

How Geisinger Health System is leveraging operational innovations to streamline and standardize care delivery



Executive Summary

Geisinger Health System is leveraging digital technology and expert training to ensure that every site that provides radiology services delivers the same high standard of care throughout the entire network. This standardization effort is complemented by an enterprisewide initiative to streamline clinical operations in radiology and provide all patients with equal access to high-quality care, regardless of where that care is delivered.

These ongoing projects are key components of a 10-year Value Partnership between Geisinger and Siemens Healthineers. This collaborative, performance-oriented relationship is delivering tangible benefits for Geisinger and the community it serves. Standardized radiology operations mean that every patient receives the highest possible quality of care. Streamlined operations enable Geisinger to provide services to more patients, effectively increasing access to care. And these efforts enable Geisinger to deliver high-quality care to more patients without retaining additional full-time or freelance technologists.

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Geisinger: High-Quality Care for a Diverse Region

Through a network of 10 hospital campuses and a variety of outpatient facilities and affiliated practices, Geisinger serves a population of about one million people in central Pennsylvania, USA. The extended Geisinger family also includes Geisinger Commonwealth School of Medicine and Geisinger Health Plan, a comprehensive health insurance service. The entire Geisinger organization is dedicated to making better healthcare more accessible.

Geisinger serves a diverse population over a wide geographical area that includes cities, remote rural areas, and everything in between. Despite these factors, Geisinger remains determined to ensure that patients receive the same high quality of care no matter where or when they access the Geisinger network.

"Access is always a challenge when it comes to healthcare. We want to make sure that we're providing the right patient care in the right locations. This partnership with Siemens Healthineers has allowed us to offer our rural communities access to advanced imaging without having to travel long distances."

-Sean Szmal, Regional Operations Director of Radiology at Geisinger





Geisinger and Siemens Healthineers Form a Value Partnership

To reach their goals, Geisinger management sought business relationships that went beyond traditional transactional contracts. A true partnership would help them address three key challenges:

- Expanding access to quality care
- Achieving greater consistency in scanning and image interpretation
- Managing staffing shortages and reducing staff-related expenses

To address these challenges, Geisinger entered into a collaborative, performance-oriented Value Partnership with Siemens Healthineers, a long-standing vendor with a shared vision for excellence in radiologic services and beyond.

"Together we can improve patient access, and together we can take better care of our communities."

-Sean Szmal, Regional Operations Director of Radiology at Geisinger



Value Partnership at a glance

Key Deliverables:

- Medical technology and roadmap
- Standardized equipment configurations
- Customized training for clinical and biomed staff

Digital Health

- Solutions to measure and optimize medical technology utilization
- Tools to improve patient access and consistency of results
- Workflow solutions and services to create efficiencies and boost productivity

Performance Improvement

- Siemens Healthineers consulting team identifies opportunities for improvement
- Workflow consultants streamline processes and create efficiencies

Education and Training Solutions

- Support for medical technology training
- Support for application upgrades
- FlexForce Coach to optimize staff technique and workflows

Service

- Personalized service coverage model
- Training support for hospital biomed department
- Remote applications to detect issues and prevent unplanned downtime

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Standardized Radiology Operations Improve Quality throughout the Network

Optimized medical technology workflows are key to developing standardized and efficient protocols for high-quality imaging. With standardized technology and workflows across the Geisinger system, staff members are able to rotate between facilities with little or no additional training or learning curve. The benefits of optimized staff utilization cannot be overstated: Like many healthcare enterprises, Geisinger must meet increasing caseloads with fewer radiologists and radiologic technologists.^{1,2}

Most importantly, standardization of imaging protocols and interpretation means that patients receive the same high standard of care wherever they access radiology services from Geisinger. Adopting and refining best practices across the network can improve patient outcomes, satisfaction and loyalty. And improved patient experience, in turn, can help attract and retain patients, potentially increasing revenue.³⁻⁵

A smart mix of digital health solutions enabled Geisinger to standardize radiology protocols, increase access to care, and maximize equipment utilization. Remote scanning support with *syngo* Virtual Cockpit allows care teams to standardize care, increase productivity and deliver high-quality imaging services across all locations. The teamplay

performance management application helps to manage protocol distribution and ensures consistency in practice. Al-Rad Companion*, a product family of cloud-based Al powered solutions designed to improve performance and efficiency, helps simplify and standardize image interpretation for radiologists. Al-Rad Companion helps radiologists to identify potential areas of interest, further ensuring consistency across the network and enabling them to spend more time with patients.

Training is a key element of standardizing care. With this in mind, Geisinger leveraged the FlexForce Coach workforce program from Siemens Healthineers. FlexForce Coach provides OEM training customized to each customer's specific needs and ensures that radiologic technologists are performing their duties and utilizing equipment according to optimized, standardized protocols.



FlexForce® Coach

- Comprehensive staff development and performance consulting
- Personalized to every organization's needs
- Delivers lasting value that is tracked and reported to maximize success





Ensuring Access to Quality Care, Everywhere

Access to consistent, high-quality healthcare is a particular challenge in rural areas. The need to travel long distances to access care, coupled with challenges in attracting and retaining staff in some rural settings, constitute a challenge to delivering quality care in sparsely populated areas far from urban hubs.

Geisinger administrators set equitable access to care as a primary goal and worked closely with Siemens Healthineers to make it a reality. The partners leveraged digital technology to streamline clinical operations, enabling care providers to deliver quality and value to all of their patients.

Many of the same solutions that are in use to help standardize clinical operations are also being used to improve access to quality care.

syngo Virtual Cockpit** enables remote scanning functionality that provides virtual access to expert centralized radiologic technologists from every radiology facility in the Geisinger network. That means consistent processes—and consistent results—in every location, from hub to spokes. In addition, syngo Virtual Cockpit can help proactively balance staff availability to cover for sick or vacationing technologists, potentially reducing staff expenses. This technology enables Geisinger to further increase access by extending evening hours, and it also improves throughput at Geisinger imaging facilities. Since program launch, virtual scanning has opened more than 1,000 additional MRI slots.

Al-Rad Companion can increase efficiency, enabling staff to serve more patients. Al-Rad Companion is part of the teamplay ecosystem, a powerful suite of solutions for radiology departments. teamplay can measure and optimize equipment utilization and enables remote collaboration among staff.

These are powerful benefits for the patients Geisinger serves, and they also translate into financial benefits for the health system, which can now scan and read more patients than before.



Siemens Healthineers digital health solutions at a glance

teamplay

- Measures equipment utilization
- Auto-populates dashboards
- Distributes standardized protocols

syngo Virtual Cockpit

- Expands access via remote scanning technology
- Proactive approach to managing potential staff shortages and expenses
- Ensures consistency in practice, "from hub to spokes"
- Manages protocol distribution and utilization
- Allows for additional volume and revenue

AI-Rad Companion

- Multi-organ diagnostic decision support system
- Automatic post-processing of imaging data sets
- Automated report available in PACS
- Support of routine workflows for radiologists

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Conclusion

Geisinger and Siemens Healthineers are working together to optimize radiology operations and improve access to high-quality care for the patients Geisinger serves. The Value Partnership they have formed includes a customized mix of medical technology (imaging equipment), workforce training and development, and innovative digital health solutions that have enabled standardization across the network while improving access to care—no matter where that care is provided.

This partnership delivers powerful benefits for patients, and it also improves Geisinger's financial performance through increased efficiency and flexibility—delivered via remote scanning and standardized workflows—in their radiology facilities.

As a long-term partner, Siemens Healthineers will continue to work with Geisinger to anticipate and manage changes in the macro and local healthcare environments, in support of clinical excellence and financial stability for years to come.

"Healthcare changes rapidly, and so we work to innovate new ways to provide care. New digital capabilities address challenges in performance optimization, staff shortages, and patient access to consistent, high-quality care. Since Geisinger and Siemens Healthineers launched a Value Partnership, we've realized that together we can achieve more than we ever could on our own."

-Aalpen Patel, MD, Chair of Radiology at Geisinger

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- 5. Liu S, Li G, Liu N, Hongwei W. The Impact of Patient Satisfaction on Patient Loyalty with the Mediating Effect of Patient Trust. *Inquiry*. 2021;58:469580211007221.
- *Al-Rad Companion consists of several products that are (medical) devices in their own right, and products under development. Al-Rad Companion is not commercially available in all countries. Future availability cannot be ensured.
- **syngo Virtual Cockpit is not commercially available in all countries. Due to regulatory reasons its future availability cannot be guaranteed.

 Precondition: Expert-i enabled modality from Siemens Healthineers and for remote scanning appropriately trained personnel operating under applicable federal, state, and local laws as to the specific imaging modality(ies), including radiation and contrast.

Siemens Healthineers AG (listed in Frankfurt, Germany: SHL) pioneers breakthroughs in healthcare. For everyone. Everywhere. As a leading medical technology company headquartered in Erlangen, Germany, Siemens Healthineers and its regional companies is continuously developing its product and service portfolio, with Al-supported applications and digital offerings that play an increasingly important role in the next generation of medical technology. These new applications will enhance the company's foundation in in-vitro diagnostics, image-guided therapy, in-vivo diagnostics, and innovative cancer care.

Siemens Healthineers also provides a range of services and solutions to enhance healthcare providers' ability to provide high-quality, efficient care. In fiscal 2021, which ended on September 30, 2021, Siemens Healthineers, which has approximately 66,000 employees worldwide, generated revenue of €18.0 billion and adjusted EBIT of €3.1 billion.

Further information is available at www.siemens-healthineers.com.

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Siemens Medical Solutions USA, Inc. 40 Liberty Boulevard Malvern, PA 19355-9998, USA Phone: +1-888-826-9702 siemens-healthineers.us Siemens Healthineers Headquarters

Siemens Healthcare GmbH Henkestr. 127 91052 Erlangen, Germany Phone: +49 9131 84-0 siemens-healthineers.com