



Beta Case Study: Oswego Hospital

July 2006

About Oswego Hospital:

Oswego Hospital is a not-for-profit, full service, 164-bed hospital in Oswego (central), NY. Since 1881, Oswego Hospital has been providing superior full medical care to the greater Oswego community: www.oswegohealth.org, this year marking their 125th anniversary. Part of Oswego Health, the hospital employs a staff of 700, with an additional 125 employees providing care at the Manor at Seneca Hill, a 120-bed skilled nursing and short-term rehab care facility. There are also several outpatient clinics associated with the network, two of them offsite, including one in Mexico, NY and one in Parish, NY, as well as an on-site 32-bed mental health clinic.

The Problem:

As the primary medical facility in the Oswego, NY region, serving over 5,000 inpatients and 256,000 outpatients annually, Oswego Hospital identified the need for a more efficient way to handle clinical orders. They recognized the importance of automating manual procedures, like clinical documentation and computerized physician order entry (CPOE), as key to reducing time and saving paper. The hospital also wanted a system that would not only tie into their current HIS, **ALLEGRA®**, but one that would connect with other Oswego Health applications. This would allow the hospital to better manage patient information and ultimately provide an electronic medical record (EMR).

*Gail Greenwood, RN, Chief Operating Officer at Oswego stated, "It was always our vision to have a clinical system, but the timing just wasn't there. When things lined up, we explored a variety of clinical systems, but none had what we needed: They were either too cumbersome, couldn't give us the necessary functionality, or we couldn't afford them. So we decided to wait. When **Sapphire™** came along, we started revisiting our thoughts on clinical systems."*

The Solution:

After reviewing at least 8 or 9 systems, Oswego Hospital decided that the browser-based IntraNexus HIS, **Sapphire**, had the best of all the components they had seen among programs that suited a community hospital. Through **Sapphire**, physicians and other Oswego clinical staff members would be able to learn critical details about the patients under their care. **Sapphire** could be used to order tests, review the results of those tests, and send alerts for abnormal test results. Physicians and nurses with the proper credentials would be able to view patient information in their offices, in the hospital, at home, or at any other remote site, via a secured virtual private network (VPN) on the Internet.

*Craig Dumas, Information Services Director, stated, "I was particularly interested in the open platform design of the **Sapphire** architecture. Being browser-based means it will run on a variety of hardware solutions."*

*Ms. Greenwood explained, "Because **Sapphire** can run on any hardware – both in the backend and on the devices the clinicians will use - our staff is really excited about using portable devices at the bedside for documentation. When IntraNexus showcased all the various devices like laptops, tablets and PDA's, everyone became a lot more enthusiastic about documentation. Bedside documentation becomes a lot more appealing when you can use portable devices."*

And the fact that IntraNexus could help Oswego develop functionality to suit the needs of their environment was additionally attractive to the progressive medical concern.

Said Ms. Greenwood, *“Somehow IntraNexus found a way to combine the best of everything, and their flexibility could readily fit our design. When you consider how systems operate and what you need, those integrated systems would never survive in our environment. They are inflexible. Flexibility is KEY! That is **Sapphire’s** biggest selling point. We needed a system that was flexible, and **Sapphire** is.”*

Mr. Dumas added, *“We weighted other HIS solutions against the flexibility of **Sapphire** and its ability to easily interface with our ancillary systems, and there was no comparison. We opted for **Sapphire**. Other systems just can’t interface with our existing systems, whereas **Sapphire** seamlessly can. And the fact that we don’t have to redesign our financial system was the deciding factor for our CFO.”*

Also, while Oswego Health’s chief HIS concern was automating Oswego Hospital, tying the other sites into the system was equally as important. Therefore, interoperability was crucial, and with a rich history of working with multi-facility and multi-site clients, the IntraNexus enterprise-wide capabilities were a great fit.

*“We wanted to bring in a system that would also support our nursing home. There are no solutions out there that do both, so that made **Sapphire** even that much more attractive. IntraNexus ought to be able to get sales just on that alone. You can’t find a good nursing home system, and if you do, it’s not for a healthcare system as well; it’s a stand-alone”,* noted Ms. Greenwood.

Regarding patient privacy and safety, an acute concern for responsible healthcare facilities everywhere, **Sapphire** fully addresses those issues as well: **Sapphire** is fully HIPAA compliant.¹ Its inherent structure anticipates patient safety issues, and its template-driven design can readily accommodate any additional safety features needed.

Jean Scardella, Clinical Information Systems Analyst for Oswego Hospital stated, *“With **Sapphire**, I see patient safety benefiting the most, as well as patient care. I also expect a lot of time to be saved.”* Ms. Scardella went on to share, *“**Sapphire** provides us with a host of advantages that we don’t already have, including more accurate patient ordering and fewer chances to miss orders. Other features our staff is excited about include addressing patient safety issues around medication; order and conflict management, as well as test ordering; having test results at our fingertips; and having a patient’s history and their results immediately accessible. Our systems don’t have to be menu driven any more. Everything will be patient driven, which makes things so quick and easy!”*

All things considered, including the good, solid relationship and proven history IntraNexus has had with Oswego since 1996, IntraNexus was a natural fit for the hospital’s aggressive HIS plans.²

¹ **Sapphire’s** predecessor, **ALLEGRA**, was likely the first HIPAA-compliant HIS in the industry.

² In 1996, IntraNexus began providing consulting services for Oswego around their **ALLEGRA** product, an HIS solution that IntraNexus purchased in 2001.

The Implementation:

Their long-standing, positive and mutually beneficial relationship with Oswego Hospital prompted IntraNexus to offer the hospital – and Oswego to accept – being the Beta client for **Sapphire**.

On June 12, 2006, as promised from the outset, IntraNexus delivered on its commitment to “go-live” with version 1 (the implementation of clinical information management) at Oswego Hospital.

*“**Sapphire** was the best go-live we have ever had and was the result of careful planning and work completed by both the hospital and the IntraNexus staff,” stated Ms. Greenwood. “**Sapphire** was an extremely flexible fit for our hospital’s workflow. IntraNexus worked so well as a technology partner that it was difficult to tell the difference between our staff and theirs.”*

Phase 1 – Version 1

Version 1 – Clinical Information Management includes:

- **Order entry** – Placing orders and viewing results over a Web-based user interface, including CPOE.
- **Results reporting** - Viewing results on line... any results from any ancillary systems that are interfaced with the repository, as well as orders that were placed through **Sapphire**. All can be viewed on-line, through **Sapphire**. Trended results are also available across episodes of care.
- **Clinical repository** – The repository is SQL-based and allows for easy access, open architecture and any kind of reporting.
- **EMR** – Electronic medical record, which is the clinical repository.
- **Clinician home page** – Each physician has a customized home page, tailored to his specific needs.
- **Clinical information** -Any information regarding a patient’s health or procedures can be accessed at any time, anywhere, with security-approved access.
- **Bar coding** – Inputting data from almost any source that’s in barcode format. This can be used in a lot of places within the **Sapphire** system: (medical administration, patient look-up, charges, etc.)

Phase 2 – Version 2

Oswego Hospital is scheduled to launch **Phase 2** of their **Sapphire** implementation in September of this year (06), with a **go-live date in Q01, 2007**.

Version 2 – Advanced Clinical Information Management includes:

- **Clinical documentation** - Entering documentation using facility-defined templates: (e.g. – care plans/pathways, flowsheets, assessments, S.O.A.P. notes, progress notes, assessments, etc.)
- **Charting** – Documentation relative to orders.
- **Flowsheet** – Tracking different pieces of data about patients (e.g., intake, vital signs, etc.) over time;
- **Clinical graphing** – Visually displaying data in a graphical format.
- **Tasks** – Follow-up reminders for clinical action.
- **Conflict management** – Enables the system to identify orders that could adversely impact patient health.

Oswego Hospital does not currently have **Version 3** of **Sapphire** (Financial Information Management & Patient Registration) scheduled; however they currently use the IntraNexus **ALLEGRA** product for this functionality and will be upgraded to **Sapphire** Financials & Patient Registration, **upon its release in Q0407**.

Version 3 - Financial Information Management includes:

- **Patient access** – Regards patient pre-registration, patient registration, patient admission, patient placement (bed assignment, patient transfer, patient discharge).
- **Insurance card scanning** – Provides the ability to digitally copy a patient's insurance card and attach it to a patient's record.
- **Real-time Eligibility** – Supports electronic eligibility during patient registration, or upon request.
- **Patient financials** – Manages patient accounts, including billing, insurance follow-up, collections, payment posting, and reporting.
- **Contract management** – Manages individual insurance plans, so specific plans and their unique provisions can be associated with employers.
- **Medical necessity** – Automatically verifies if a patient diagnosis (e.g., chest pain) will warrant payment of a specific test for that diagnosis; (e.g., EKG).
- **Line item billing** - The system stores claim information, so payments can be applied to individual charge items, as they were displayed on the claim. [This is critical for tracking reimbursement for Medicare Outpatient Prospective Payments (APC's). It also provides the mechanism to manage physician billing.]

The Future:

With the smooth implementation of Version 1, **Sapphire** is already proving to be a tremendous benefit to Oswego Hospital, its patients, physicians, administration and staff:

*“The **Sapphire** system that IntraNexus is providing will help us to improve efficiencies. These will be realized via our ability to pull out QA improvement statistics and data,” stated Ms. Greenwood. She continued, “If we can keep the docs happy by providing them with an easy to use system and can get some of the documentation we need as well, that will be a tremendous advantage. We can use data to make nursing decisions regarding patient care, and being able to easily pull that data out of **Sapphire** will be a huge timesavings. **Sapphire** will also let us line-up lab work, so if meds need to be dispensed, they will automatically get dispensed from the pharmacy. That will greatly reduce administrative work, thereby reducing costs, errors and improving morale.”*

Yet the importance of the **Sapphire** Beta is even more far reaching: *“The visibility of this project goes way beyond these walls. The county is looking at this,” explained Mr. Dumas. “The state is becoming aware of this project as well, due to **Sapphire’s** interoperability and the open connections among the multi-functional organizations that **Sapphire** provides. We are even leveraging **Sapphire’s** functionality to obtain grant money for our hospital. That’s how everyone is hearing about us.”*