largest and most comprehensive rural healthcare systems, provides care to more than 2.6 million residents in 43 counties. Geisinger is a not-for-profit health organization that encompasses 3 hospital campuses, 39 primary care practice sites, 26 clinical service lines, an alcohol and chemical dependency treatment center, a set of full-service insurance companies, multiple research organizations, and an entrepreneurial arm. As the largest private employer in the region (14,000 employees), the health system has a state-wide $5.5 billion economic impact.

The multidisciplinary physician group practice comprises more than 900 physicians, 460 advanced practitioners, and 350 residents and fellows who provide approximately 2 million outpatient visits at 62 primary and specialty clinic sites and 2 outpatient surgical centers. The group's 39 community practice sites with a total of 220 providers conduct 864,000 outpatient visits annually. These community physicians admit to 11 independent local hospitals.

About 48,000 patients (utilizing 820 licensed inpatient beds) are admitted annually to Geisinger hospitals, which also conduct 100,000 emergency room visits each year. The original medical center located in Danville, Pennsylvania is a full-service tertiary/quarternary care teaching facility boasting a hospital for advanced medicine, a children's hospital and state-of-the-art neonatal intensive care unit (NICU), and a Level 1 trauma center. Award-winning heart and cancer hospitals and a Level 2 trauma center are located at a second medical center campus in Wilkes-Barre, Pennsylvania.

Geisinger's leaders saw an opportunity to reinvent what they realized was a broken system.

Geisinger's health insurance companies offer diversified HMO and commercial health plans serving 298,000 members, including 57,000 Medicare Advantage members. Geisinger ended fiscal year 2011 with an operating income, after interest expense, of $180.9 million, a 6.8% return on $2.7 billion of revenue. Despite the challenges of a weak economy, the uncertainty of healthcare reform, and continued reimbursement shortfalls in 2010, Geisinger provided $265.9 million (13.0% of operating expenses of the tax exempt organizations) of community benefits, including uncompensated care and care provided under government programs at less than cost.

Value-driven Care Delivery

In 2001, Geisinger's leaders evaluated the state of U.S. health care and saw an opportunity to reinvent what they realized was a broken system. Since then, Geisinger has been designing and implementing innovative, value-driven approaches to improving health care. The journey began with leadership commitment to invest in superior infrastructure. Today, this ongoing commitment is focused on patient-centered primary care and redesign of inpatient and specialty care.

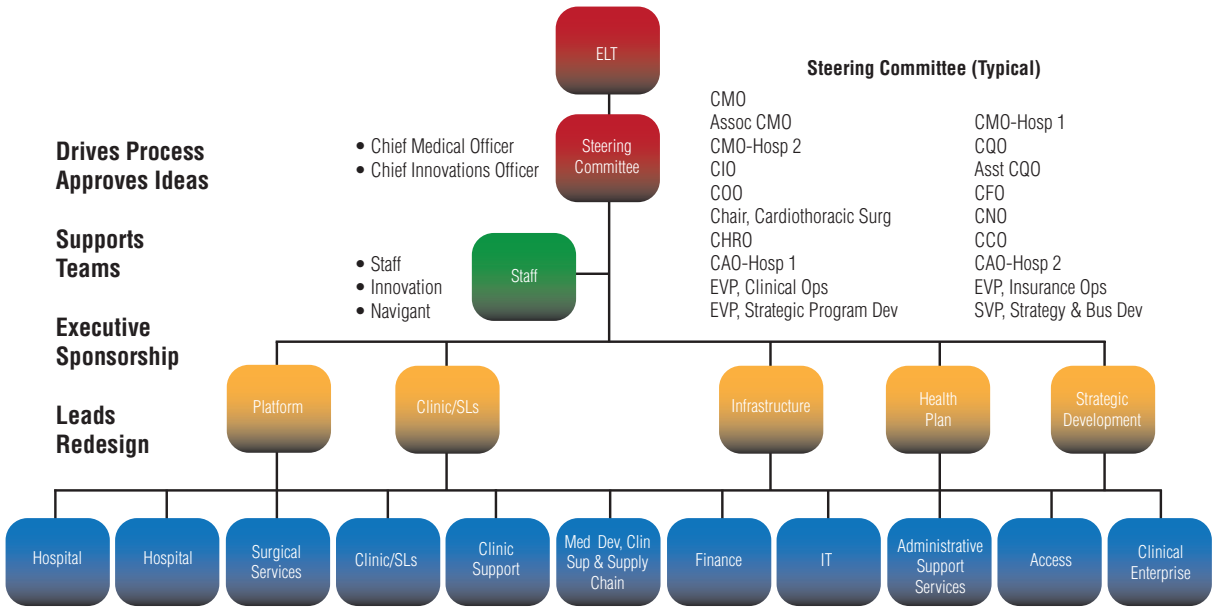
The goal of the redesign was to enhance value for all stakeholders involved in health care by improving outcomes while reducing their costs, enhancing the provider experience, and raising financial performance in both fee-for-service and "results sharing" environments for hospitals and physicians. Redesign slows the rate of cost increases for the payer (insurer) and purchaser, preserving the affordability of insurance and, therefore, its availability.

Significant value is derived from integrated global/bundled reimbursement programs administered by the health insurance plan. Pay-for-performance—combined with best practices—has driven results that consistently show decreased rates of mortality, infection, and other complications, along with decreased lengths of stay and readmission rates.

Over the past 10 years, Geisinger has evaluated, adjusted, and perfected many care procedures (pathways). The result is a system of care that delivers evidence-based medicine by integrating information technology with care team accountability and easy access for patients. These care pathways

FIGURE 1

Executive Leadership Team Accelerated Performance Program



have been seamlessly embedded into clinical processes and their outcomes are measured. Following are the redesigned pathways:

Chronic Disease Care

The chronic care redesign leverages the entire primary care team to drive systematic improvements in total population care. The physician-driven, team-enabled, evidence-based workflow uses accurate clinical information from the electronic medical record to identify needed care and reliably deliver that care to all patients. It targets patient-centered measures with patient-specific goals and uses an "all or none" methodology that improves management for chronic conditions to improve long-term health. All or none quality measures accelerate the transition to the team-based model of patient care. Population data are simultaneously pushed out to all members of the care team, enabling aligned incentives and metrics for rapid cycle change.

Currently, the chronic disease management portfolio includes diabetes, congestive heart failure, coronary artery disease, chronic kidney disease, osteoporosis, hypertension, adult preventive bundle and childhood immunizations.

Geisinger's "all or none" bundles of care scores have significantly improved. For example, scores went up by over 500% during the past 5 years for 25,000 patients with diabetes and by over 300% for 15,000 patients with coronary artery disease. More importantly, in comparing optimized chronic disease care to usual care, Geisinger saw significant outcome improvements in as little as 3 years. Specifically, for the 25,000 patients treated using the chronic diabetes model, data show the organization prevented:

- 305 heart attacks
- 140 strokes
- 166 cases of retinopathy

Acute Episodic Care

By eliminating variables, the best practices surgical model for acute episodic care ensures that each patient receives every element of care, every time. This redesigned program has been applied to traditionally high-cost, high-volume health conditions. To date, 10 acute care surgical models are in place:

1. Angioplasty + AMI
2. Bariatric Surgery
3. Cardiac Imaging
4. Cataract Surgery
5. Coronary Artery Bypass Graft (CABG)
6. Low Back Pain
7. Lung Cancer
8. Percutaneous Coronary Intervention (PCI)
9. Perinatal Care
10. Total Hip Replacement

Each care model incorporates a system of checks and balances and holds a specific care team member responsible for each element of care. Checkpoints are built into the patient's EHR, with each step documented and cross-referenced. Details related to care, including coordination and transition aspects, are entered into the EHR and immediately available to the entire care team. As an example, there is a 40-step checklist used for coronary artery bypass graft (CABG).

Advanced Medical Home

Geisinger's medical home model began by focusing on patients with the most complex conditions. It has expanded to include patients across the healthcare spectrum – from those who are well and need preventive care, to those with chronic conditions, co-morbid conditions, and to those at the end of life.

A critical part of the program is intensive management of every patient discharged from a hospital, for a period of at least 30 days. This ensures maximal health improvement from the acute intervention and reduces the frequency of complications and readmissions. In the first 2 years of the program, hospital admissions were reduced 18%, readmissions were reduced 36% and overall cost of care declined 7%. The program has been expanded to include other transitions, such as discharge from a nursing home.

Accessible Care

Patient-centric care demands access to care when and where the patient wants and needs it. This is the foundation of primary care redesign, patient-centered medical homes, and accountable care organizations. This enhanced access to primary and specialty care, as opposed to a restrictive gate-keeper model, enables care earlier in the course of disease and in a more cost efficient outpatient setting.

Open Access Scheduling

In a collaborative with the Institute for Healthcare Improvement, Geisinger's primary care offices instituted open access scheduling for their patients 10 years ago. Since then, the offices have maintained consistent, same-day access for urgent and routine problems. The system measures the third-available appointment for each primary care physician with an expectation that this will be within 24 hours. Specialty physicians also have an open access scheduling target of three available appointments within an eight-day window.

Geisinger Health System team accepting the 2011 AMGA Acclaim Award (left to right): Steven Pierdon, M.D., M.M.M., Executive Vice President, Chief Medical Officer, Geisinger Northeast; Elizabeth Boyer, Senior Director, CPSL Best Practice/Care Gaps; Diane Littlewood, R.N., B.S.N., CDE, Director, Population Management Operations, Geisinger Health Plan; Maria Kobylinski, M.D., Department Director; and Frederick J. Bloom, Jr., M.D., M.M.M., Assistant Chief Quality Officer.

FIGURE 2

Performance Teams' Focus Areas

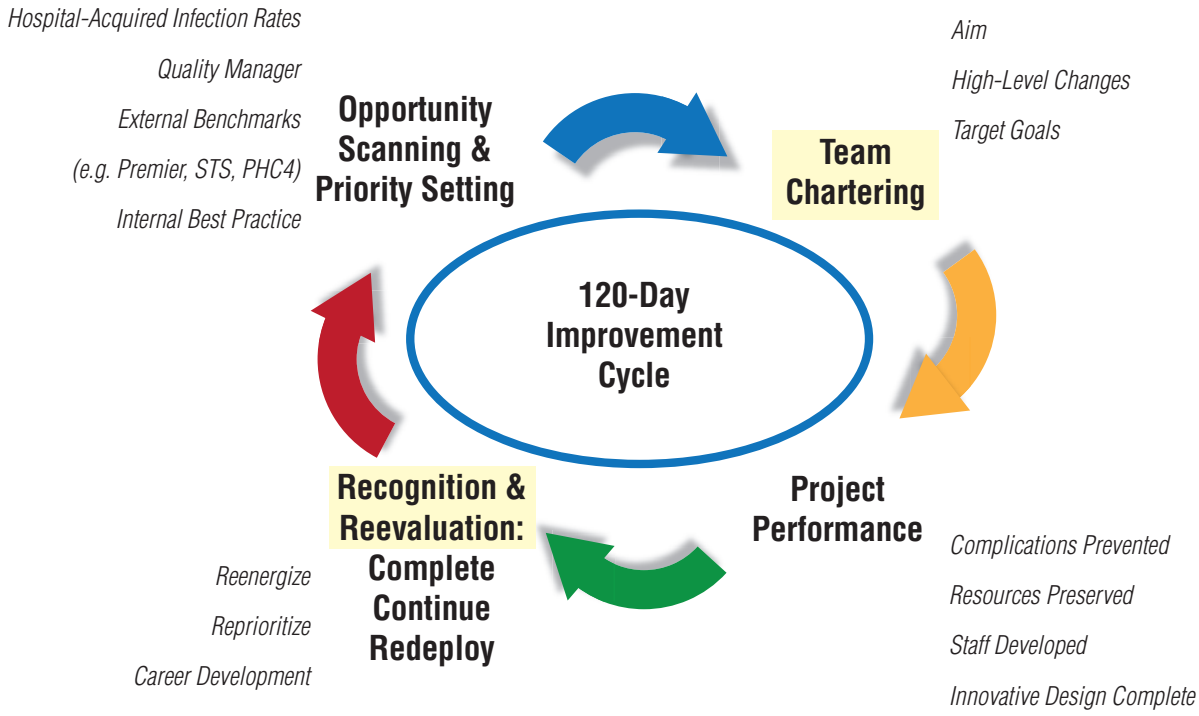
QUALITY	MARKET
Culture of Safety Population Health Outcomes Decreased Mortality and Readmission Rates Eliminating Preventable Harm Reducing Infection Rates Expanding Evidence-Based, Value Care Patient Activation/Engagement	Market Capture Marketing Insurance Operations Growth TeleHealth Accountable Care Organization Development
INNOVATION	**LEGACY**
Research Converting Data to Information Optimizing Capacity Eliminating Preventable Delays Ambulatory Care Access Resource Utilization	Role Redesign Workforce Management Employee Wellness Talent Management Training Retention

Accessible Urgent Care

Several of the traditional, daytime primary care sites now have on-site Urgent Care Centers with an after hours program that offers patients access to urgent care with extended hours of coverage at the same clinic site. Staffed by nurse practitioners, supported by physicians, and connected by the EHR, the centers provide convenient, appropriate care for basic but urgent needs. This extension-of-care team also provides late-night direct care when support by phone or other electronic contact is not enough.

FIGURE 3

Accelerated Performance 120-Day Improvement Cycle



Visionary Leadership

Geisinger Health System's president and chief executive officer, Dr. Glenn Steele, expends a significant amount of time and energy on fine-tuning short- and long-term strategy. He works closely with health system foundation directors and members of multiple advisory boards to solicit their advice and input. He takes the process even further by requesting similar contributions from 50 system-wide focus groups of staff and physicians. First-round results are reported and revisited by a smaller number of focus groups. The result is a consistent, cohesive set of strategic goals:

2011 – 2015 Vision: Transforming the Future

- System Quality and Innovation = Rapid Cycle Innovation
- Market Leadership = Scaling and Generalizing Innovation
- "The Geisinger Family" = The Personal and Professional Well-being of Our Employees

Every level of the organization, from the boardroom to the bedside, is aligned to achieve these visionary goals. Each clinical service physician head is partnered with an administrative vice president. They share accountability for program growth, clinical (quality) and financial performance targets, and recruitment, retention, and mentoring of staff. Service line goals are driven by patient safety and outcomes. This focus on quality has pushed the service lines to build stronger staff skills and achieve better performance, thus increasing value for patients.

One of the ways Geisinger is securing the legacy of quality and innovation is through the Quality Institute, a collaborative, interactive learning program spanning the clinical enterprise from front-line workers to the executive suite. The aim of the quality curriculum is to develop a cadre of leaders with the basic improvement skills and knowledge necessary to lead change and continuous quality improvement within the framework of their clinical or operational microsystem.

Team-Managed Accelerated Performance

In 2009, a formal structure, the Accelerated Performance Program, was developed to facilitate the approach to redesign. The program organizes teams throughout the system to address quality challenges such as:

- Avoiding preventable harm and improving outcomes
- Achieving high patient, health plan member, and employee satisfaction and high employee engagement
- Ensuring operational success
- Managing inpatient and outpatient volumes
- Balancing external factors and regional/local focus with national commitment
- Improving efficiency, i.e., better staff utilization, and providing the right resources/right time/right care for patients

Service line leaders head multispecialty, multidisciplinary performance teams and workgroups (see Figure 1). Through these efforts, the necessary processes and procedures to produce good patient outcomes are defined, communicated, tested, and implemented. Based on their findings, these teams guide EHR optimization and tightly link clinical operations and IT. They continually refine processes and provide the feedback to co-workers and leadership.

In fiscal year 2010, teams addressed accelerated performance and innovation in administration (finance, IT, strategic planning, supply chain),clinical areas (bedside care, clinics/service lines, clinical support, care gaps, surgical services), and the health plan. During that year, implemented changes produced one-time savings of $34.7 million and an additional $48.7 million on a recurring basis. For the current fiscal year, performance teams have identified $114.7 million in "idea value" savings: $41 million as one-time savings and $73.7 million in annual savings. Specifically aligned to Geisinger's 2011-2015 vision, 2011's performance teams focused on the following areas: quality, market, innovation, and legacy (see Figure 2).

The Accelerated Performance Program is a series of ongoing 120-day improvement cycles (see Figure 3). Every 120 days, new opportunities are found to improve operational and patient care processes. This framework engages the entire organization in assessing problems and developing and implementing solutions, using evidence-based standards to deliver best practices.

Physician Compensation Alignment

Recent healthcare reforms have reignited interest in tying payments to measurable improvements in patient outcomes. The health system and group practice leaders have long believed that a quality- and value-driven incentive program is critical to reward both individual and group progress.

Geisinger's physicians devised, and in 2001 successfully launched, a realigned physician/provider compensation structure. This model focuses the attention of all physicians on quality metrics and patient satisfaction, as well as on contributions to the group's financial and clinical excellence. For both primary care and specialty teams the emphasis is on outcomes of care—and pay is based on outcomes—not solely on volume. Currently, 20% of compensation is based on non-productivity measures. Patient satisfaction, quality improvement, innovation and market growth are rewarded. The thinking was not to pay people to work harder, but to pay them to work differently in a physician-directed, team approach.

The compensation model is both competitive and affordable. It provides transparency and uniform administration. Physicians are able to predict, and impact, their compensation through their performance. Physicians can view their "score cards" online at any time to review their own and their team's performance. Performance metrics selected by the physicians are rewarded every six months.

For primary care providers, the Medical Home compensation model and incentive are equally compelling. They receive compensation at three levels: (1) upfront monthly payments for Medical Home participation, (2) fee-for-service payments for patient care, and (3) bonus payments for quality targets, funded by improved efficiency.

Health Information Technology

Geisinger's clinical model of physician-led, team-delivered care is enhanced by HIT.

The technology enabling such exchange of information was being developed as early as 1995. Since then, Geisinger's HIT infrastructure has evolved through many stages:

1995 – Outpatient Electronic Health Record (EHR)

2001 – Networked Patient Health Record (PHR)

2002 – Regional Outreach IT

2004 – Integrated Process and IT Optimization

2005 – Health Information Exchange/Regional Health Information Org (RHIO)

* AHRQ and state funds set stage for regional sharing of health information

* Basis for Beacon Community Grant award

2005-2010 – PGP Demo/Medical Home Construction

2006 – Care Coordination – Medical Home/Outpatient Reliability Bundles

2007 – Inpatient EHR installed

2010 – Beacon Community Grant Implementation

2011 – Medical Neighborhood/Integrated Regional Health Information Org (RHIO)

Prior risk-sharing or capitation arrangements between payers and providers often failed because providers lacked health information or supporting technology to manage patient care and timely data from insurers. Today, the health plan can share financial and utilization information immediately with providers so they are aware of patient status. Predictive modeling identifies high-risk patients who will benefit from case management and early, appropriate intervention. The organization's use of advanced optimized HIT enables it to proactively identify the preventive or chronic disease care required by a patient or class of patients.

Enhanced Access to Personal Health Record (PHR)

The one-third of Geisinger's active patient population using the PHR has access to many advantages. The fully interactive patient portal allows access to the PHR anytime, from anywhere. With the ability to directly schedule appointments, refill medica-

tions, request referrals, review test results and communicate with the physician, patients have no need to call or visit the office for these reasons. This electronic connectivity also allows patients and families to access interactive video and other educational materials from home or office. They also receive alerts and communications about gaps in care, or an invitation to complete a web-based screening tool to identify specific risk factors.

Impact on Local Population

In high-performing health systems, improving population health becomes not just a "community benefit," but also essential for organizational success. To achieve this goal, Geisinger built strong relationships with other providers in its region and organized research and training programs to support improved patient care.

Geisinger continues to expand its patient "touches," serving 109,000 more unique patients in 2010 than in 2004. This increase represents an average annual growth rate of 4%. Total inpatient discharges increased by 2% annually from 2006 to 2010. Market penetration (unique patients served divided by total population) for Geisinger's 31-county primary and secondary service area increased from 16% in 2005 to 20% in 2010. Economic support for local residents continues to increase. For fiscal year 2010, the health system's outlay for community benefit totaled $265.9 million.

Translational Health Research

A key component of past, present, and future reengineering efforts has been the executive vision to develop, and invest in, translational health research. Geisinger's Center for Health Research was founded in 2003 to focus on developing improvements in population health, accelerate the translation of knowledge into practice, and create healthcare solutions that are both patient-centered and economically sustainable. The research focuses on developing knowledge of high relevance to the needs of the group's patients and methods to rapidly translate these into broad clinical use.

Physician Group Practice Demonstration Project (PGP Demo)

From 2005 to 2010, Geisinger Health System participated in the Centers for Medicare and Medicaid Services (CMS) PGP Demo to determine if large, multispecialty group practices deliver higher quality care at a lower cost than surrounding physicians and hospitals. This Medicare shared savings program resulted in substantial improvement in quality measures for diabetes, congestive heart failure, coronary artery disease, hypertension, and adult preventive care. The organization was the most improved quality performance practice in the demo, consistently achieving 100% of the quality measures during the final four years. In addition, Geisinger reduced the actual cost of care to CMS by more than $13 million based on target expenditures. The PGP Demo showed that value creation by improving quality at reduced cost is possible, and informed the accountable care organization (ACO) section contained in the Affordable Care Act of 2010.

Geisinger redesigned care within post-acute environments, including skilled nursing homes, using knowledge from participation in the PGP Demo. It developed an advanced, practitioner-led nursing home model that ensures the daily presence of a nurse practitioner or physician assistant to provide comprehensive intake assessment, early identification and treatment of problems, and coordination of discharge planning with the patient's primary care team.

Challenges and Opportunities

Like all rapidly growing organizations within a transitioning industry, the health system has many challenges to remain focused on its end goals:

- Supporting the increasing complexity of the organization without increasing costs
- Greater emphasis on quality and value for patients, payers, purchasers, and the organization
- Providing value-based care for rural, elderly, chronically ill population
- Relentless pursuit of improvement and innovation
- Building research and innovation
- Staying committed to scale out innovations regionally and nationally
- Addressing changes associated with healthcare reform:
  - Increased demand for services
  - Market consolidations (insurance companies and providers)
  - Changing/decreasing reimbursement structures
  - Changing societal expectations
  - Maintaining an agile and proactive stance for "unintended consequences"

Lessons Learned

Through Geisinger's redesign efforts, many lessons have been learned—in particular, that high cost is often a marker for poor quality.

Without a partnership between the patient and the physician-led team, the rest of the picture doesn't come into focus. The patient must be engaged and active in his/her own health management. Access to information and shared decision making is of paramount importance.

It is critical to include all levels of the organization at the beginning of the process—from boardroom to service line and operating unit leaders, to bedside caregivers. Leadership by and engagement of the care teams and service line managers result in the most effective design and implementation of process changes. The employees who actually perform the work must redesign the processes so that each remaining step is performed

efficiently, able to be replicated throughout the system, and essential to quality patient care. Not only is their input necessary, but staff at all levels must be trained and informed so everyone understands the changes in process, their new role, any new procedures, and their specific scope of responsibility and accountability. Responsibility must be spread over the care team, with clearly defined roles, and every person must be enabled to work at the highest level of his/her skills and licensure. This ability is enormously satisfying to staff.

Accountability must be defined, supported by appropriate execution authority, and enforced at individual and care team levels, as well as at higher organizational levels. Process redesign prior to the overlay of computerization is critical. Technology is essential for efficiency and accessibility, but is only an accelerator, not a substitute, for proper work design. It is not the HIT itself, but its implementation in a total system of care, which makes a process successful.

Geisinger's Future

Geisinger Health System will continue on the journey toward high-value care. This requires executing the necessary operational plans every year to realize *The Vision* in its key focus areas—Quality and Innovation, Market Leadership, and The Geisinger Family.

Quality and efficiency are inextricably linked: efficiency originates during process redesign to improve quality. Geisinger has transformed itself into a radically different healthcare system. The organization looks forward to further scaling and sharing this transformational approach regionally, nationally, and internationally. Near-term objectives include developing into a fully functional ACO for Medicaid and commercial payers and further transformation of health care through greater patient involvement, better predictive modeling, and implementation of personalized medicine.

As Geisinger Health System looks toward its next century of patient care, its primary mission will continue to be providing high-quality, compassionate care to all who need it, when they need it, and where they need it.

Adapted from the 2011 Acclaim Award Application of Geisinger Health System submitted by Assistant Chief Quality Officer Frederick J. Bloom, M.D., M.M.M.