Eclipsys EHR Success Case Studies

Improved Operational Efficiency with an Electronic Health Record
Hartford Hospital increases revenue, eliminates duplicate documentation, improves safety and satisfaction

Business issue
Hartford Hospital Respiratory Department documented and charged on a separate system from the Hospital’s HIS. Therapists were double-documenting in order to share information with other caregivers and were not receiving prompt notification for patient care orders.

Eclipsys Products/Services
- Sunrise™ Clinical Manager
- Sunrise Record Manager
- Sunrise Decision Support Manager

About Hartford Hospital
Hartford Hospital is a four-hospital medical center with 867 licensed beds, 106 respiratory care practitioners conducting 290,000 patient services per year.

Web site: http://www.harthosp.org

About Eclipsys Corporation
Eclipsys is the recognized leader in providing knowledge-driven, process-improving software and services to major healthcare providers, including integrated delivery networks, medical centers and hospitals.

Web site: www.eclipsys.com

For more information, contact: outcomes@eclipsys.com

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Solution
Hartford Hospital’s Respiratory Therapists utilize Sunrise Clinical Manager’s Charger and Worklist Manager to support their multi-disciplinary workflow, streamline therapy and equipment charging and improve documentation efficiency.

Financial – Revenue
- The Respiratory Therapy department experienced a 154% increase in billable volume between Q1 and Q2 of 2004 after implementing the Sunrise Clinical Manager.

- Gross revenue for the RT department increased 13.7% from $12.4 M in FY 2003 to $14.1 M in FY 2004.

Productivity / Process Efficiency
- Therapists can document from any workstation in the hospital.

- Eliminated handheld devices used prior to the Sunrise Clinical Manager rollout for charge capture.

- Easier, faster and more efficient documentation allows the therapists to spend more time with their patients and increases therapist and patient satisfaction.

Patient Safety
- Respiratory therapists receive pages when orders are entered and can access orders online from any workstation in the hospital, reducing the number of lost or delayed orders.

- Orders automatically generate tasks on the worklist manager, eliminating “dropped” patients or treatments.

- Clinical data is all stored in one location in Sunrise Clinical Manager, ensuring that critical patient information is available.
Health First automates their surgical workflows to improve operational efficiency and reduce costs

**Business issue**
Health First realized that all three hospitals forming the core of the system had opportunities to improve in the surgical arena. Paper-based systems were inadequate to improve management of surgical operations and there was very little standardization across the hospitals.

**Eclipsys Product/Services**
- Sunrise™ Surgical Manager, powered by Surgical Information Systems (SIS)
- Sunrise Clinical Manager

**About Health First**
The core entities within Health First are three not-for-profit hospitals; Cape Canaveral Hospital, Holmes Regional Medical Center and Palm Bay Community Hospital. Other services include outpatient centers; Brevard County’s only trauma center; home care; specialized programs for cancer, diabetes, heart, stroke, and rehabilitative services; a 32-member medical group; three fitness centers; and Medicare+ Choice, commercial POS, and commercial health plans. Working together in a seamless system, Health First is devoted to integration of quality healthcare services and state-of-the-art technology and information networks.

Web site: [www.health-first.org](http://www.health-first.org)

**Solution**
Health First used Sunrise Surgical Manager, powered by Surgical Information Systems (SIS), to conduct a system-enabled redesign of its surgical workflows, including registration, pre-admission testing, pre-operative services, OR and PACU to enhance efficiency and improve quality. The result is improved documentation and faster, more effective processes.

**Patient Safety**
- Increased consistency of medication documentation and eliminated unapproved abbreviations and transcription errors at all hospitals.
- Increased the percentage of cases meeting the National Patient Safety Goals for “time-outs” to verify case information to 100 percent and the signing of supply counts to 95 percent at Cape Canaveral Hospital.

**Quality of Care**
- Improved documentation quality of Surgical Infection Prevention protocols by 64 percent from March 2004 through June 2004 at Holmes Regional Medical Center.
- Improved documentation for all case types by creating Care Plans and building scripts to facilitate accurate and complete documentation across the sites.
- Significantly improved documentation compliance at Cape Canaveral Hospital:
  - Increased documentation of pain management discharge instructions from zero percent to 83 percent.
  - Improved the quality of specimen documentation by 71 percent.
  - Increased documenting review of advance directives by 52 percent.
  - Increased documentation of pain assessment/reassessment with analgesic administration in PACU by 82 percent.
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For more information, contact: [documented.outcomes@eclipsys.com](mailto:documented.outcomes@eclipsys.com)

About Surgical Information Systems
Surgical Information Systems is dedicated to improving the quality, organization, delivery and outcomes of surgery through information technology. With the most comprehensive solution suite covering the entire perioperative continuum, SIS delivers all of the clinical and financial information to the right people at the right time.
Web site: [www.orsoftware.com](http://www.orsoftware.com)

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### Financial – Cost Reduction
- Eliminated 0.5 FTE by redesigning pharmacist workflows related to manual updating of preference cards and allergy checking at Holmes Regional Medical Center. Annual savings realized $55,455.
- Eliminated 0.5 FTEs at Palm Bay Community by ending post-op data entry. Annual savings realized $10,234.
- Cape Canaveral Hospital eliminated FTEs in several areas due to improved workflows with an annual savings of over $92,000:
  - 2 FTEs in scheduling despite an increase in data capture and adding payroll responsibilities to the position.
  - One surgical secretary FTE when combining inpatient and ambulatory.
  - 1.5 support FTEs in the Pain Clinic by eliminating post op data entry.
- Saving over $2,700 per month by reducing paper forms across the three hospitals.

### Productivity and Process Efficiency
- Increased the percentage of First Cases starting on time from 50 percent to 83 percent at Cape Canaveral Hospital.
- Improved latex allergy documentation, leading to more efficient room and supply preparation and a reduction in redundant activities at Cape Canaveral Hospital.
- Reduced orientation time across all hospital by approximately 8 hours when staff floats from one area or facility to another by having a common system.
- Increased the percentage of cross-trained nursing staff from 31 percent (11 out of 35) to 74 percent (26 out of 35) making it easier to match staffing levels with need across areas at Cape Canaveral.
- Significantly decreased the amount of time dedicated to maintaining preference cards at all hospitals. Global changes, such as switching from one vendor to another, can be automatically changed on all affected preference cards. Previously, each preference card had to be adjusted individually.
- Saved nurses at Holmes Regional Medical Center time by eliminating the need for them to update the MAR used by nursing floors. A hard copy MAR is sent to the floors and is attached to the chart.
- Reduced pre-admit registration time by approximately 50 percent, or 15 minutes, for repeat patients and 10 minutes for new patients across the three hospitals.
The Johns Hopkins Hospital and Health System improves documentation, contributing to increased revenue and improved satisfaction

Business issue
Johns Hopkins Hospital was experiencing undesirable results using manual, paper-based systems. As a result, they had difficulty maintaining complete and accurate documentation.

Eclipsys Products/Services
- Sunrise™ Critical Care
- Sunrise Decision Support Manager
- Sunrise Record Manager

About Johns Hopkins Hospital
For more than a century, Johns Hopkins has been recognized as a leader in patient care, medical research and teaching. Today, Johns Hopkins Medicine is known for its excellent faculty, nurses and staff specializing in every aspect of medical care. The Johns Hopkins Health System includes three acute-care hospitals: Johns Hopkins Hospital, Johns Hopkins Bayview Medical Center and Howard County General Hospital. It also includes programs for local, national and international patient activities.

Web site: www.hopkinsmedicine.org/hopkinshospital/

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Solution
Johns Hopkins Hospital effectively used Eclipsys’ clinical solutions to automate their documentation process. This helped streamline workflows, resulting in positive patient care and revenue outcomes.

Financial – Revenue
- Retained over $1 million a year in payer revenue as a result of improved documentation and an improved ability to produce documentation as proof of services rendered.

Productivity and Process Efficiency
- Increased compliance with regulatory requirements. This has reduced data collection and preparation time.
- Facilitated compliant charting of the sixth vital sign (pain).

Quality of Care
- Improved the quality and quantity of documentation due to efficiency enhancements in the charting process.
- Improved continuity of “home” medications (i.e., drugs patients were taking prior to admission) that were discontinued during a stay in the ICU due to contraindications with drugs prescribed while in the ICU.
- Developed real-time notices to identify patients that qualify for a study or investigational group, such as sepsis. This increased the list of potential study participants while decreasing the time spent identifying them.
- Used the clinical data repository (CDR) to quantify and identify patient safety indicators including some of the key indicators identified by the Quantum Leap consortium of VHA hospitals.

Satisfaction
- Increased physician satisfaction through the facilitation of better documentation to support pro-fee billing on some units.
- Increased nursing satisfaction with electronic charting of patient information.
Sarasota Memorial Hospital improves patient care and enhances nursing workflows with Sunrise Clinical Manager

Solution

Sarasota Memorial Hospital began using Sunrise Clinical Manager as a tool to redesign its workflows and improve quality and efficiency as early as 1999. Since that time, they have replaced a significant amount of paper documentation with electronic forms and have taken advantage of the benefits of an electronic system, such as simultaneous access by multiple providers and automated messaging via e-mail or pager.

Quality of Care

- Increased the use of less restrictive restraints, such as mittens, by creating physician orders for restraints and revising a restraint flowsheet as part of a nursing-led effort to adhere to JCAHO’s recommendation to reduce the use of restraints.

- Improved consistency of care and documentation for patients at risk of falling by creating a Fall Risk Assessment within Clinical Manager. The results of the assessment indicate which nursing restraint protocol should be utilized, leading to more consistent patient care and documentation.

- Improved nursing documentation. Audits of an average of 343 charts per month covering 19 nursing units show the following areas of improvement:
  - Increased chart compliance with all Review Items, from 35 percent to 71 percent, an improvement of 100 percent.
  - Completed Braden Scale for Skin Assessments, which began at approximately 86 percent, but are now consistently in the high 90-percent range.
  - Improved Plan of Care/Problem List Dynamically Updated with Change in Patient Condition from an initial score of 85 percent to a consistent score of nearly 100 percent.
  - Improved Documentation of Patient Education from 75 percent to virtually 100 percent. The 90-percent range was reached and has been maintained since the eighth month of data collection.
  - Improved an already strong Documentation of Pain Assessments Every 4 Hours, which was in the 80-percent range at the beginning of the audit, to the 90-percent range. Compliance has not dipped below 88 percent for well over 20 months.
Financial – Cost
• Saved at least $289,520 versus the national average and $727,936 versus the Florida average due to reduced turnover rates in the year 2002.
  o Note: Based on differences in open positions times $11,000 (direct cost of replacing RNs as reported by the American Organization of Nurse Executives in 2002).
• Saved $122,251 to date by replacing paper flowsheets, assessments and other documentation.
• Avoiding approximately $135,000 in annual Information Technology (IT) department per diem staff costs by redesigning the role of the Health Unit Coordinator (HUC), which now includes PC and printer maintenance.
• Saving approximately $4,500 in trainer costs annually by using Sunrise e-Learning to train students, agency and other outside staff.

Productivity/Process Efficiency
• Eliminated double documentation of restraint orders, eliminating the need to send a paper report to Decision Support and document in the notes. The electronic order now includes the reason for the restraint.
• Saving approximately 3,000 phone calls per month by eliminating the need for nurses to page or call the department when Respiratory Therapy orders were written. An auto-page was set up using an MLM, which eliminated that step.
• Reduced FTEs in Case Management while increasing the number of reviews completed.
  o Greatly improved the process for managing concurrent denials by allowing clinicians to review charts from their office or any other location within the hospital.
  o Decreased the number of concurrent denials due to better management of avoidable days.
  o Improved caseworker effectiveness by providing access to the full chart, allowing them to score workloads based on specified criteria and review cases with physician advisors.
  o Enhanced the efficiency of doing trend analyses. Before Clinical Manager, caseworkers gathered data from paper charts and manually entered it into Excel.

Satisfaction
• Greatly improved satisfaction, as evidenced by the voluntary increase in utilization by nursing and ancillary staffs. Electronic documentation is used virtually exclusively for most clinical documentation, including flowsheets, knowledge trees and free text notes.
• Nurses’ responses on a satisfaction survey included comments that they are saving time, not missing orders and providing better and safer care. Improved communication with doctors and other clinicians and easy access to legible information were mentioned as key benefits of Clinical Manager.
Springhill Medical Center improves quality of care, patient satisfaction and operating efficiency using Sunrise ED Manager

Solution
Springhill Medical Center activated Sunrise ED Manager to improve quality of care, workflow and patient satisfaction in the emergency department. Utilization of system features such as triage documentation, electronic tracking board and order sets provided clinicians with tools to efficiently and safely deliver care to patients.

Productivity & Process Efficiency
- Reduced patient wait times on average by one hour utilizing quick registration and triage documentation.
- Reduce average time patients wait to be seen by a physician by 30 minutes. Physicians receive an electronic alert on the tracking board when a patient is waiting to be seen, providing visually cues to manage throughput.
- Reduced overall length of stay per patient by an average 60 minutes since the activation of ED Manager.
- Managed 100% increase in patient volume during Hurricane Katrina, efficiently and safely using ED Manager.

Financial – Revenue Enhancement
- Improved physician billing process by eliminating the risk of lost charts and providing electronic access to documentation necessary to charge for the appropriate level of care.

Quality of Care
- Improved documentation for JCAHO core measures by using electronic forms created in ED manager to document exceptions to core measure guidelines.
- Achieved 70% increase in Press Ganey scores one year after activation of ED Manager.

Effective Use of Technology
- 100% of ED physicians utilize ED Manager for computerized physician order entry.
  - Three months post activation, 60% of orders were entered directly in ED Manager; 12 months post activation, 85% of orders are entered directly in ED Manager.
- 15% increase in the number of patients seen per day by physicians using evidence-based order sets.