



Divine Providence Hospital - Muncy Valley Hospital  
The Williamsport Hospital & Medical Center



# Susquehanna Health

**Susquehanna redefines delivery of care and ROI  
with its enterprise Soarian solution.**

*Case Study*

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## Vital Stats

Name of Healthcare organization:	Susquehanna Health
Primary location:	Williamsport, PA
Other facilities/locations:	Divine Providence Hospital, Muncy Valley Hospital, The Williamsport Hospital & Medical Center
Number of employees:	3,000+
Number of physicians:	210
Number of beds:	225
Inpatient admissions:	14,483
Outpatient visits:	405,668

Divine Providence Hospital

## At a Glance

Susquehanna Health was founded in 1994 when three hospitals merged to create a fully integrated healthcare system serving patients in an 11-county north central Pennsylvania region. The alliance includes The Williamsport Hospital & Medical Center, Divine Providence Hospital, and Muncy Valley Hospital, along with their subsidiaries. The hospitals—collectively the largest employer in the region—have a long and rich tradition of providing quality care.

Faced with increasing local and regional competition, changing regulations and reimbursement models, and the ever-present imperative to improve efficiency without sacrificing quality of care, Susquehanna partnered with Siemens in development, beta testing, and deployment of a breakthrough healthcare information system (HIS), Soarian®. The organization replaced its clinical and financial systems with Soarian's innovative capabilities, which were designed in cooperation with Susquehanna and other healthcare leaders and built from the ground up to support and foster modern medical, financial, and administrative practices.

Continued

## Challenge

Susquehanna faces reimbursement challenges, which are exacerbated by its rural designation, even though its facilities operate in more of an urban setting. The organization must also contend with stiff competition from other community hospitals, as well as a larger tertiary facility 30 miles away. In such an environment, potential patients can shop around for price, quality, and convenience—a trend toward healthcare consumerism that Susquehanna must address.

In today's world where the business of healthcare threatens to get in the way of achieving its patient goals, Susquehanna must continually fine-tune processes across the entire enterprise—from clinical and financial to administrative and operations. Key to its success is the ability to foster strong, effective, and efficient information sharing across all disciplines, departments, and facilities.

Information technology (IT) is fundamental to Susquehanna's ability to overcome challenges but the organization's 20-year-old HIS was no longer up to the task. Designed to support a 1980s approach to billing, and with little support for clinical processes, the solution "was not our future," according to Tim Schoener, administrative director of IT. "We needed something with extreme future potential: a system that supported a modern approach to clinical processes and revenue cycle management. And, we wanted a solution that crossed the continuum of facilities, from our hospitals to physician offices to, in the future, home-based care."

"We needed to employ many workarounds because our old system wasn't designed for contemporary billing practices," continues Schoener. "Healthcare billing is confusing and our old system didn't make it any easier."

There were challenges on the clinical side, too. "Our nursing assessment was computerized, however all other documentation was paper based," recalls Candace Dewar, administrative director, quality and safety. "Our nurses were doing a great job but the complexity of the documentation was overwhelming—particularly from the perspective of meeting regulatory requirements."

To compensate, staff relied on multiple "cheat sheets" that outlined processes. However, even if the processes were followed without human error and the correct documentation centralized into a chart, access to charts in a paper-based environment was exceedingly difficult—allowing only one person access at a time.

“Automated notification via Soarian is the reason Susquehanna Health is at 100 percent compliance for smoking cessation referrals.”

Candace Dewar  
Administrative Director, Quality and Safety  
Susquehanna Health

## Solution

In the late 1990s, Susquehanna Health realized it needed a new HIS—but it was frustrated in its search for a solution that satisfied its forward-thinking requirements. “We attended HIMSS every year and spent a lot of time on the sales floor looking at various solutions,” recalls Schoener. “There was nothing out there that met our needs.”

“When we learned about Siemens plans to develop Soarian and what it could do for us, we knew that it had the potential to change what healthcare does from an informatics perspective,” says Schoener. After careful evaluation, Susquehanna agreed to become Siemens development and beta partner for Soarian Revenue Cycle Management, and later made the decision to implement Soarian Clinicals along with the new financial system.

“Our HIS is the backbone of the hospital—the better it performs, the better our facilities operate,” reflects Charles Santangelo, executive vice president and chief financial officer. “We elected to go with Soarian because of Siemens vision of improving performance across all areas of the enterprise.”

“The seamless workflow between clinical and financial systems is key. As Siemens development and beta partner for Soarian, Susquehanna was able to be very involved in helping define that interoperability,” explains Karen Armstrong, senior vice president and chief information officer.

Starting in 2000, the two organizations worked closely on multiple fronts—and with other healthcare organizations—to define and develop a new kind of health information system that was designed from the very beginning to design, organize, track, and deliver processes across the full spectrum of patient care and financials. Another goal was to create a system that could evolve over time to meet new demands in the rapidly changing healthcare market.

### At a Glance (continued)

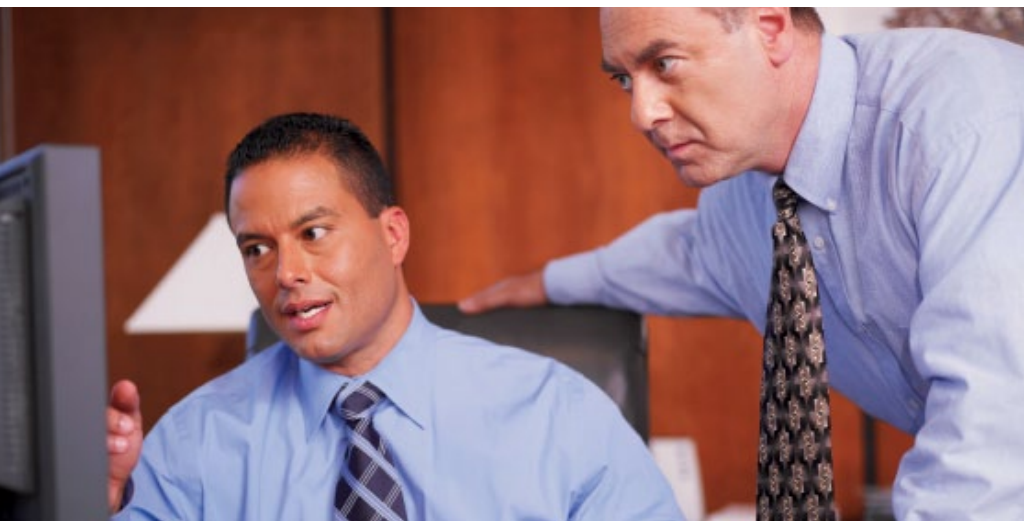
On July 1, 2004, Susquehanna went live with Soarian Clinicals and Revenue Cycle Management across its entire enterprise—completely replacing its existing HIS. Since that time, Susquehanna has continued to collaborate with Siemens, rolling out new capabilities, such as Med Administration Check™ (MAK) and Computerized Physician Order Entry (CPOE).

Susquehanna Health prides itself on practicing the art of caring and the science of healing. Recognized as an industry leader and provider of exceptional, high-quality care, Susquehanna Health is a member of the Top 100 Integrated Healthcare Networks<sup>1</sup>, with multiple appearances in the Top 100 Most Wired Hospitals and Healthcare Systems<sup>2</sup>. Further, its member hospital, The Williamsport Hospital & Medical Center, was designated a Distinguished Hospital for Patient Safety, ranking it in the top 5 percent of US hospitals for patient safety.<sup>3</sup>

<sup>1</sup> *Modern Healthcare Magazine*

<sup>2</sup> *Hospitals & Health Networks*, the journal of the American Hospital Association

<sup>3</sup> HealthGrades 2008



## Implementation

As development of the initial set of Soarian functionality neared completion, Susquehanna Health prepared for an implementation to replace all of its existing financial and clinical systems at one time.

Susquehanna formed a number of planning committees comprising key members of all departments, as well as IT. Siemens consultants worked side-by-side with Susquehanna personnel throughout the implementation. “We had an excellent collaborative effort at Susquehanna Health,” notes Dewar. “Nursing was actively involved in the implementation.”

A primary focus for the committees was managing Susquehanna’s transformation. The organization recognized the magnitude of the coming changes and held extensive discussions regarding how processes and departments would function differently with Soarian. Armstrong explains, “You can’t use your old processes with Soarian—they just didn’t align with Soarian’s more holistic, interdisciplinary revenue cycle management mindset. I tell people to get help during the implementation phase to rearrange processes, jobs, roles, responsibilities, and even the internal structure before going live.”

In addition to identifying process changes, Susquehanna invested significant effort in the deployment of supporting technology. For example, 600 new and 500 upgraded desktops, plus 150 wireless devices, replaced the “green screen” dumb terminal interface previously in use across the health system. The organization also introduced biometric fingerprint authentication technology to control access to Soarian functionality—and IT populated a reference database of images and names to enable this cutting-edge approach. Moreover, 260,000-plus master patient index records (MPIs) were migrated to Soarian to ensure continuity of information between the old and new systems.

With so much change, training was another major focus. More than 2,000 Susquehanna employees received hands-on training to prepare for Soarian.

Susquehanna went live with Soarian on July 1, 2004, across all three facilities. It was the first organization to deploy Soarian Revenue Cycle Management, including Revenue Management, Patient Access, and Scheduling, and the second live with Soarian Clinicals, including Clinical Access, Common Clinicals, and Clinical Team. “I would do the big bang approach again,” advises Schoener.

Susquehanna extends its partnership with Siemens by piloting new features and releases as they become available. In addition, Susquehanna strives for continuous improvements to enterprise processes to gain further efficiencies from Soarian.

“In a nutshell, Soarian has supported Susquehanna Health in meeting its patient safety and quality care initiatives.”

Dr. George Manchester  
Chief Medical Officer  
Susquehanna Health

## Results

The benefits of Soarian’s Healthcare Process Management capabilities and future-ready architecture have been realized across all areas of Susquehanna Health.

“In a nutshell, Soarian has supported Susquehanna Health in meeting its patient safety and quality care initiatives,” says Dr. George Manchester, executive vice president and chief medical officer.

CFO Santangelo echoes this praise from the financial perspective: “With Soarian, revenue cycle is no longer strictly a finance process. It extends beyond traditional boundaries to interface clinical and financial information, which our changing marketplace demands. Soarian is best positioned to help Susquehanna Health meet these new imperatives.”

### **Managing the revenue cycle—from beginning to end**

A revenue cycle management mindset has returned significant financial results and productivity benefits.

At the end of fiscal year 2007, Susquehanna reported accounts receivable (A/R) days of 36.6—down from a pre-implementation figure of 47.8. “As goes the revenue cycle, so goes a good portion of your revenue results,” counsels Santangelo. “A reduction of 11 A/R days is a major accomplishment.” He notes that bad debt has been steady, which is particularly impressive in the face of health plans requiring higher deductibles and co-pays.

“Susquehanna Health is using Soarian to track performance metrics on an ongoing basis,” adds Santangelo. “Soarian’s online, immediate reports make it easy to see when something is starting to go off track and take action. Since 2006, our metrics have improved and we expect that trend to continue as we take more advantage of the process improvements that Soarian enables.”

The organization is seeing improvements in productivity and encounter management with Soarian. “We created a separate team in A/R that does nothing but follow up with payors,” explains Santangelo. “Soarian worklists are an outstanding tool for doing follow-up and help to make sure that nothing falls through the cracks.”

Revenue cycle management starts the minute a patient walks through Susquehanna Health’s doors. “Revenue cycle is not a finance process today,” Santangelo says. “Everyone is a part of it. Our registration staff knows that getting the right information upfront is critical to our success at the back end.”

Santangelo also appreciates the business intelligence available through Soarian: “We plan to take more advantage of the Soarian data warehouse. For example, we are capturing clinical and financial data for various product lines, which can be analyzed to identify opportunities to improve service and our competitive position.”



### **Modern medicine in every sense of the word**

The implementation of Soarian Clinicals, a subsequent rollout of Siemens Med Administration Check (MAK) in 2007 through 2008, and a continued deployment of Soarian Computerized Physician Order Entry (CPOE) have dramatically changed the way that caregivers and support personnel work with patients.

“It started out as an IT project, but we now appreciate that the advanced capabilities Soarian offers, such as workflows and notifications, allow us to deliver more efficient patient care,” says Manchester. “Access to clinical information is much improved and that makes it easier for doctors to do their jobs. For example, most, if not all, clinical data is available online through Soarian—from imaging through our PACS system to labs to EKGs. And, it’s accessible in-house, from a physician’s office and home, and via handheld devices.”

Advanced IT solutions make a difference when it comes to staff recruiting and overall satisfaction. “Recently trained physicians are interested in working for an organization that uses leading-edge technology, like Soarian,” explains Manchester. What’s more, a recent survey of medical staff members found that 96 percent were satisfied with Susquehanna’s information technology—up from 86 percent two years ago.

Susquehanna has found that Soarian enhances intra- and inter-departmental communication. “All departments can access the information they need at any time—that’s the biggest asset I see with Soarian,” notes Manchester.

According to Dewar, automation has helped us improve our quality outcomes. “Streamlined notification via Soarian is the reason Susquehanna Health is at 100 percent compliance for smoking cessation referrals.”

Susquehanna is using Soarian as its vehicle to build its re-engineered best practices into the system and improve standardization. This, however, is only the beginning. Manchester observes: “Our CPOE implementation will make it even easier to implement clinical pathways and order sets. Soarian allows us to implement these in a very efficient manner.”

“Our positive partnership over the last four years led Susquehanna Health to work with Siemens again for our building technology in a new patient tower, as well as new modalities.”

Karen Armstrong  
Chief Information Officer  
Susquehanna Health

## Closing

The partnership between Susquehanna Health and Siemens has strengthened as a result of the Soarian implementation—which is impressive considering the risks and challenges involved in such a major undertaking. “Our Soarian implementation was an enormous project,” says Santangelo. “Siemens recognized that and committed the resources to support Susquehanna Health every step of the way.”

“Siemens approach to Soarian is to be more than just a hospital information system,” continues Santangelo. “It is designed to be the information system of an integrated healthcare system—covering all areas, including the hospital, physicians, payors, pre-acute and post-acute care, and more. When Siemens sees an issue or shortcoming with their product, they take the time to research what’s needed and build the right functionality.”

## Next Steps

“Siemens is unique in the industry in its ability to provide solutions across a broad spectrum of healthcare needs—from imaging and labs to pharmacy to clinicals to financials—to create a complete picture that supports excellent patient care,” says CIO Armstrong. “Our positive partnership over the last four years led Susquehanna Health to work with Siemens again in partnership with our building project, a new patient tower. In addition, Siemens has worked with us to design our future automated laboratory, as well as new imaging modalities.”

Susquehanna Health intends to refine its use of Soarian to streamline processes and improve the quality and safety of patient care. In the near term, plans call for a full rollout of CPOE, as well as taking further advantage of Soarian’s sophisticated workflow technology for clinicians and its business-intelligence capabilities on the financial side. Longer term, Susquehanna plans to roll out departmental solutions in such areas as Critical Care and Emergency Department.

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