

Partnering with Partners

Partners HealthCare, a nonprofit integrated academic healthcare delivery system serving the Boston, Massachusetts, area, and Siemens have teamed up for research and further development of Soarian, an innovative integrated IT application suite for healthcare.

By Louisa Kasdon

Dan Gross, CFO of Newton-Wellesley Hospital, was holding his breath. It was the much-anticipated “go-live” day at the 300-bed community hospital, which is located about 20 minutes outside of Boston. Day one of the deployment of the Soarian® Revenue Cycle system, one element of an innovative research and development collaboration between two industry leaders – Siemens and Partners HealthCare, which was founded in 1994 by Brigham and Women’s Hospital and Massachusetts General Hospital in Boston, Massachusetts, USA.

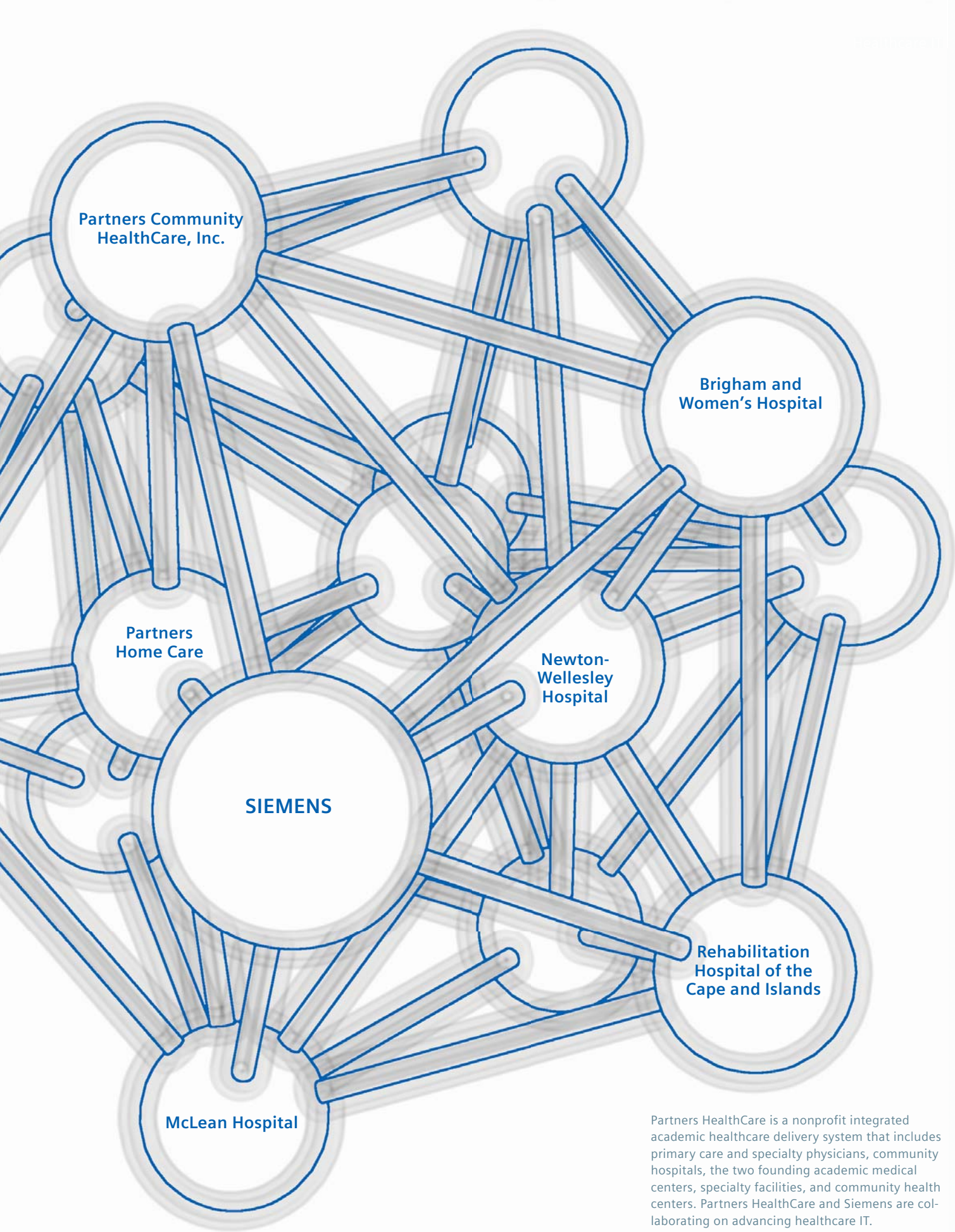
The collaboration allows each partner to leverage and apply its respective expertise optimizing healthcare processes through the use of information technology (IT), and to work together to design a robust and agile suite of applications that will advance healthcare information technology. Years in the planning, conceptually farsighted, and very complex – for Soarian, as for all IT projects – there comes the moment of truth, the instant where design must transition from PowerPoint® to people. All had agreed,

Newton-Wellesley Hospital was the perfect pilot test site. Throughout the planning process, and perhaps hourly in the ramp-up to “go-live” day, Dan Gross reassured himself, repeatedly: “Our old system wasn’t working for us anymore. We can do better for our staff and our patients, and this is the way forward.”

Seeking the Next Gold Standard in Healthcare IT

Both the Siemens team and the Partners HealthCare team see the Soarian system as the vehicle for that evolution in IT. It is a bold undertaking, borne of a big vision of informed decision-making and efficient business practices through SOA – service-oriented architecture. The Siemens/Partners HealthCare alliance has three tethered goals: redesigning the financial and administrative processes to support payment reform within a system of care (including 14 hospitals and several physician organizations), designing an integrated, knowledge-based, and flexible foundation for clinical information systems, and conducting the





Partners Community HealthCare, Inc.

Brigham and Women's Hospital

Partners Home Care

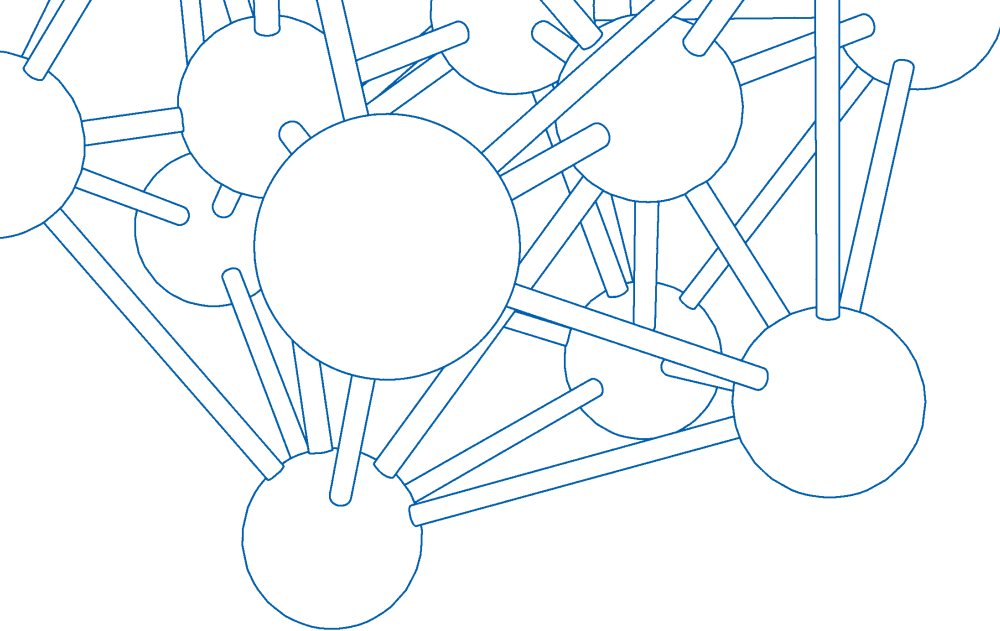
Newton-Wellesley Hospital

SIEMENS

Rehabilitation Hospital of the Cape and Islands

McLean Hospital

Partners HealthCare is a nonprofit integrated academic healthcare delivery system that includes primary care and specialty physicians, community hospitals, the two founding academic medical centers, specialty facilities, and community health centers. Partners HealthCare and Siemens are collaborating on advancing healthcare IT.



research and development needed to ensure that clinical information systems can support the demands of tomorrow's care delivery. Expectations are that the results of the Soarian collaboration between Partners HealthCare and Siemens will form the basis for a new gold standard of efficiency and integration of administrative and clinical information for hospitals and medical centers across the world.

If all goes according to plan, Partners HealthCare will benefit by having developed an SOA system that helps improve patient care processes as well as financial performance. Siemens will benefit by further developing a flexible, responsive, and marketable IT product that has been road-tested in multiple arenas for health-care delivery, from large academic centers to community-based hospitals, physician networks and clinics, and in single-payer and multiple-payer revenue environments. Given the breadth of Partners HealthCare, what works for Partners system-wide has an excellent chance of working for the marketplace at large.

For Partners HealthCare, it was clear that a fundamental overhaul to streamline its financial and administrative processes and data management was required – not only to update information systems to current best practices, but also to improve Partners' efficiency and financial position and to maintain its superb level of patient care. Like many healthcare systems and centers in the world, the revenue cycle IT systems that Partners HealthCare had inherited as it acquired hospitals was a

quilt of old vendors, new vendors, kinks and quick fixes, and solutions that worked mostly, but never well. Partners HealthCare formed a top-level committee to articulate its long-term needs and objectives. The planning team understood that to succeed, any new system would have to be a push/pull, flexible system that took into account the sociology of human behavior in workflow as well as necessary data capture. John Glaser, former VP and CIO of Partners HealthCare, and newly appointed CEO of Siemens Health Services business unit, puts it more simply: "We felt that any successful new IT system should be aspirational – the bridge between the things that actually *do* happen in a complex process at a medical center, and the things that *need* to happen and may or may not be happening yet."

Creating a Spirit of Collaboration

After interviewing several vendors, Partners and Siemens chose to work together and co-create a unique instance of a major IT vendor research and development collaboration with an integrated delivery system. A lengthy process, with proposals going back and forth, but former CIO Glaser points out that as a company and research partner, Siemens always stood out. "With a company like Siemens, you know they're going to be in healthcare for a long period of time, given their investment in imaging, diagnostics, and IT," he says. "You know that the likelihood is very high that they're

going to commit and have the ability to marshal extraordinary resources from across the globe, literally. It was our belief in their ability to execute that caused Partners to form the partnership. It was my positive experience in working closely with Siemens that caused me to want to take a leadership role there."

From the get-go, both teams were committed to operating in more than a vendor/customer relationship, in a true spirit of collaboration. Both parties understood that there could never be a simple solution of "We'll build it and make it work." On the contrary, for a project with such complex and far-reaching objectives, the Partners-Siemens team conceived it as a two-way research and development project from the outset. Partners would assist Siemens with the clinical application design and would commit to implementing the Siemens Revenue Cycle applications suite. It was an interactive process that both parties knew could easily consume a decade from start to finish. With a sprawling task list that stretched from billing and patient registration to innovative approaches to managing medical knowledge in clinical information systems, there was uncharted territory for both organizations. The bonus at the end: If the resulting system can simplify operations and accommodate demands in all the variants of medical practice and healthcare sites in the huge Partners HealthCare network, it has the potential to work everywhere else. Peter Markell, Vice President of Finance at Partners HealthCare, says that the



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John Glaser, former Vice President and CIO, Partners HealthCare, Boston, Massachusetts, USA, and newly appointed CEO of Siemens Health Services, Malvern, Pennsylvania, USA

organization had been looking for a new revenue system to convert and standardize information across the entire system ever since he first arrived in 1999. The Soarian project is the largest corporate-wide project that Partners has ever taken on, and Markell feels it is crucial to future survival. “Healthcare is a fragmented industry. We’re moving from a fee-for-service world into a bundled-care world, right now,” he says. “Managing revenue is one problem. But we also needed a Web-based, rule-based workflow system that would help us standardize and interface all the fiercely independent systems we inherit, as well as those we create. That’s not just a challenge for us in Massachusetts, or for us in the USA, it’s the challenge for any medical system operating anywhere in the world.” Glaser agrees: “Cost concern on healthcare is global at this point, and we may be higher in the USA in terms of aggregate amount, but the increase rate is global.”

A Win for Evidence-based Clinical Research

Beyond the promise of increased workflow efficiency and improved revenue management, the collaboration has another major objective: using Partners HealthCare’s substantial experience with clinical information systems and deep medical informatics expertise to improve patient-centric care, clinical diagnosis, and public health outcomes worldwide. Blackford Middleton, Corporate Director for Clinical Informatics Research & Development at Partners HealthCare, explains that SOA is the best-suited approach to a primary challenge to medicine: distilling useful strategic research into knowledge in a world with potentially blinding amounts of information. “How do we use data to present the patient’s problems in a coherent, codified way so that one user and teams of users can manage patient problems in an effective manner?” he asks. “What’s the architecture around that? What does the front end look like? What does the repository of problems look like in which many different applications may contribute, and many applications may be used? The challenge,” he



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Blackford Middleton, Director of Clinical Informatics
Research & Development, Partners HealthCare, Boston,
Massachusetts, USA



explains, “is to separate knowledge from data, and support knowledge-based clinical workflow, in a disciplined, yet flexible, manner – and to develop the infrastructure to support whatever the need is at the front end, whether the end-user is a physician, nursing user, case manager, epidemiologist, researcher, or the patient him or herself.”

For it to be a success, Middleton suggests that a system for electronic clinical information of the future must be flexible and allow the system to absorb new clinical knowledge in real-time without major programming and time delays. Middleton uses the analogy of an SOA-enabled system “allowing us to change a light bulb without bringing the entire electrical system down. Siemens’ commitment to effective management of clinical decision support offered a very natural alignment for Partners. They had invested a lot of time and money and were thinking along the same paths as we were.” But Middleton says that the biggest bonus, from Partners’ clinical research perspective, “is learning together about how to encapsulate or separate knowledge and data; and how to provide advanced decision support at the front end.”

A First-stage Report from the Front Line

It is too early to know precisely what the final footprint of the Soarian collaboration will be. Even as Partners HealthCare prepares to further deploy Soarian Revenue Cycle, the final format is years away. Both sides remind themselves that the goals were meant to be aspirational, even visionary: integrating all administrative and revenue cycle functions, becoming more patient-friendly, improving the ability of clinicians to deliver extraordinary healthcare, and improving financial performance. “We want to be visionary, but still practical,” says Siemens’ point person on the collaboration, Steven Nudd. “If you don’t put a stake in the ground, you continue to debate where to begin to build. By beginning to build, you gain momentum, and you learn to iterate through incremental changes.” John Glaser agrees. “We’re talking about the future. We may not actually know what

Summary

Challenge:

- To create the next gold standard in healthcare information technology
- To integrate the complex tangle of billing and collections information in a very large, integrated, academic healthcare delivery system
- To design clinical information systems and administrative interfaces that are transparent and user-friendly
- To redefine criteria for clinical research in an ever-changing, data-rich healthcare world

Solution:

- Innovative research and development collaboration between Siemens and Partners HealthCare using the the suite of Soarian applications as the vehicle for evolution in IT
- A bold experiment, a multi-year research and development initiative with two industry leaders, and groundbreaking co-development leveraging each partner’s strengths – the IT expertise of Siemens and Partners’ healthcare depth
- A complex, user-friendly use of SOA – service-oriented architecture – to support informed clinical decision-making and most efficient business practices for collection, registration, and operations

Result:

- First “go-live” implementation of the Soarian Revenue Cycle application at Newton-Wellesley Hospital, a 300-bed community hospital in the Partners HealthCare system, launches on time and is judged a success; installations at other entities planned
- Both organizations well served by the collaboration, with Partners HealthCare developing an SOA-based system that will help improve patient care processes and hospital profitability and Siemens benefitting by further developing a flexible, responsive, and marketable IT product that has been road-tested in multiple arenas for healthcare delivery
- Well-founded optimism that what works for the widespread Partners HealthCare system has an excellent chance of working for the marketplace at large

it will look like, or exactly how to get there, any more than a 20-year-old can understand what it means to be 40, or a 40-year-old can understand what it means to be 60.” Soarian, Siemens, and Partners HealthCare, he observes, all “exist in the outside world. The world passes laws. It passes regulations. It incurs recessions, and a variety of other things. In a dynamic healthcare world, our task is to converge at a balance between what the system can do, what work needs to be done, and what we aspire to be.” With total support from two very committed healthcare industry players, Soarian and the overall collaboration are moving full steam ahead. The first “go-live” implementation

test at Newton-Wellesley launched on schedule and with only a few months of live experience, all are pleased with the results. Did it work? Gross folds his hands on the table, and smiles, “I consider it a success.”

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Further Information

www.siemens.com/hospital-IT

