

Summa Akron City Hospital gains 206% ROI with Centricity Perioperative



Client Profile

- 488-bed acute care hospital
- Performs over 12,000 surgical and operative procedures annually
- Part of Summa Health System, one of the largest Integrated Healthcare Delivery Systems in Ohio

Goals

Desiring a streamlined process, improved supply cost management, and improved revenue realization, Summa Akron City Hospital, Akron, Ohio, sought the capture of accurate data to support often-difficult business and clinical practice decisions. Without an electronic solution, it was labor-intensive and difficult to obtain the information it required.

Solution

By enhancing the use of Centricity* Perioperative through the implementation of clinical documentation, Summa Akron City Hospital now has a comprehensive surgery management and electronic medical record solution.

Results

- Projected, cumulative five-year net benefit of \$1,143,020, with an ROI of 206% and payback of 10 months
- Cumulative projected five-year increase in revenue of \$1,221,020
- Projected, cumulative five-year benefit of \$477,000 in productivity and workflow improvements
- 17% average increase in charge units and 26% increase in total charges in the first year at Summa Akron City Hospital
- 4.33% per case increase in reimbursements
- Improved ability to meet government and third-party payers' requirements with fewer rejected claims using 40% fewer resources
- Reduction, by half, of the time needed to complete bi-annual inventory



“With Centricity Perioperative’s Clinical Documentation, we have significantly improved our billing and inventory functionality with fewer dedicated resources.”

*Rob McCulloch
Senior Application Analyst
Clinical Information Systems
Summa Akron City Hospital*

The perioperative department is one of the major financial drivers responsible for the long-term success and sustainability of a healthcare facility. Perioperative services often account for more than 50 percent of a healthcare facility’s margin, as well as 30 to 40 percent of its expense. In an environment of healthcare reform, economic uncertainty, and the continued push toward an integrated electronic health record (EHR), these departments face major capital and operational budget pressures. Even minor changes to reimbursement can significantly impact a surgical service’s—and organization’s—profitability.

Proactively addressing these challenges depends on having access to the right data to help support business and patient services decisions. This helps identify opportunities for improvement that optimize workflow. But at Summa Akron City Hospital, this information was difficult to obtain, as data had to be manually extracted and analyzed from multiple locations — including material management; scheduling; and admissions, discharge and transfers (ADT) systems.

A robust, integrated, and optimized perioperative information system would help ensure access to the operational and clinical data that the perioperative department needed. Summa Akron City Hospital added clinical documentation features with integrated clinical and resource logic to its Centricity Perioperative system to create a comprehensive perioperative information and EHR solution.

Within one year of going live with the clinical documentation features, Summa Akron City Hospital realized considerable operational improvements and increased staff satisfaction. “With Centricity Perioperative’s clinical documentation features, we have significantly improved our billing features and inventory functionality with fewer dedicated resources,” says Rob McCulloch, Senior Application Analyst, Clinical Information Systems, Summa Akron City Hospital.

Reduced inventory costs

Prior to implementing Centricity Perioperative’s clinical documentation features, supply management was difficult and labor intensive. Over time, the item file/resource catalog had become corrupted. Many items were missing or duplicated, some products were inactive, and descriptions were

incomplete or inaccurate. Using Centricity Perioperative and adopting a standard nomenclature, Summa Akron City Hospital was able to remove thousands of duplicate or inactive items, providing for a more accurate and lean item master/resource catalog. Now Summa Akron City Hospital can take a snapshot of its inventory—including stock, non-stock, and consignment resources—reducing, by half, the time it normally takes to complete a bi-annual inventory count.

Revising the resource catalog also helped improve the supply procurement process, which had been segmented in individual department silos. Working with the materials management system, procurement of inventory items along with the correct unit and cost can now be easily identified and maintained using a standard Health Level Seven (HL7) interface. Having access to accurate cost and procurement information helps reduce the time needed to assign CDM and HICPS codes, as well as virtually eliminating charge transcription and legibility errors.

Automated perioperative pathway and procedure-specific record templates, an integrated resource catalog, doctor’s preference cards, and auto-populated clinical consumption tracking have increased nursing staff satisfaction. With increased preference card and casepick/costing accuracy, nurses spend less time on non-clinical activities and more time on patient-specific activities.

Charge by exception

The clinical documentation features use clinical logic to optimize the documentation and charge-by-exception processes. Using the automated charge-by-exception utilities, perioperative services has reduced documentation time and post-case review and audit, while more efficiently meeting regulatory and professional record requirements.

What used to require two staff members now only requires one. The hospital was able to allocate these key resources to other roles for additional operational improvements. “Our inventory and billing teams are able to work smarter and faster, while providing more accurate reports,” says Ron Peterson, RN, Billing Specialist/Supply Supervisor. “We better meet government requirements and have fewer rejected claims using far fewer resources.”

Summa Akron City Hospital has reduced the time it takes to complete a bi-annual inventory count by 50%.

Calculating total procedure cost

Centricity Perioperative calculates total procedure cost—including breakouts of supplies and capital equipment—for a more accurate accounting of items used during a procedure. It also provides point-to-point implant and tissue tracking capabilities, eliminating the need for a third-party tissue tracking application.

Nurses no longer have to guess about what items should be charged or try to remember what was used during a procedure. The information system automatically records all chargeable items using intelligent charge rules. These are based on facility requirements and can include department, facility inpatient/outpatient, and procedure parameters taken directly from the integrated scheduling and nursing record.

Improved reporting

Centricity Perioperative's robust reporting capabilities have also spurred improvement. "We were able to identify ways to optimize the schedule and reduce overtime by implementing opportunities identified through the reporting tools," says Rose Gearhart, Senior Application Analyst, Surgical Services. "We also have been able to identify and improve efficiencies such as first case starts, turnover times, and the ability to audit time out activities, which went from minimal manual audits to over 700 electronic reviews."

In addition to standard reports, Summa Akron City Hospital also benefited from the user-friendly SAP® BusinessObjects™ (BOA) Online Analytics Processing (OLAP) reporting tool provided and supported in conjunction with Centricity

Perioperative. BOA reporting intelligence provides usable, accessible data to drive both operational and clinical decisions.

"Using the robust reporting utilities, administrators can review data and trends," says McCulloch. "Data collected is unbiased and can be used to justify improvements in workflow, staffing, and resource utilization."

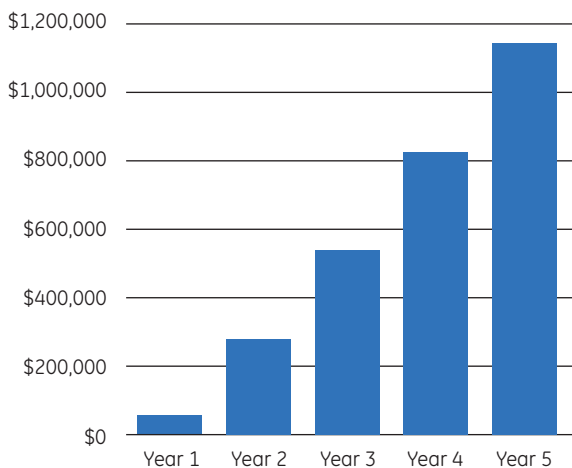
Centricity Perioperative's comprehensive reporting tools helped Summa Akron City Hospital gain efficiencies by reviewing the total costs of like procedures and working with doctors and payers to ensure consistent service delivery and billing. By querying multiple parameters, Summa Akron City Hospital can identify the true average case costing of a procedure—even for patients not covered by insurance. This may become even more important as healthcare insurance reform may have a significant impact on which procedures and services drive operational and clinical decisions.

With the ability to capture data and to use the data for actual process improvement, Summa Akron City Hospital feels Centricity Perioperative has ultimately paid for itself. Since implementation, Centricity Perioperative has helped maximize surgical suite use, cut costs, reduced resource allocation, increased charge capture, and fostered other clinical and service improvements.

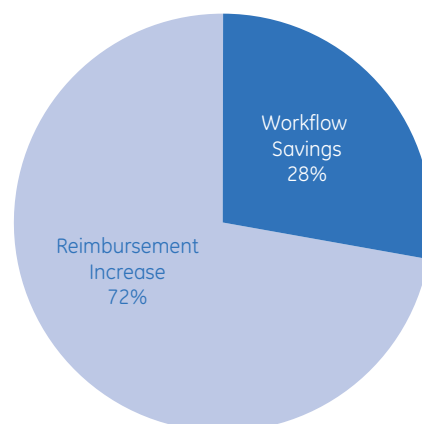
The bottom line for Summa Akron City Hospital—\$1.1 million in net benefits.

By implementing clinical documentation features in Centricity Perioperative, Summa Akron City Hospital optimized billing and inventory using fewer dedicated resources, while realizing improved charge and revenue capture.

Cumulative Net Benefit



Cumulative Five-Year Net Benefit = \$1,143,020



Results summary

- Increasing reimbursements—an average of 4.33% per case
- Improving charge capture in the Specialty Surgery Center—increasing the average charge units by 36.8% per case for an increase in total charges of over 16% per case
- Realizing an average increase of 17% in charge units and an increase of over 26% in total charges in the first year of implementation at Summa Akron City Hospital
- Better meeting government and third-party payer requirements and having fewer rejected claims using 40% fewer resources
- Completing bi-annual inventory in 50% less time

As a result of the increased reimbursements and charge capture, the hospital will see a projected, cumulative five-year increase in revenue of \$1,221,020. In addition, moving from a paper-intensive workflow to an integrated electronic process leads to an improved workflow and increased productivity, resulting in a projected, cumulative five-year benefit of \$477,000.

Overall, Summa Akron City Hospital will see a projected, cumulative five-year net benefit of \$1,143,020, with a return on investment of 206 percent and a payback period of 10 months. The following chart provides a detailed, five-year analysis.

Project summary							
Return on Investment	206%						
Payback (in months)	10						
Cumulative Net Value	\$1,143,020						
Net Present Value	\$811,735						
Project costs	Start up	Year 1	Year 2	Year 3	Year 4	Year 5	TOTAL
Investment	\$150,000						\$150,000
Ongoing costs		\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$405,000
Total project costs	\$150,000	\$81,000	\$81,000	\$81,000	\$81,000	\$81,000	\$555,000
Benefits	Start up	Year 1	Year 2	Year 3	Year 4	Year 5	
Reimbursement increase	\$200,000	\$220,000	\$242,000	\$266,200	\$292,820	\$1,221,020	
Workflow savings	\$90,000	\$92,700	\$95,400	\$98,100	\$100,800	\$477,000	
Total benefits	\$290,000	\$312,700	\$337,400	\$364,300	\$393,620	\$1,698,020	
Financial analysis	Start up	Year 1	Year 2	Year 3	Year 4	Year 5	
Net Value	-\$150,000	\$209,000	\$231,700	\$256,400	\$283,300	\$312,620	
Cumulative Net Value	-\$150,000	\$59,000	\$290,700	\$547,100	\$830,400	\$1,143,020	

Return on Investment (ROI) is the percentage return expected over a specified period of time. ROI is the total benefit divided by the total costs. This ROI metric is good for assessing the multiplier provided by the benefits relative to the total investment and costs.

Net Present Value (NPV) represents the cumulative present value of the expected return of a project over a specified period of time minus the initial costs of the project. This figure provides visibility on the actual value of a project, taking into consideration the time value of money—the ongoing benefit of a project in today's money. NPV tells you the magnitude of the project and if the project generates a profit.

Payback Period (or breakeven) is the timeframe it takes for the project to yield a positive cumulative cash flow. Payback period is a key measurement of risk but does not take into account cash flows after the payback period.

ROI, NPV and Payback should be used in conjunction to understand the rate, size and timing of the return.

Net Value (or Net Benefit) is the benefit delivered to the organization for the investment made in the project. Net Value is calculated by taking the total benefit minus the project costs.

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