

"Staff satisfaction is much higher with Sunrise Clinical Manager and network performance is already more consistent."

Cynthia Davis
Vice President of Information Technology and CIO
DeKalb Medical Center
Decatur, Georgia

Sunrise Clinical Manager rolled out hospital-wide in 14 hours at DeKalb Medical Center

- Customer: DeKalb Medical Center, a not-for-profit hospital system based in Decatur, Georgia, is a recognized leader in clinical and service excellence.
- Situation: The medical center's strategic plan for its electronic medical record (EMR) initiative required a healthcare information technology (HIT) solution that would make it easy for physicians to interact and deliver care across the organization.
- Solution: DeKalb Medical Center selected Eclipsys Sunrise Clinical Manager for its ability to provide unprecedented visibility of all clinical results and patient lists, plus an integrated pharmacy interface and remote access.
- Bottom line: The quick activation of Sunrise Clinical Manager has resulted in increased staff efficiency and satisfaction, improved coordination of care and more consistent network performance.

The story

DeKalb Medical Center, serving Decatur, Georgia and the greater metro Atlanta area, has grown from DeKalb County's first community hospital in 1961 into a multi-facility hospital system known for excellence in clinical services. In 2004, the medical center sought to strengthen its leadership position and further improve the quality of patient care. DeKalb Medical Center chose Eclipsys Sunrise Clinical Manager to be the foundation of its EMR initiative, which is among the organization's top eight strategic priorities.

"We wanted to make DeKalb Medical Center a place where it's easy for physicians to interact and deliver care," says Cynthia Davis, vice president of Information Technology and CIO, DeKalb Medical Center. "Sunrise Clinical Manager offers physicians



user-friendly remote access to patient information, so it's the linchpin of our strategic plan. And that, in turn, is why we consider Eclipsys one of our strategic partners."

A smooth activation

On July 4, 2004, DeKalb Medical Center went live with Sunrise Clinical Manager. Davis notes that she is very proud of how smoothly the system activation went, despite the challenges of integrating data across multiple systems.

"We did 12,000 hours of training, including a mock 'go-live' event in which everyone practiced their responsibilities," Davis says.

"All staff underwent a change-readiness assessment," Davis continues. "Staff, their managers and trainers all had to sign off on their readiness, willingness and competency to adopt the new systems. We also had 'red shirt' super-users who boosted everyone's confidence by flowing through the organization, answering questions and resolving problems."

Seventy hours of downtime had been projected, but such a long interruption would have put patients at risk. Therefore, the medical center used a temporary online tool to handle patient registration and tracking, and to send information to the pharmacy, radiology and laboratory departments.

"Thanks to our Go Live Command Center, manned 24/7 by staff, including our CEO, Eric Norwood, we had Clinical Manager up and running in only 14 hours," Davis says.

"Sunrise Clinical Manager offers physicians user-friendly remote access to patient information."

The benefits

Nine months after going live, Davis rates DeKalb Medical Center's experience with Sunrise Clinical Manager as "strongly positive." Well over 300 primary physicians are currently using the system, representing a 90 percent adoption rate of results and patient lists among the physicians responsible for 70 percent of the medical center's business.

"Staff satisfaction is much higher with Sunrise Clinical Manager, and network performance is already more consistent," Davis says. "Physicians have been very happy with the 'one-stop shopping' for clinical results and patient lists."

Sunrise Clinical Manager has notably improved the coordination of care at DeKalb Medical Center. "One good example is pharmacy," Davis says. "Before, with our stand-alone pharmacy system, the pharmacists could only access lab results. Now that we have the Sunrise Clinical Manager pharmacy interface, pharmacists can see all of a patient's orders. They get to see the 'big picture' of a patient's clinical care."

"My team, in partnership with the clinical leadership, has changed the world here," Davis says. "And it's all because of Clinical Manager and our organization's commitment to improving patient care here at DeKalb."



About DeKalb Medical Center

Serving the community since 1961, DeKalb Medical Center is a not-for-profit hospital system that includes the 525-bed DeKalb Medical Center, the 102-bed DeKalb Medical Center at Decatur and DeKalb Medical Center at Hillandale, a new 100-bed hospital. A leader in progressive medical technology delivered by a highly qualified and caring staff, the hospital system serves approximately 500,000 patients each year and offers a variety of community outreach programs. For more information, go to www.dekalbmedicalcenter.org.

About Sunrise Clinical Manager

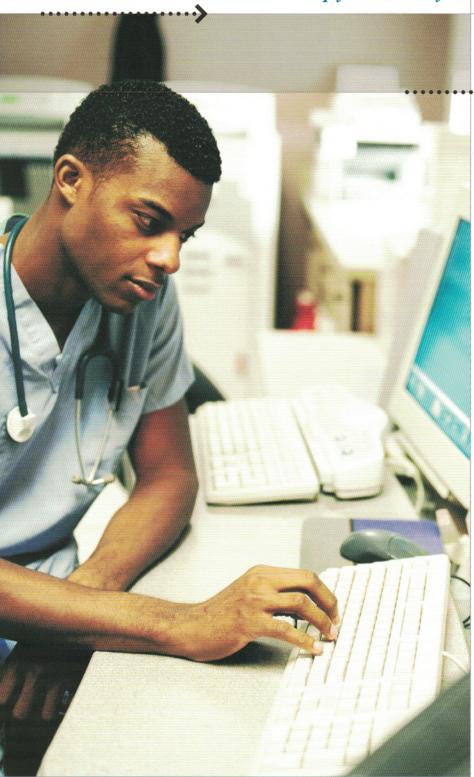
Sunrise Clinical Manager is an enterprise-wide electronic health record solution that provides immediate, secure access to patients' complete records, streamlines care processes and improves the quality and cost-efficiency of care. It features a state-of-the-art workflow engine, CPOE system, embedded evidence-based content and sophisticated clinical documentation capabilities.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, Sunrise Clinical Manager and our successes with clinician adoption. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"The success of Sunrise Clinical Manager has improved physician retention at ARMC. Physicians here say they wouldn't want to practice anywhere without a mature CPOE system in place."

Kenneth Fath, MD, FACC Cardiologist, Medical Director of Performance Improvement and Medical Informatics Alamance Regional Medical Center Burlington, North Carolina

Implementing Sunrise Clinical Manager results in awardwinning performance improvement at Alamance Regional Medical Center

- Customer: Alamance Regional Medical Center (ARMC) is a 238-bed community hospital in Burlington, NC and a pioneer in computerized physician order entry (CPOE) adoption.
- Situation: This innovative community medical center wanted to enhance patient safety through the use of technology. It considers automation as a key factor in eliminating handwritten orders, providing the detailed information necessary to help control costs and attract patients.
- Solution: ARMC implemented Eclipsys Sunrise Clinical Manager and leveraged its ability to provide knowledge-based clinical decision support, reminders and alerts at the point of care.
- > Bottom line: Using Sunrise Clinical Manager, ARMC has transformed the care delivery process. With high voluntary physician adoption rates, Clinical Manager has helped significantly reduce the potential for medical errors, improved turnaround times and reduced costs in a challenging fiscal environment. It has also augmented the medical center's ability to retain physicians and attract patients.

The story

As part of its ongoing review of operations, ARMC senior management identified handwritten and duplicate orders, as well as missing and incomplete patient charts, as significant issues that impacted both healthcare quality and costs. ARMC decided to automate physician order entry and eliminate



handwritten orders to enhance physician workflow and improve the ability of clinicians to share valuable information and knowledge. After a thorough review of all available options, in 1998 ARMC implemented Eclipsys Sunrise Clinical Manager for results reporting and CPOE. In the following year, the Institute of Medicine issued its landmark report, "To Err Is Human: Building a Safer Health System," highlighting the need for a comprehensive approach to improving patient safety in healthcare organizations across the nation.

Enhanced efficiency for the entire care team

While the ability to view information, prioritize patient care and place orders remotely, prior to hospital rounds – even from the physician's home – optimizes physician workflow, it also creates significant downstream benefits for nurses, pharmacists and other clinicians. Ninety percent of physicians have voluntarily adopted Clinical Manager for order entry and 100 percent use it for results retrieval. The ability to access patient information using wireless devices at the bedside and throughout the hospital makes it easy for ARMC clinicians to document the care process at it happens.

"Physicians who use CPOE technology understand its value in terms of improving patient safety, workflow and clinician and patient satisfaction," said Dr. Kenneth Fath, cardiologist and medical director of performance improvement and medical informatics. "The success of Sunrise Clinical Manager has improved physician retention at ARMC. Physicians here say they wouldn't want to practice anywhere without a mature CPOE system in place."

"Clinical Manager is a truly powerful tool for enhancing patient care and patient safety."

In 2003, building on the success of its CPOE adoption, ARMC implemented the electronic medication administration record (eMAR) built into Sunrise Clinical Manager. The additional capabilities and an interface linking Sunrise Clinical Manager to ARMC's pharmacy system has helped to further decrease potential errors during the medication administration process. The move has helped eliminate 15 manual steps in the medication management process, reduce lost charges and virtually eliminate expenses associated with printing and copying the paper-based MAR.

"Using Sunrise Clinical Manager, we've been able to break out of the traditional information silos and create an environment of truly integrated care among physicians, nurses, pharmacists and all ancillary units," said Marie DiFrancesco, RN, MBA, lead clinical analyst at ARMC. "Clinical Manager is a truly powerful tool for enhancing patient care and patient safety. Clinicians are proud of its impact on the organization."

Benefits

With Sunrise Clinical Manager as the foundation for its strategies to improve care, ARMC has improved patient safety, reduced turnaround times, enhanced efficiencies and reduced costs. Their achievements include:

- Ninety percent voluntary physician adoption of CPOE, 100% for results retrieval
- Seventy-two percent reduction in potential medication errors
- Decrease in medication order processing cycle time from 86 minutes to three minutes
- Fifty-eight percent reduction in duplicate lab orders, saving \$110,000 annually
- Reduction in time to administer STAT (urgent) medication orders from 40 minutes to 17 minutes
- Increase in blood transfusion utilization audits from 30 percent to 100 percent of cases

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About Alamance Regional Medical Center

Alamance Regional Medical Center is a not-for-profit private community healthcare system serving Burlington, NC, and the surrounding area with a state-of-the-art 238-bed medical center, 81-bed nursing home and continuing care retirement community. The health system offers a full spectrum of inpatient and outpatient services to more than 140,000 patients annually.

ARMC has been recognized with numerous awards, including the 2005 Microsoft Hospital of the Year award. It is also one of only three North Carolina hospitals to be named to Solucient's Top 100 Hospitals List for performance improvement. ARMC also was recently recognized with an Award for Excellence from the Healthcare Delivery Solutions Congress as the "Best Example of Innovation in Quality Care and Patient Safety in a Hospital/Health System," and was selected as one of North Carolina's best hospitals by *Business North Carolina* magazine. Additionally, ARMC has achieved a ranking shared by only seven percent of American Hospitals: a score of 98 out of a possible 100 from the Joint Commission on Accreditation of Healthcare Organizations. For more information, go to www.armc.com.

About Sunrise Clinical Manager

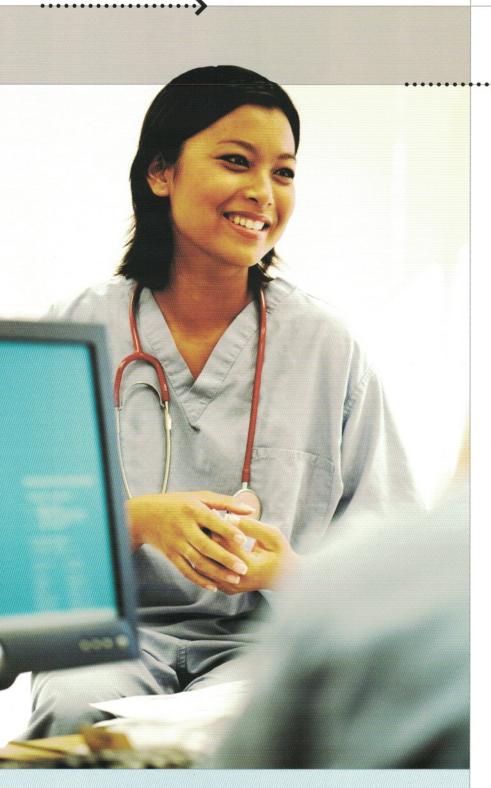
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"The configuration tools in Sunrise Clinical Manager allowed us to customize a system we knew met the specific needs of our clinicians."

Donna Jackson, RN, MSN, BC Clinical Systems Sarasota Memorial Health Care System Sarasota, Florida

Sunrise Clinical Manager provides flexibility without complexity at Sarasota Memorial Health Care System

- Customer: Sarasota Memorial Health Care System, an 828-bed hospital, serves nearly one-million people in a four-county region along Florida's west coast.
- Situation: To achieve its strategic vision, Sarasota Memorial needed to deploy an electronic patient record flexible enough to support over 500 active, voluntary physicians, over 1,300 nurses, and many other diverse users, spanning all medical disciplines and delivery settings.
- Solution: Sarasota Memorial uses Eclipsys Sunrise Clinical Manager to create and customize an electronic record for the entire healthcare enterprise, based on medical best practices and customized for individual workflows.
- Bottom line: Clinical Manager gives access to patient information to all staff who require it – over 3,000 active users at Sarasota Memorial, satellite facilities, and doctor's offices.

The story

Designing an electronic medical record that physicians would embrace was a particular challenge at Sarasota Memorial Health Care System because the hospital's physicians are not employees, but independent practitioners from the community. To meet the challenge, Sarasota Memorial selected Eclipsys Sunrise Clinical Manager because its functionality and flexibility are unmatched – imperative for a hospital with more than three dozen specialty healthcare departments.

By clinicians, for clinicians

The intuitive tools in Sunrise Clinical Manager helped a team of nurses, physicians and ancillary staff – those



with the best understanding of the needs of their peers – to create the electronic record. "We knew the system needed to be intuitive for our physicians and nurses to interact with it effectively. The configuration tools in Sunrise Clinical Manager allowed us to customize a system we knew met the specific needs of our clinicians," says Donna Jackson, RN, MSN, BC, of the Clinical Systems department at Sarasota Memorial.

Winning physician acceptance

To smooth the transition for physicians, Jackson and her peers used Clinical Manager to build electronic order sets with the look and feel of the original paper orders. The Clinical Systems department also created physician profiles for each medical specialty, with customized order sets, filters and patient lists. The team developed profiles for all user roles, including nurses, ancillary caregivers, case managers and office staff. When users log in, their profile defines what they see and the type of information they are authorized to access.

"We started by examining the workflow of one specialist from a practice area, such as a cardiologist," explains Dr. Marc Silverstein, physician advisor with Clinical Systems. "We captured what they needed to know and made it work in Clinical Manager." The team then copied the physician's profile and shared what it learned with others in the same practice group. As physicians came up with ideas for enhancements – a filter for this, a report for that – the team used their suggestions to improve the system for others. The ability to customize Clinical Manager, harnessing its powerful automated workflows and decision support tools, was crucial in winning physician acceptance.

"This has given us the opportunity to change the way we practice medicine and create our own future."

Flexibility to address issues as they arise

Customized rules and alerts are another example of Clinical Manager's flexibility. In addition to improving patient safety, the ability to build custom rules allows Sarasota Memorial Hospital to leverage information in ways not previously possible. For example, the hospital's home-health agency was not responding in a timely fashion to requests for home healthcare services. This gap in communication resulted in greater lengths of stay and put clinicians in the position of sending patients home without assurance they would receive the prescribed follow-up care. To address this concern, the Clinical Systems team created a rule that triggers an automatic page to a home-care nurse whenever an order is placed for home care. This simple rule has helped drop response time from as long as three days to two hours.

Flexibility for continuous improvement

Barbara Vanek, director of Clinical Systems and her team continue to refine the electronic record with enhancements that directly impact the immediacy, accuracy and cost of patient care. She is excited about one of the Clinical Manager features they plan to implement next: a summary screen of patient status. This handy screen pulls together key information from across the patient record and customizes it to a clinician's practice and preferences.

The benefits

Sarasota Memorial has seen advances in safety, efficiency, quality, timeliness, and reporting – improvements that are a source of great pride. Now hospitals worldwide considering their own electronic record look to Sarasota Memorial as a compelling model. For Jackson and her team, it's an opportunity to show how Clinical Manager's flexibility can help other institutions achieve similar benefits.

"This has given us the opportunity to change the way we practice medicine and create our own future," Jackson says.

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About Sarasota Memorial Health Care System

Sarasota Memorial Health Care System, an 828-bed regional medical center, is the second-largest acute care public hospital in Florida. With about 3,000 staff members and more than 1,000 volunteers, it is Sarasota County's third-largest employer. A community hospital, Sarasota is a full-service facility, with specialized expertise in heart, cancer and neuroscience services and a Level III neonatal intensive care unit, outpatient services, home health and long-term care among its many programs. It is the only provider of obstetrical services in Sarasota County. The hospital, founded in 1925, is among the top providers in the United States in the number of open-heart surgeries performed annually. One of the first non-academic hospitals in the nation to develop a clinical research service, the hospital is conducting clinical research studies in lung disease, cardiac surgery, cardiology, vascular surgery, geriatric medicine and many other specialty areas. For more information, go to www.smh.com.

About Sunrise Clinical Manager

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"Working closely with our Clinical Informatics team, the Eclipsys Consulting Group has used its industry experience and knowledge of Eclipsys applications to get our end users on board."

> Rick Schooler Vice President, Information Services Orlando Regional Healthcare Orlando, Florida

Eclipsys Consulting Group™ Helps Orlando Regional Healthcare Achieve Widespread Adoption of Sunrise™ Clinical Solutions

- Customer: Orlando Regional Healthcare is one of central Florida's largest healthcare systems, encompassing seven (soon to be eight) hospitals and M.D. Anderson Cancer Center Orlando, together currently totaling 1,652 beds.
- Situation: Orlando Regional Healthcare needed a new enterprise-wide clinical information system to improve patient safety and care. However, leaders knew that success depended on improved workflows and buy-in from physicians, nurses and other clinicians.
- Solution: Orlando Regional Healthcare chose to leverage the transformation services of the Eclipsys Consulting Group to guide the organization and its end users through a planned workflow redesign process so it could maximize the adoption and value of Eclipsys Sunrise Clinical Manager™ and Sunrise Surgical Manager™, powered by Surgical Information Systems.
- Bottom Line: The Eclipsys Consulting Group is helping ensure successful implementations and widespread clinician and physician adoption. As a result, Orlando Regional Healthcare expects financial benefit of at least \$21 million over the next five years – while achieving its objectives for improving patient safety and care. Total savings and/or net revenue improvement are estimated in excess of \$35 million.

The Story

Like other healthcare providers, Orlando Regional Healthcare must constantly work to reduce costs, increase efficiency and improve patient care and safety. To meet this ongoing challenge, senior management decided to embark on an extensive healthcare information technology (HIT) project.



After an extensive vendor review, the organization selected Eclipsys advanced clinical software. However, health system senior management knew selecting and installing software was just the first step in a transformation process that would span its seven facilities (soon to be eight) and involve thousands of clinicians. The new solutions needed to be implemented in a way that would streamline, coordinate and improve traditional workflows enterprise-wide.

To help ensure these objectives were met across the organization's many specialties and regionally dispersed venues of care, Orlando Regional Healthcare leveraged the expertise of the Eclipsys Consulting Group.

"The Eclipsys Consulting Group is skilled and experienced, but a significant advantage is that it's associated with Eclipsys," says Rick Schooler, vice president of Information Services for Orlando Regional Healthcare. "The team knows the applications, and is helping to get end users on board and working more productively."

"The Eclipsys Consulting Group is skilled and experienced, but a significant advantage is that they're associated with Eclipsys."

Improving Workflows, One Step at a Time

The Eclipsys team helped the health system identify under-performing workflows and worked with Orlando Regional Healthcare clinicians and IT staff to design and implement the new solutions for maximum improvement. As Charmaine Frederick, the health system's director of Clinical Informatics, describes it, "In implementing these new solutions and workflows, we're breaking traditions that have been in existence for years. So we've had to show that what we're introducing is better and works. The Eclipsys Consulting Group's experience has helped provide us with that 'ammunition'."

Physician Adoption Strategy is Key to Success

The Eclipsys Consulting Group's proven "connector strategy" reduced physicians' anxiety and helped win their commitment to the new systems. Physicians with large patient caseloads were assigned to clinician "connectors" who were knowledgeable about the new systems. Physicians met with their connectors regularly to voice preferences about functionality and workflow changes, provide other feedback, ask questions and receive project updates.

Frederick and her team worked with the Eclipsys Consulting Group to roll out Sunrise Clinical Manager in the Emergency Department of Orlando Regional Sand Lake Hospital. Within a month of implementation, all ED physicians were entering their own orders on Sunrise Clinical Manager. To date, over 500 physicians across the health system are accessing Sunrise Clinical Manager to retrieve patient lists and results.

Millions to be Saved

Eclipsys services and software solutions are providing a critical foundation to help the health system achieve its strategic goal – to provide patients with better, safer care more efficiently. To gauge success, the Eclipsys Consulting Group helped Orlando Regional Healthcare establish clear benchmarks to measure the benefits they achieve. "As we spend more time using the systems, we anticipate that we'll document definitive gains in productivity and efficiency as well as improvements in patient safety, utilization and overall cost/case," Schooler says.

By working with the Eclipsys Consulting Group and utilizing Eclipsys clinical solutions effectively, Schooler expects the health system to realize financial benefit of at least \$21 million over the next five years – while achieving its objectives for improving patient safety and care. Total savings and/or net revenue improvement are estimated in excess of \$35 million.

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About Orlando Regional Healthcare

Orlando Regional Healthcare, a 1,652-bed private, not-for-profit organization, was established in 1918. The hospital system serves more than 640,000 central Florida residents and 4,500 international patients annually. As a community-owned organization, Orlando Regional reinvests its profits into many one-of-a-kind, specialized services like central Florida's only Level I trauma center and statutory teaching hospital. It has been repeatedly recognized as one of the nation's top hospitals. For more information, visit www.orhs.org.

About the Eclipsys Consulting Group

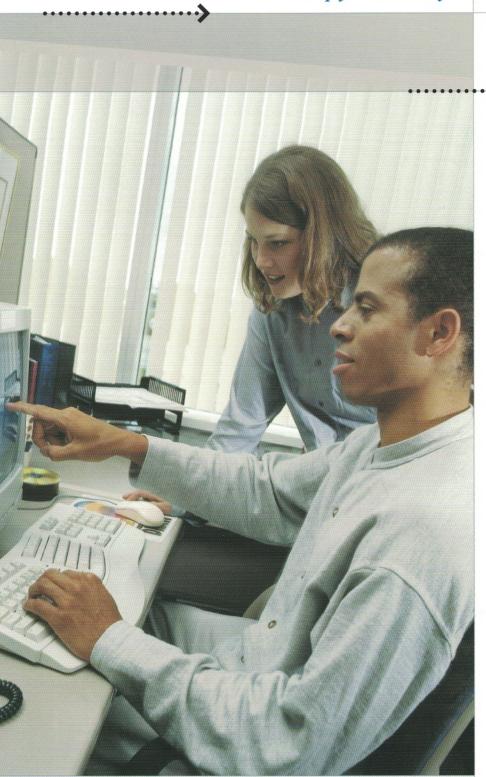
The Eclipsys Consulting Group works with customers not only to understand Eclipsys products and services, but also to influence the people, processes and organizational factors that determine a project's success. The Eclipsys Consulting Group partners with healthcare providers to ensure that IT investments return significant quality, cost and service improvements to the bottom line. This occurs with initiatives that focus on technology enablement, workflow redesign and optimization, adoption, and change management.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, the Eclipsys Consulting Group's range of transformational services, Sunrise Clinical Manager, Sunrise Surgical Manager and our other solutions. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"We wanted a system based on the latest technology and a company with the expertise to incorporate anything we felt would serve our information needs... Eclipsys was the clear winner."

> Jeff Flaks Chief Operating Officer and Executive Vice President MidState Medical Center Meriden, CT

MidState Medical Center Boosts Efficiency and Cuts Costs

- Customer: A subsidiary of Hartford Healthcare Corporation, the 130-bed MidState Medical Center in Meriden, CT, is an acute care hospital serving central Connecticut.
- Situation: MidState Medical Center's Health Information Management (HIM) department needed to improve operational efficiency, decrease costs and reduce the amount of storage space required for paper records.
- Solution: MidState selected Eclipsys Sunrise Record Manager to help facilitate its migration to a paperless environment, streamline HIM processes and improve HIM efficiencies.
- Dottom Line: With Sunrise Record Manager, MidState Medical Center now provides on-demand access to electronic patient records and has achieved more accurate coding, a smoother revenue cycle and improved HIPAA compliance. At the same time, the HIM department has significantly reduced its operating expenses and space requirements.

The Story

It was clear to MidState's HIM staff that managing paper records and using manual processes was inherently inefficient and expensive. Even more importantly, inaccessible records, incomplete forms and errors sometimes impacted care delivery. Fortunately, the construction of a new building provided the acute care hospital with an opportunity to introduce state-of-the-art technologies and transform its existing HIM processes.

After reviewing a number of options, the organization selected Eclipsys Sunrise Record Manager. "Our goal was to automate the management of patient information to better support first-class patient care," explains Jeff Flaks, chief operating officer and executive vice president of MidState Medical Center. "We wanted a system based on the latest technology and a company with the expertise to incorporate



anything we felt would serve our information needs. We measured cost and value, and Eclipsys was the clear winner."

Sunrise Record Manager was first implemented in 1998. Today, the latest version of the solution is utilized by almost 400 MidState doctors, all healthcare teams and HIM staff, as well as Hartford Hospital, MidState's "sister" facility.

"In our old facility, we had approximately 4,200 square feet for our entire HIM department," recalls Judy Guccione, director of HIM and HIPAA Compliance. "When we moved to the new building, we went down to 1,200 square feet, with an archival area of 12 by 4 feet. Working closely with Eclipsys made us very confident about moving into a smaller space. They helped us analyze our new facility and identify the steps needed to reach our goals."

Anytime, Anywhere Access to Complete Patient Records

Of course, Sunrise Record Manager yields benefits far beyond reducing storage space requirements. Sunrise Record Manager enhances and streamlines clinical workflow by providing access to patient records from any computer and letting caregivers view information instantly. "What's exciting is that it's both instantaneous and simultaneous," Guccione says. "At any point during a patient's episode, you can have a social worker, physician and nurse all looking at the patient's record from different locations."

"I can run a report and see who went into a record, what they looked at and if they printed it."

Sunrise Record Manager also provides Guccione with the critical tracking and audit tools for release activities and record access required for regulatory compliance. "The Eclipsys product is wonderful because there's audit functionality in the background," she explains. "I can run a report and see who went into a record, what they looked at and if they printed it. With privacy and security such major concerns, that information is crucial to have in my position."

The Benefits

Since implementing Sunrise Record Manager, the number of incomplete records has dropped from more than 4,000 to fewer than 200 – MidState's lowest level ever. Automating manual processes has allowed the HIM department to reduce headcount by 2.5 full-time equivalents (FTEs), saving MidState Medical Center more than \$80,000 per year.

Complete and instantly accessible patient information through Sunrise Record Manager translates to a smoother revenue cycle and faster reimbursements. MidState has realized an 85 percent improvement in a key revenue cycle indicator – Discharged, Not Final Billed (DNFB) – the amount directly related to "uncoded" accounts pending action by HIM. Using Sunrise Record Manager, MidState has reduced DNFB from \$3 million to \$450,000 to date and expects to see continuous improvement.

Today, MidState Medical Center's state-of-the-art facility manages electronic paper records in a nearly paperless environment, while reaping the benefits of integrated HIM with clinical and revenue cycle workflows. And it couldn't be done without Sunrise Record Manager.

"Over the years, I've worked with many vendors," Guccione notes. "The confidence I feel working with Eclipsys is priceless. When you need to tweak the application to meet the needs of your organization, Eclipsys listens – and delivers."



About MidState Medical Center

A subsidiary of Hartford Healthcare Corporation, MidState Medical Center is a 130-bed acute-care hospital providing high-quality medical treatment, healthcare services, information and support to communities in central Connecticut. MidState has been rated among the top hospitals in Connecticut and in the country for patient satisfaction, and is listed among the top 50 best small and medium companies to work for in America. MidState features private inpatient rooms, general surgery, emergency medicine and state-of-the-art health services in centers dedicated to cancer care, wound and hyperbaric care, family birthing, digestive health, cardiac care and sleep care. For more information about MidState programs and services, visit www.midstatemedical.org.

About Sunrise Record Manager

Sunrise Record Manager automates the complex processes of health record management that span care delivery and revenue cycles. By automates coding and helping HIM departments migrate to paperless operations, Sunrise Record Manager eliminates duplication, enhances efficiency and improves the quality of the legal record. As a result, HIM operations become more efficient and achieve complete and timely reimbursement.

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"When you collect 103 to 104 percent of expected net revenue, that's cash – cash for operations and cash to the bottom line."

Linda Sheaffer, CPAM, CCAM Corporate Director of Patient Administrative Services WellSpan Health York, PA

WellSpan Health Improves Cash Flow to 103 Percent of Expected Net Revenue

- Customer: WellSpan Health is a not-for-profit, community-based healthcare system serving south-central Pennsylvania and northern Maryland.
- Situation: WellSpan's homegrown accounting system could not keep pace with complex managed care and compliance requirements, resulting in problems generating clean claims, long Accounts Receivable (A/R) cycles and unsatisfactory cash flow.
- Solution: WellSpan selected Eclipsys Sunrise Access Manager/Patient Financial Manager to provide the health system's York Hospital with an integrated revenue cycle management solution. Following successful use at York Hospital, WellSpan is now implementing the solution at its Gettysburg Hospital and as the heart of its combined business office.
- Bottom Line: WellSpan's York Hospital has seen a higher percentage of clean claims, shorter A/R cycles and improved cash collection, with costs well below the national average.

The Story

In the late '90s, WellSpan Health was facing billing and collection challenges that its homegrown patient accounting system could not meet. Complex managed care and compliance requirements put a strain on the system, making it difficult to generate clean claims. As a result, WellSpan experienced long A/R cycles and lower cash flow. As a solution, WellSpan implemented Eclipsys Sunrise Access Manager/Patient Financial Manager at its York Hospital in November 2002.

Fewer Denials and Underpayments

The Eclipsys solution provides integrated registration and accounting workflows that boost employee productivity while ensuring compliance with payer and regulatory requirements. Rules, alerts



and warnings are triggered during patient intake, throughout the stay and during end-of-visit processing, to ensure that care complies with payer and regulatory requirements. The ability to tailor screens and workflows to fit approval requirements and contract terms is a key advantage. "We haven't found one contract that we can't build," said Linda Sheaffer, CPAM, CCAM, WellSpan corporate director of Patient Administrative Services. "When the CFO asks if we can handle a new kind of billing, we can."

Sunrise Access Manager/Patient Financial Manager also calculates expected reimbursement according to the patient's healthcare coverage, including Medicare, Medicaid and private insurance plans, including HMOs. The system automatically compares payments with expected reimbursement and immediately assigns discrepancies to payer units for analysis and possible rebilling. To help rectify variances, an online audit trail provides a complete accounting history for the patient and particular service.

Access Manager/Patient Financial Manager also gives WellSpan managers immediate feedback about organizational operations, along with actionable information that helps improve performance. To ensure registration quality, the system tracks performance of WellSpan's 350 registrars to identify recurring errors and the need for possible retraining. Registration managers also have instant access to account status and resolution of variances – the kind of information that only an integrated system can provide. For nursing managers, a daily report lists admissions, discharges and transfers, by hour and day, for each unit. "That's the kind of information we use to adjust our staffing levels in our organization," says Amy Repman, WellSpan Health's corporate manager of Access.

"We never had this level of functionality in our patient accounting system," Repman adds. "It really has changed things from a process perspective, eliminating back-end fixing of delayed front-end communications."

The Benefits

WellSpan administrators report exceptional benefits resulting from the Sunrise Access Manager/Patient Financial Manager implementation. For example, fewer underpayments and denials translate into improved cash collection. Also, at a cost-to-collect ratio of one to four, WellSpan exceeds the national standard for facilities of its size.

"If you're realizing only 97 or 98 percent of net revenue, you're leaving money on the table," Sheaffer says. "When you collect 103 to 104 percent of expected net revenue, that's *cash* – cash for operations and cash to the bottom line."

Faster account resolution with quality monitoring and electronic work queues also contribute to efficiency gains. Early intervention has helped WellSpan Health reduce A/R days by approximately 20 percent to 51 days, down from 68. And, as a result of the built-in quality manager in Access Manager/Patient Financial Manager, first-time clean-claim generation at WellSpan has improved to 97 percent. "It's always more efficient when you can get a clean claim out the door on the first try," Sheaffer notes.

With benefits confirmed at its York facility, WellSpan Health is deploying Sunrise Access Manager/Patient Financial Manager at Gettysburg Hospital. The system will be the heart of a combined business office providing streamlined, integrated patient financial operations across the WellSpan organization.

"With Eclipsys, we will have integrated WellSpan processes rather than separate processes for each hospital," Sheaffer says. "That's good news for WellSpan Health and good news for our patients."

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About WellSpan Health

WellSpan Health is a fully integrated system serving Adams and York counties in Pennsylvania and northern Maryland. York Hospital is a community teaching hospital and regional referral center for neonatology, behavioral health, trauma, cardiology, orthopedics, neurosurgery and cancer. Gettysburg Hospital is a community hospital specializing in transitional care. The system also includes primary and specialty care offices, ambulatory care and outpatient sites, retail pharmacies, a home health organization and two managed care plans. For more information, visit www.wellspan.org.

About Sunrise Access Manager/ Patient Financial Manager

Sunrise Access Manager/Patient Financial Manager is a proven revenue cycle management solution with industry-leading capabilities that help healthcare organizations improve cash flow, reduce costs and increase patient satisfaction. The solution integrates scheduling, registration/ADT and patient accounting functions to address contemporary healthcare workflows.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out how Sunrise Access Manager/Patient Financial Manager and other Eclipsys Sunrise solutions can help improve the outcomes of your healthcare organization. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"Without Sunrise ePI, we couldn't ensure the integrity of the patient records in our clinical data repository and provide the highest quality, most cost-effective care across our health system."

Ralph Johnson
Interim Associate Vice President of Information Services
MaineHealth
Portland, Maine

Sunrise ePI Helps MaineHealth Deliver Complete and Accurate Electronic Patient Records Across 36 Organizations

- Customer: A non-profit health system of 36 member and affiliated organizations serving the southern, central and western areas of Maine. It is the state's dominant health organization.
- Situation: MaineHealth needed a reliable way to positively identify each patient – regardless of where in the organization that patient was served. Success would depend heavily on the ability to identify, reconcile and avoid duplicate patient records.
- Solution: The health system selected the Eclipsys Sunrise Enterprise Person Identifier to assign each patient a unique number, which serves as a link to the patient's complete MaineHealth record. As it is rolled out across MaineHealth, Sunrise ePI is also enabling the health system to identify and clean duplicate entries in its existing systems and prevent new duplicates when organizations join the growing MaineHealth family.
- Bottom Line: MaineHealth has improved efficiencies as medical records are more complete and accurate. Costs, duplication and the potential for avoidable medical errors have decreased while resource utilization and customer satisfaction have improved.

The Story

To enhance patient care across its 36 member and affiliated organizations, MaineHealth established a clinical data repository (CDR) for sharing clinical patient data. The organization's leaders knew that achieving a high return on investment depended on maintaining the integrity and completeness of patient data. Otherwise, physicians would quickly lose confidence in the accuracy of the CDR.



Using Eclipsys Sunrise Enterprise Person Identifier (ePI), MaineHealth now assigns each patient a unique "enterprise master patient identifier" (EMPI). As patients move between MaineHealth's multiple facilities, specialties and information systems, this identifier "follows" them as part of their electronic health record. Sunrise ePI retains all other medical record numbers assigned to the patient, while enabling the centralized storage of the patient's complete medical record in the shared CDR.

At MaineHealth, Sunrise ePI operates in the background of the registration system to flag duplicate or potential duplicate records. If ePI (based on unlimited, pre-defined criteria) identifies that a likely duplicate has been created, it alerts the Health Information Management staff so they can make a final determination and merge records as appropriate. Sunrise ePI can also be used to interact directly with the ADT (admission/discharge/transfer) system during the registration process to minimize the creation of duplicate patient records.

"Sunrise ePI helps us ensure that we don't cause potential duplicate records as we bring new members into the MaineHealth family."

Bringing the Team Together

Implementing an EMPI, no matter how superior a solution, across many affiliated organizations can indeed be a challenge. Here, the clinical transformation and best-practices expertise of the Eclipsys Consulting Group $^{\text{TM}}$ came into play. Eclipsys consultants helped guide staff across MaineHealth in planning, implementing and managing this major workflow change.

The Benefits

Sunrise ePI has delivered solid results. Ralph Johnson, the health system's interim associate vice president of Information Services, reports that system-wide, the average rate of potential duplicate records has dropped from 25 percent to only 8 percent. Similarly, efficiency has skyrocketed: for example, the two employees who previously resolved duplicates for just one hospital (the system's 606-bed flagship, Maine Medical Center, Portland) now handle duplicates across all 36 organizations.

As MaineHealth continues to grow, ePI helps it grow efficiently. Sunrise Enterprise Person Identifier enables MaineHealth to clean the master patient indexes of new associated healthcare organizations before they begin utilizing the CDR. "As we bring new members into the MaineHealth family, Sunrise ePI helps us ensure that we don't cause potential duplicate records while we're adding that wealth of additional patient data," Johnson says.

So what is the bottom-line value of Sunrise Enterprise Person Identifier to MaineHealth? Johnson put it succinctly: "Without Sunrise ePI, we couldn't ensure the integrity of the patient records in our CDR and provide the highest quality, most cost-effective care across our health system. And that's what our population counts on us to provide."



About MaineHealth

MaineHealth is a not-for-profit, community-owned, comprehensive delivery system providing the continuum of care from prevention and health maintenance through tertiary services, rehabilitation, chronic care and long-term care. Building on its growing membership, MaineHealth works to ensure high-quality, locally governed healthcare for southern, central and western Maine. For details, see www.mainehealth.org.

About Sunrise Enterprise Person Identifier

Sunrise Enterprise Person Identifier helps healthcare organizations correctly identify patients regardless of where care is being delivered, what departments or facilities are providing services, and what information systems are being used. Sunrise ePI can minimize the creation of duplicate medical record numbers and manage multiple system identifiers for the same patient, increasing the accuracy and completeness of patients' electronic health records across the continuum of care.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, Sunrise Enterprise Person Identifier, the Eclipsys Consulting Group's range of transformational services and our other solutions. Contact your Eclipsys representative, visit www.eclipsys.com or email us at info@eclipsys.com.





"Nurses are now able to check the status of every patient, prioritize bed assignments and handle physician orders and medications quickly and accurately."

Jeff Triboulet
Director, ED Nursing
Springhill Medical Center
Mobile, Alabama

Springhill Medical Center Weathers the Storm with Sunrise ED Manager

- Customer: A 252-bed, privately owned acute care hospital serving Mobile and southwest Alabama.
- Situation: The Emergency Department struggled with long patient wait times and overcrowding. Manual, paper-based processes hampered both treatment and patient throughput.
- Solution: Springhill Medical Center implemented Eclipsys Sunrise ED Manager to streamline interdepartmental communications as well as automate and integrate a wide range of patient-care functions.
- Bottom Line: The hospital's Press Ganey¹ ranking for quality and patient service rose by nearly 70 percent, and in the aftermath of Hurricane Katrina, the ED was able to handle twice its normal patient volume.

The Story

Springhill Medical Center needed to automate manual processes in its busy, overcrowded Emergency Department, where board-certified emergency physicians treat approximately 34,000 patients annually. The medical center needed a system that would meet the unique needs of its ED clinicians, who must make decisions quickly and keep track of several patients concurrently in varying stages of care.

In October 2004, Springhill Medical Center activated Eclipsys Sunrise Clinical Manager™ and Sunrise ED Manager, which are fully integrated and share a common architecture and clinical data repository. This integration provides complete patient information to clinicians at the point of care and across the care continuum to help Springhill Medical Center become a truly connected enterprise.

"We wanted a system that would be accepted by physicians, provide evidence-based practice guidelines,

Press Ganey Associates Inc. performs satisfaction surveys of hospital services. Clients receive quarterly reports of quantitative data that may be compared to state, national and benchmark norms.



streamline workflow, and integrate with current hospital systems," said Pam Shedd, project manager responsible for clinical information systems at Springhill Medical Center. "Sunrise ED Manager met our criteria."

Springhill's emergency clinicians use ED Manager to improve efficiencies at every stage of the care process. Once a patient is "quick-registered" in the ADT (admissions, discharge, transfer) system, ED Manager automatically populates the department's electronic Display Board with all documented patient information. This gives the ED staff a complete, real-time view of every patient waiting for testing, diagnosis or treatment. A red flag on the Display Board alerts nurses of orders, and color-coded columns make it easy to see which patients need immediate attention. "Nurses can now check the status of every patient, prioritize bed assignments and handle physician orders and medications quickly and accurately," said Jeff Triboulet, director of ED Nursing at Springhill.

ED physicians are continually finding new ways to use the power and flexibility of the Eclipsys solution to streamline workflows, customizing columns on the Display Board with visual cues for lab orders and reconfiguring the structured notes to suit their individual preferences.

"I'm able to focus on practicing medicine instead of the computer system."

Dependability in Extreme Circumstances

Hurricane Ivan ripped through the area in September 2004 and delayed Springhill Medical Center's "big-bang" activation of ED Manager and Clinical Manager by three weeks.

In August 2005, less than one year later, Hurricane Katrina ravaged Gulf communities from New Orleans to Mobile. For two days after the storm, the Springhill ED treated nearly 200 patients a day – twice its normal volume. "At any given time, there were 70 patients on the Display Board," said Shedd. "ED Manager helped our doctors handle the high volume. The Eclipsys systems did not go down during Katrina, and I was even able to connect from home. We did not miss a beat."

Benefits

ED Manager has enabled the ED staff at Springhill Medical Center to streamline workflows, substantially reduce patient wait times and improve care. Successful integration of ED Manager with the legacy ADT system enables clinicians to document patient care and generate orders immediately with minimal patient information.

Springhill Medical Center has been able to reduce patient wait times by 30 minutes and overall length of stay by 60 minutes. "The physicians pay attention to the Display Board to see how long it's taking and try to move patients through more quickly," Shedd said. "They like the fact that they can look up at the Display Board and see when their labs are back or radiology is complete."

Patient throughput increased by 15 percent in the first eight months after installation, averaging close to 100 patients a day. "The order sets in ED Manager have enabled me to see two to three more patients per shift," said Springhill ED physician Darren Waters, MD. "My billing rates have increased and I'm able to focus on practicing medicine instead of the computer system."

Most importantly, physician utilization of ED Manager has reached 100 percent after quick adoption right from the start. Within three months of going live with ED Manager, Springhill's physicians were entering 60 percent of orders; after 12 months, they were placing 85 percent of orders directly in ED Manager.



About Springhill Medical Center

Springhill Medical Center is a comprehensive medical-surgical hospital serving the residents of Mobile and the greater Southwest Alabama region with a complete range of acute and outpatient care. Springhill Medical Center has established a reputation for providing the high-quality, comprehensive healthcare expected of a regional leader. For more information, see www.springhillmedicalcenter.com.

About Sunrise ED Manager

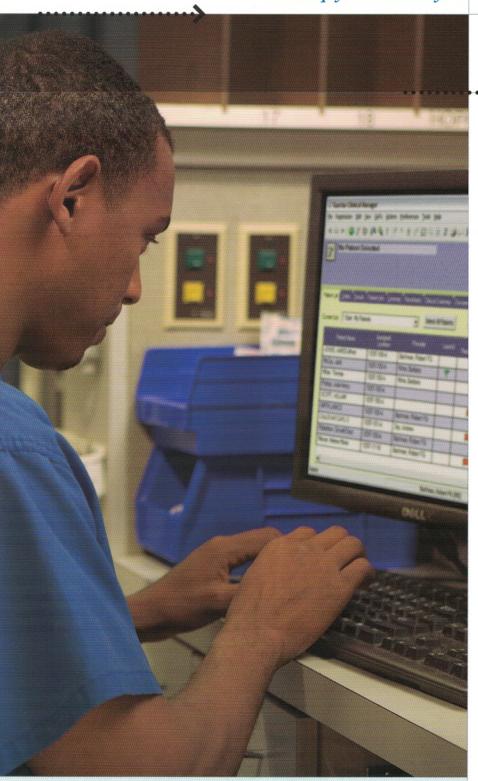
Sunrise ED Manager is a robust solution that automates Emergency Department processes and services, resulting in improved patient care, organizational efficiencies, and reduced costs throughout the enterprise. Sunrise ED Manager provides automated functionality for triage, registration, order management, clinical documentation, ED-specific clinical content, prescription management, discharge/disposition planning, management reporting, and more. Sunrise ED Manager allows authorized users — anywhere and at any time — to access comprehensive, actionable information at the point of decision-making.

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Find out more about Eclipsys, Sunrise ED Manager and other customers' successes with clinician adoption and care transformation. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"We succeeded in improving patient safety and satisfaction and enhancing clinical workflow between departments and clinicians."

Pat Montanaro Director of Clinical Systems Hartford Hospital Hartford, CT

Hartford Hospital Increases Revenues and Improves Patient Care with Sunrise Clinical Manager Charger

- Customer: An award-winning acute care hospital with 972 physicians and 867 beds across four facilities, Hartford Hospital has one of the largest tertiary care and community healthcare centers in New England, and a Level 1 trauma center.
- Situation: The Respiratory Therapy department's clinical and billing system required therapists to double document and therapists were not receiving prompt notification of new orders, resulting in lost orders and revenues.
- Solution: Hartford Hospital transitioned its Respiratory Therapy department to Sunrise Clinical Manager and now processes charges with the Clinical Manager Charger.
- Bottom Line: The Respiratory Therapy department streamlined therapy services and equipment charging, decreased lost or delayed orders, and increased the volume of billable services and related revenues.

The Story

At Hartford Hospital, 106 Respiratory Therapy practitioners work side by side with nurses, physicians and other healthcare providers to treat patients who range in age from the newborn to elderly. The therapists serve a large volume of patients with such diseases as asthma, bronchitis and emphysema. The department's teams support Medicine, Cardiology, Surgery, Emergency and other hospital departments, and employ patient-driven protocols.

For all its progressive practices, however, the Respiratory Therapy department relied on a proprietary clinical and billing system acquired in the mid-90s. This system was not integrated with Eclipsys Sunrise Clinical Manager, the hospital's core clinical system.



This lack of integration caused numerous problems and day-to-day frustrations for staff and patients. Therapists did not receive prompt notification of new orders from physicians so treatment delays and lost orders were commonplace. Inefficient data exchange with the hospital's billing system resulted in lost revenues. Adding to the inefficiency, therapists were double documenting in order to share patient information with other caregivers. The therapists could only enter new patient data, download charging information and upload charting and billing data at a few specified workstations.

The situation had not gone unnoticed by the hospital's Information Systems (IS) department, which was in the midst of a staged implementation of Sunrise Clinical Manager. The hospital decided to transition respiratory functions to Sunrise Clinical Manager.

"It was a classic team effort that lead to our success."

Pat Montanaro, director of Clinical Systems, helped form the team of Respiratory and IS staff that evaluated the existing workflow, developed a future workflow and determined an implementation strategy. "Our mandate was to transition the Respiratory Department's current system functions, which included clinical documentation, assignment management, workflow management, reporting and charging," said Montanaro. "We also had to perform pre-production testing, create training materials and conduct end-user training before going live. We had our hands full and a December 31 deadline to meet."

A key part of the solution was the Sunrise Clinical Manager Charger functionality that can be configured to generate financial transactions from HL7 messages, such as orders and results, and automatically send them to the hospital's patient accounting system. In addition to better data exchange with the hospital's business office, Clinical Manager provided authorized users with immediate access to a patient's complete electronic medical record (EMR) from any setting throughout the enterprise. This helped maximize patient safety and eliminate costly duplication and re-work by the therapists.

The team kicked off the project just before Labor Day and the Charger was installed, configured and tested by the end of October. Workflow changes, end-user training and additional testing brought the project timeline right up to midnight on New Year's Eve, when the Respiratory Therapy department successfully went live on the new system.

"It was a classic team effort that led to our success," said Montanaro. "The Charger function worked so well, the respiratory therapists were asking why we hadn't given it to them earlier. More importantly, we succeeded in improving patient safety and satisfaction as well as enhancing clinical workflow between departments and clinicians."

The Benefits

The transition to Sunrise Clinical Manager has made a considerable impact at Hartford Hospital in several areas. Revenues have increased dramatically. In the first quarter after implementing Sunrise Clinical Manager, the Respiratory Therapy Department measured a 154 percent increase in billable volume, and a 13.7 percent increase in gross revenues from the previous year.

Patient care delivery has improved. With Sunrise Clinical Manager, respiratory data is now stored in one location, ensuring that critical patient information is easily available. Respiratory therapists can access orders online from any workstation in the hospital, reducing the number of lost or delayed orders.

And what about the productivity drain of double documenting? Today, respiratory therapists can document patient care from any workstation quickly and easily, improving communications with other clinicians across the continuum of care.

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About Hartford Hospital

Founded in 1854. Hartford Hospital is an acute care hospital and a major tertiary care and community health care center, serving a statewide patient population. The hospital is the cornerstone of Connecticut's finest full-spectrum health care system, which includes Hartford Hospital's mental health network; a community hospital; a skilled nursing/intermediate care facility; a major pediatric health center; and five walk-in medical centers throughout greater Hartford. A wholly owned subsidiary of Hartford Health Care Corporation, Hartford Hospital is a primary affiliate of the University of Connecticut School of Medicine and Dentistry for both graduate and undergraduate medical education.

About Sunrise Clinical Manager

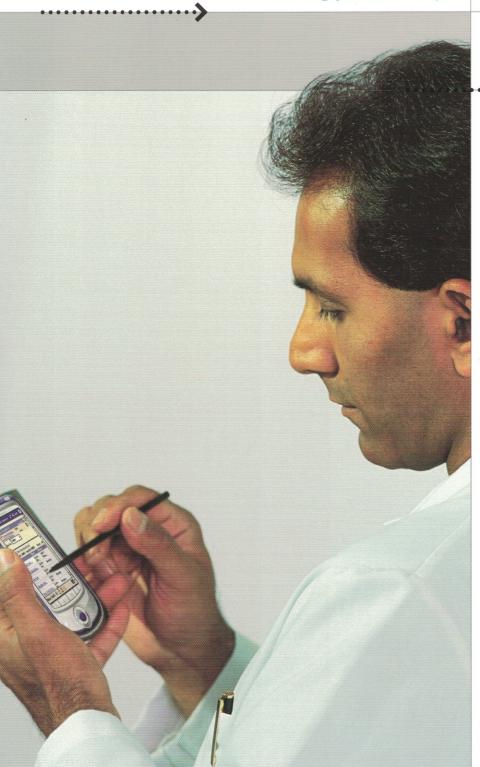
Sunrise Clinical Manager is an enterprise-wide electronic health record solution that provides immediate, secure access to patients' complete records, streamlines care processes and improves the quality and cost-efficiency of care. It features a state-of-the-art workflow engine, CPOE system, embedded evidence-based content and sophisticated clinical documentation capabilities.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, Sunrise Clinical Manager, Sunrise Clinical Manager Charger, and our successes with patient safety and documentation efficiency. Contact your Eclipsys representative, email us at *info@eclipsys.com* or visit www.eclipsys.com.





"Having portable, personalized devices that match workflow helps maximize our direct use of clinical solutions – a key component in improving safety and outcomes for patients."

Philip Strong, MD

Hospitalist

El Camino Hospital

Mountain View, California

El Camino Hospital Pioneers "Hospital of the Future" with Eclipsys Solutions

- Customer: El Camino Hospital, Mountain View, CA
- Situation: Preparing to build "the hospital of the future," technology pioneer El Camino Hospital needed a partner to help it achieve a connected enterprise so its staff could deliver the highest quality of care.
- Solution: El Camino Hospital selected Eclipsys for consulting and technical services, installed a wireless network and implemented Sunrise Clinical Manager™ to provide clinicians with instant access to up-to-date information and knowledge.
- > Bottom Line: El Camino Hospital achieved a 70-percent increase in clinician use of point-of-care technologies and reduced network infrastructure costs by 60 percent. Working with the Eclipsys Consulting Group™, El Camino Hospital decreased operational costs in several departments. Clinicians have embraced the new technology, saying it enhances communication and helps them work more efficiently.

The Story

For decades El Camino Hospital, a 395-bed organization located in the heart of California's Silicon Valley, has been a leader in the application of healthcare technology. In 1971, the organization pioneered the first-ever computerized physician order entry (CPOE) system.

As it prepares to construct a new building to meet strict, new state seismic standards, El Camino Hospital is once again actively pioneering new approaches to patient comfort, convenience and safety. Today, the organization is laying the groundwork for "the hospital of the future." To make its vision of a connected enterprise a reality, El Camino Hospital relies on Eclipsys services and software.



Mobility is a core component of El Camino Hospital's forward-looking vision. Hospital leaders recognize that patient data must be available anytime and anywhere so clinicians can provide timely, informed care. With Eclipsys as its technology partner, the hospital upgraded to a gigabit Ethernet in 2003 to support house-wide mobility through a secure wireless network.

"For professionals and clinicians, having a robust and secure campus-wide wireless network means that we can adapt our personal devices to the work we need to do. And we can do that work wherever we happen to be," said Philip Strong, MD, a hospitalist at El Camino Hospital. "Having portable, personalized devices that match workflow helps maximize our direct use of clinical solutions – a key component in improving safety and outcomes for our patients."

The Eclipsys Consulting Group has been a valuable partner throughout this process, helping El Camino Hospital meet its strategic goals and control expenses. "A key to El Camino Hospital's future success lies in our ability to continuously improve processes and drive bottom-line growth through a combination of volume growth and expense control," says Mark Zielazinski, chief information officer at El Camino Hospital. "The Eclipsys Consulting Group is a crucial partner in identifying these opportunities on an ongoing basis as part of our budget cycle."

"The Eclipsys consultants helped us redesign our staffing models, our supply structure and really helped us successfully reach our goals."

In one such example, Diana Russell, RN, vice president of Patient Care Services, co-led a project with the Eclipsys Consulting Group to improve efficiencies and reduce supply costs associated with the hospital's renal dialysis program. The project resulted in an annual \$600,000 cost reduction. "The Eclipsys consultants were extremely helpful to me in looking at national benchmark data," recalls Russell. "They helped us redesign our staffing models, our supply structure and really helped us successfully reach our goals." Additional projects with the Eclipsys Consulting Group have helped reduce costs in lab, radiology and healthcare information management (HIM).

The Benefits

With a robust IT infrastructure in place, El Camino Hospital can deploy other advanced technologies, including Sunrise Clinical Manager, to connect clinicians to information and knowledge for improved clinical decision-making. True to its pioneering spirit, the hospital served as an early adopter of the latest release of the Eclipsys advanced clinical solution, Sunrise Clinical Manager.

This new technology has made El Camino Hospital clinicians more efficient and effective by providing access to information through the use of voice-activated communication devices, Tablet PCs and wireless carts. The use of wireless technology has reduced network infrastructure costs by 60 percent compared to the previous year since moving, adding or changing desktop and network cables or other equipment was no longer required. With the ability to "unplug," clinicians' use of point-of-care technologies has increased 70 percent and El Camino Hospital has been able to roll out more patient care solutions faster than ever before.



About El Camino Hospital

El Camino Hospital is a progressive, full-service, acute care community hospital in Mountain View, CA, the heart of Silicon Valley. El Camino has created and maintained a culture committed to technology innovation to continually improve patient care, staff satisfaction and cost management. More information is available at www.elcaminohospital.org.

About Eclipsys Services

With decades of experience helping healthcare organizations use technology effectively to transform their processes, the Eclipsys Services team provides the experience and knowhow to help organizations realize maximum return on their IT investment. With Eclipsys providing technical personnel and expertise, healthcare organizations can focus on delivering quality care while leveraging technology to successfully meet their strategic goals.

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Web site: www.eclipsys.com





"With ObjectsPlus/XA, I can do things in a matter of seconds that would otherwise take months for me to write."

Rick Stevens Former Senior Analyst Orlando Regional Healthcare Orlando, Florida

Orlando Regional Healthcare Customizes Sunrise Clinical Manager™ Quickly and Gains Years of Value

- Customer: A seven-hospital, 1,652-bed organization and one of central Florida's largest healthcare delivery systems.
- Situation: Orlando Regional Healthcare needed a new clinical information system to better coordinate care throughout the organization. The new solution needed to integrate with legacy systems and be easily customized to add specific functionality that would improve end-user efficiency and satisfaction.
- Solution: Orlando Regional Healthcare selected Eclipsys Sunrise Clinical Manager to coordinate care throughout its facilities and leveraged the built-in ObjectsPlus/XA open objects integration capability and XA™ extended architecture of Eclipsys Sunrise Clinical Manager to easily and inexpensively customize the system.
- Bottom Line: ObjectsPlus/XA technology enables rapid and simple integration of Sunrise Clinical Manager with Orlando's legacy systems, delivering faster time to value.

The Story

When Orlando Regional Healthcare started to evaluate clinical information systems, the goals of improving patient care, safety and satisfaction by automating key care-delivery processes were paramount. However, Orlando Regional Healthcare also wanted a solution that could be easily customized to enhance existing processes without draining resources and putting a huge burden on its already stretched IT department. The healthcare delivery system found what it was looking for with Eclipsys Sunrise Clinical Manager and its unique ObjectsPlus/XA capabilities.



Extending Clinical Manager with ObjectsPlus/XA

ObjectsPlus/XA exposes the objects – the business logic – of Clinical Manager so IT departments can quickly and easily extend the system to communicate with non-clinical departments. Furthermore, it is possible to do this and maintain the same "look and feel" as Clinical Manager. As such, customer IT staff become, in effect, co-creators of an extended Clinical Manager because they have easy access to the same code as Eclipsys developers.

ObjectsPlus/XA dramatically reduces development time and drain on scarce IT resources. Instead of having to build custom functionality and write thousands of lines of custom code from scratch, the IT department can access and build upon the system's basic logic, such as its graphical user interface, error handling, permissioning and data access sub-systems. Rick Stevens, former senior analyst at Orlando Regional Healthcare, summed up the advantage of this capability: "With ObjectsPlus/XA, I can do things in a matter of seconds that would otherwise take months for me to write."

"With the previous system, every time the hospital changed vendors, or item numbers changed, IT had to update product lists in multiple places."

List Maintenance Made Possible

One powerful example that illustrates the value and flexibility of ObjectsPlus/XA is the way Orlando Regional added a custom tab to Sunrise Clinical Manager. This linked the core clinical system to the hospital's central purchasing software, provided by another vendor.

According to Stevens, "With the previous system, every time the hospital changed vendors, or item numbers changed, IT had to update product lists in multiple places. Since the hospital buys tens of thousands of items, it was a big challenge for us to keep the list up to date. Now, thanks to the added tab, Orlando Regional's nurses order supplies directly from the central system used by purchasing and accounts payable, which is always up to date." This made nurses, as well as purchasing and accounts payable staff, much more efficient and saved hundreds of hours and phone calls annually.

The Benefits

Sunrise Clinical Manager and ObjectsPlus/XA are enabling the rapidly growing Orlando Regional Healthcare organization to better connect its people and processes throughout the health system. By connecting nurses directly to the central purchasing system, Orlando Regional Healthcare has helped its clinical staff work with greater efficiency and relieved its IT staff of a previously time-consuming burden.

Drew Goddin, former director of Information Services for Orlando Regional Healthcare, states, "ObjectsPlus/XA has enabled us to incorporate Orlando functionality into Sunrise Clinical Manager and make it Orlando Regional's solution, as opposed to simply a vendor's application. Our staff accesses our proprietary information and functions through the Eclipsys system, but experiences it all as one, seamless solution. ObjectsPlus/XA is a very powerful and empowering capability."



About Orlando Regional Healthcare

Orlando Regional Healthcare, a 1,652-bed private, not-for-profit organization was established in 1918. The hospital system serves more than 640,000 central Florida residents and 4,500 international patients annually. As a community-owned organization, Orlando Regional reinvests its profits into many one-of-a-kind, specialized services like central Florida's only Level I trauma center and statutory teaching hospital. It has been repeatedly recognized as one of the nation's top hospitals. For more information, visit www.orhs.org.

About Sunrise Clinical Manager

Sunrise Clinical Manager is an enterprise-wide electronic health record solution that provides immediate, secure access to patients' complete records, streamlines care processes and improves the quality and cost-efficiency of care. It features a state-of-the-art workflow engine, CPOE system, embedded evidence-based content and sophisticated clinical documentation capabilities.

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"Most of our physicians have no knowledge that we use Knowledge-Based Transcription on the back end, because they don't do anything different on the front end."

John Avedian, RHIA, MPH
Director of Health Information Management
Maine Medical Center
Portland, Maine

Maine Medical Center Saves Time and Money with Knowledge-Based Transcription

- Customer: The 606-bed Maine Medical Center (MMC), Portland, is the largest hospital in Maine and the flagship of MaineHealth, the state's dominant health organization. MMC is the premier referral hospital for Maine and northern New England.
- Situation: Burgeoning transcription volume, rising costs and a tight labor market for medical transcriptionists propelled MMC to seek a more efficient way to transcribe and distribute dictated reports.
- Solution: Maine Medical Center chose Knowledge-Based Transcription, powered by eScription, to streamline transcription. Medical transcriptionists no longer have to type entire documents from scratch and clinicians do not have to change how they dictate.
- Bottom Line: Through productivity and efficiency gains as well as reduced medical costs, Maine Medical Center has saved more than \$1 million to date in transcription and related costs.

The Story

Maine Medical Center has a commitment to being one of the first truly paperless hospital and achieving a single, complete electronic health record (EHR) for each patient. With increasing transcription volume and a shortage of experienced medical transcriptionists, the hospital needed to boost productivity, cut rapidly rising labor costs, and ease recruiting and retention challenges. As a result, MMC began looking for a transcription alternative that would take advantage of the latest speech-recognition technologies.

After reviewing many options, MMC selected Eclipsys Knowledge-Based Transcription, a state-of-the-art voice-recognition technology with Natural Language Processing (NLP) that produces near-perfect, formatted drafts of dictated reports in record time.



With Knowledge-Based Transcription, clinicians can dictate their reports as usual and the software automatically generates highly accurate initial drafts in the proper format for the specialty and type of report. Skilled medical transcriptionists then review and edit the drafts and send them to the dictating clinician for review. Using the system's Web-based electronic signature feature, clinicians review and approve reports online. Signed reports are immediately available to appropriate caregivers as part of the patient's EHR and reports can be distributed to clinician offices via remote printing, fax or the Internet.

Maine Medical Center first implemented Knowledge-Based Transcription in 2000. Today, MMC has over 600 physicians dictating more than 60 different types of reports created by Knowledge-Based Transcription.

Physician adoption has been painless because the solution requires no change in traditional dictating behaviors. Its speech-recognition capabilities use acoustic and language models to quickly learn each clinician's individual speech patterns. According to John Avedian, RHIA, MPH, director of Health Information Management at MMC, "Most of our physicians have no knowledge that we use Knowledge-Based Transcription on the back end, because they don't do anything different on the front end."

"When medical transcriptionists are asked to edit instead of type, they feel valued for their knowledge, rather than for how fast their fingers can move."

The Benefits

Since adopting Knowledge-Based Transcription, Maine Medical physicians have noticed better and more consistent turn-around times for reports. This has delivered real gains in productivity, efficiency and cost savings for MMC. Specific benefits include:

Productivity has doubled. Medical transcriptionists produce reports twice as fast compared to typing reports from scratch. Avedian reports that transcriptionists can produce about 340 lines per hour editing as opposed to 170 lines per hour with manual transcription. MMC's turnaround is consistent, despite increasing volume, but no increase in staffing.

Fewer outside medical transcriptionists hired. Increased productivity has markedly reduced the need for outside medical transcriptionists, increasing transcription accuracy and slashing costs associated with using contract workers.

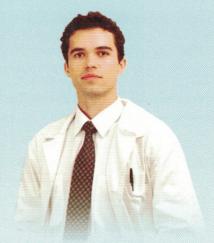
Increased job satisfaction. "When medical transcriptionists are asked to edit instead of type, they feel valued for their knowledge, rather than for how fast their fingers can move," Avedian notes. Furthermore, fewer repetitive-motion injuries occur.

Improved process management. Backlogs and bottlenecks have been virtually eliminated at MMC.

Fewer fax errors. Faxes used to have a failure rate of 20 to 30 percent. This has now declined to under three percent with Eclipsys Knowledge-Based Transcription.

According to Avedian, the productivity, efficiency and manpower gains realized through Knowledge-Based Transcription have saved Maine Medical Center more than \$1 million since 2001. These savings represent real money that MMC can dedicate to directly providing care, rather than the expense of documenting it.

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About Maine Medical Center

Maine Medical Center, the largest hospital in Maine, is the premier referral hospital for Maine and northern New England. Located in Portland, the 606-bed facility is both a teaching hospital and an active research center, providing comprehensive services in all medical specialties. It is the flagship facility for MaineHealth, the state's dominant health organization. For details, see www.mmc.org.

About Knowledge-Based Transcription

Knowledge-Based Transcription, powered by eScription, improves medical transcription workflows and costs through advanced speech processing, editing and electronic signature capabilities. It improves document turnaround time and access, adding information rapidly to patients' comprehensive electronic health records without requiring doctors and other clinicians to change dictating patterns or behavior. Knowledge-Based Transcription actively supports compliance with HIPAA, the Health Insurance Portability and Accountability Act of 1996, with audit trails, encrypted PINs (personal identification numbers) and role-based access.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, Knowledge-Based Transcription and our other solutions. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"The end product was a success. We fulfilled all of the physicians' requirements to bring all patient data into Clinical Manager and made it look like an original part of the application. Physicians could find everything they were looking for in one place."

Brian Crowe SQL Database Administrator Health First, Inc. Rockledge, Florida

Health First Quickly Integrates and Customizes Sunrise Clinical Manager Using ObjectsPlus/XA

- Customer: Formed by three not-for-profit hospitals serving Brevard County, Florida, Health First is a growing healthcare organization with 724 beds.
- Situation: Health First needed to quickly provide physicians with a way to access patient data that was stored in disparate legacy and ancillary information systems.
- Solution: Health First leveraged ObjectsPlus/XA to seamlessly integrate several patient information systems with Sunrise Clinical Manager.
- Bottom Line: Sunrise Clinical Manager and its ObjectsPlus/XA technology enabled rapid development of an integrated solution that helped improve physician satisfaction early in its implementation.

The Story

As part of its health information technology (HIT) strategy, Health First's three hospitals are migrating from stand-alone clinical, emergency, pharmacy and surgery information systems to an integrated set of advanced Eclipsys solutions, including Sunrise Clinical Manager, Sunrise ED Manager™, Eclipsys end-to-end medication management solutions and Sunrise Surgical Manager™, powered by Surgical Information Systems.

Physician utilization of the new solutions was key to the organization's long-term HIT strategy. The Health First implementation team therefore focused on physician solutions during the first phase of its threephase rollout of Sunrise Clinical Manager.

Health First leveraged ObjectsPlus/XA, the Eclipsys open object initiative that exposes the core objects and components of Sunrise Clinical Manager, to enable a



seamless integration of several patient information systems with Sunrise Clinical Manager. With these exposed objects, a healthcare organization's IT staff can quickly and easily extend Eclipsys clinical solutions to communicate with other clinical, non-clinical and legacy systems and easily customize the system to specific needs.

A three-person development team was able to integrate the legacy systems in just six weeks, without draining IT resources or overburdening development staff. After another six weeks of testing, the integrated solution was rolled out to clinicians.

A Solution for Patient Data Availability

As part of the migration to Eclipsys Sunrise solutions, the Health First implementation team knew that some patient data would not be immediately available to physicians. Nurses were still documenting patient vital signs, fluid intake and output (IOs), patient care notes and allergies in the legacy clinical system, and Emergency Department vital signs and medication orders still resided in separate proprietary systems.

"It doesn't take a lot of work to build a creative custom solution for our end users."

According to Brian Crowe, SQL database administrator at Health First, a solution was readily available from Eclipsys with ObjectsPlus/XA, which was used to build four custom tabs: Vitals, Fluid IO, Active Medications and Patient Care Notes. To build physician acceptance, Health First made sure the new custom tabs in Clinical Manager matched the appearance of its secure physicians' portal. "When the physicians are using either the portal or Clinical Manager, they're seeing the same theme, graphs and displays," said Crowe. "We kept everything uniform to make it as easy as possible for them to adapt to the new technology."

Now, as Crowe and his team continue the implementation of Clinical Manager, a physician examining a patient is able to see up-to-the-minute test results, nursing observations, vitals and fluid IOs from the time the patient enters the hospital or emergency room. The combined data is displayed in custom-designed graphs and numeric tables. Items such as heart rate, blood pressure and fingerstick glucose can be selected individually or all at once, and viewed from the start of the patient chart.

Benefits

ObjectsPlus has enabled Health First physicians to utilize existing applications and take advantage of the functionality of Sunrise Clinical Manager during the early stages of its implementation. Physicians can now view comprehensive patient data that previously resided in disparate systems.

"The end product was a success," Crowe said. "We fulfilled all of the physicians' requirements to bring all patient data into Clinical Manager and made it look like an original part of the application. Physicians could find everything they were looking for in one place."

As the ambitious rollout continues, Health First will implement Eclipsys Knowledge-Based Charting $^{\text{TM}}$ for nursing staff and Knowledge-Based Orders $^{\text{TM}}$. The custom tabs will no longer be necessary after the organization completes the first two phases of the Clinical Manager implementation.

But Health First has seen the possibilities and has more plans for ObjectsPlus. "We are going to be building on our successes and exploring new ideas for customization," said Crowe. "ObjectsPlus offers unlimited possibilities, and it doesn't take a lot of work to build a creative custom solution for our end users."

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About Health First

Three not-for-profit hospitals – Cape Canaveral Hospital in Cocoa Beach, Holmes Regional Medical Center in Melbourne, and Palm Bay Community Hospital in Palm Bay – form the core of Health First's family in Brevard County, on Florida's Space Coast. Other services include outpatient centers; the county's only trauma center; home care; specialized programs for cancer, diabetes, heart, stroke, and rehabilitative services; central Brevard's largest medical group; three fitness centers; and Medicare+Choice, commercial POS, and commercial HMO health plans.

About Sunrise Clinical Manager and ObjectsPlus/XA

Sunrise Clinical Manager is an enterprise-wide electronic health record solution that provides immediate, secure access to patients' complete records, streamlines care processes and improves the quality and cost-efficiency of care. It features a state-of-the-art workflow engine, CPOE system, embedded evidence-based content and sophisticated clinical documentation capabilities. The open objects layer underlying Sunrise Clinical Manager, Objects Plus/XA, is a technology-agnostic approach to the integration and interoperability of systems and data that allows healthcare organizations to customize Sunrise clinical solutions around their business strategy.

About Eclipsys

Eclipsys is a leading provider of advanced clinical, financial and management information software and service solutions to more than 1,500 healthcare facilities. Eclipsys empowers healthcare organizations to improve patient safety, revenue cycle management and operational efficiency through innovative information solutions.

Find out more about Eclipsys, Sunrise Clinical Manager, ObjectsPlus/XA and other customers' successes with clinician adoption and care transformation. Contact your Eclipsys representative, email us at info@eclipsys.com or visit www.eclipsys.com.





"ObjectsPlus worked brilliantly. The Discharge Summary tab has the look and feel of Sunrise Clinical Manager. It looks like it's part of the program."

Eric Grafstein, MD
Associate Research Director of Emergency Informatics
St. Paul's Hospital
Vancouver, British Columbia

St. Paul's Hospital Improves Follow-Up Care with ObjectsPlus/XA

- Customer: A member of Providence Health Care, St. Paul's Hospital is a 500-bed acute care and teaching hospital in Vancouver, BC.
- Situation: St. Paul's Hospital needed to improve the emergency department (ED) discharge process to ensure its patients received follow-up care.
- Solution: St. Paul's used Sunrise Clinical Manager™ and its ObjectsPlus/XA development layer to generate an ED discharge summary and identify patients who lacked a primary care physician (PCP).
- Bottom Line: Care providers at St. Paul's can now quickly update PCPs on patient status – even at outpatient facilities without integrated email or Web access. Plus, more patients who didn't have PCPs now receive referrals.

The Story

For almost a decade, Sunrise Clinical Manager has been helping to streamline operations at St. Paul's Hospital in Vancouver, BC. With its powerful workflow engine, embedded evidence-based content, and advanced order entry and clinical documentation, the system has helped reduce average patient stays at St. Paul's busy emergency department by 30 minutes. Time to MD assessment has dropped by 5 minutes and time to first lab order has been reduced by 15 minutes. Even better, wait times are now the lowest in the region.

Although proud of its record within the ED, St. Paul's management knew it needed to improve its ED discharge process. Some patients were treated and released without the knowledge of their PCPs, and many patients who did not have a PCP left without a referral. Most of the patients' PCPs practice outside the Providence Health Care parent organization, and many lack technology such as integrated email and Web access.



"We needed to give our patients better instructions and provide PCPs with better information about their patients who visited us," said Eric Grafstein, MD, associate research director of Emergency Informatics at St. Paul's.

"Whether or not a patient had a PCP often didn't get communicated," added Kevin Lonergan, clinical application analyst at Providence Health Care. "Our ED physicians often didn't know what services were available." These problems are not unique to St. Paul's, he said. In fact, pending government regulations require better instructions and physician referrals for discharged patients throughout the region.

The Solution

To improve follow-up care, Grafstein and his team set out to create a computer-generated discharge summary. Fortunately, the project coincided with Eclipsys' release of ObjectsPlus/XA technology. This open objects development platform makes the underlying code of Sunrise™ clinical software available for seamless linking to other applications, opening up new opportunities for customization and integration. This capability is accessible to any organization that licenses the software.

"We have total control and flexibility."

Using ObjectsPlus/XA together with Microsoft .NET technology, Grafstein went to work with his team, including Lonergan, product sponsor Grant Innes and project manager Christine Jennings. The discharge application they created prints follow-up instructions for discharged patients and automatically generates and faxes a summary to PCPs. The tab integrates data from a legacy ADT (admission, discharge, transfer) system and other sources, but it's based primarily on Sunrise Clinical Manager's health data repository and computerized physician order entry (CPOE), lab and imaging data. Using an intuitive graphical user interface, ED physicians can now select from a list of approximately 850 ED discharge diagnoses displayed in a convenient tree structure. (See http://www.eclipsys.com/CS/Providence.htm for screen captures of the application.)

"ObjectsPlus allowed us to create links between the diagnosis categories and specific procedures, prescriptions and follow-ups," said Grafstein. "It makes it easy for physicians to quickly find what they are looking for." A newly-created End-of-Visit button sends the discharge summary to the treating physician, generates a printout for the patient, and prints a prescription list. If the patient has no PCP, an alert pops up along with care options, enabling the physician to make an immediate referral.

The Benefits

The ED discharge application has been on-line since July 2005. "ObjectsPlus worked brilliantly," Grafstein said. "The Discharge Summary tab has the look and feel of Sunrise Clinical Manager. It looks like it's part of the program." By November, 2005, all 25 full-time ED physicians were regularly using the discharge summary, with a completion rate of 95 percent. Mount St. Joseph's Hospital, another Providence Health Care facility, is going live with the discharge summary early in 2006.

"The feedback has been very positive," Grafstein said. "Our physicians like the prescription writing functionality and the fact that they only have to click a single button." Most of all, ObjectsPlus/XA helped St. Paul's achieve its goal of a seamless connection with the area's PCPs. "It's been very gratifying to hear from the primary care physicians how pleased they are to get information about their patients," Grafstein said. Community physicians are now better prepared for follow-up visits, and they no longer need to track down ED clinicians. The result is better patient care — without creating extra work for St. Paul's clinicians.

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About St. Paul's Hospital

St. Paul's Hospital is a cornerstone of Providence Health Care, a six-facility Catholic health care community in Vancouver, British Columbia. Located in downtown Vancouver, St. Paul's is an acute care, academic and research hospital with over 500 beds and an emergency department that sees some 60,000 patients a year. Home to world-class cardiovascular and HIV programs, St. Paul's has a history of providing care to disadvantaged urban populations. For more information visit www.providencehealthcare.org.

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