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Stoltenberg Consulting behaves differently, simplifying healthcare technology decisions by

- ◆ listening and aligning client needs with the right consultants
- ◆ evaluating those needs and recommending solutions and options - whether technology, process, staffing and/or systems - consistently proactive on the client's behalf
- ◆ providing vendor assessment and selection support - always taking ownership in client outcomes

Stoltenberg Consulting's team provides strategic, comprehensive, tailor-made guidance and on-site support to maximize the system, applying application and process redesign expertise from our bench strength. Our flexible, results-based contracts focus on the client and their goals: maximum productivity to increase revenue and improve patient care.

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UNIVERSITY OF SOUTH ALABAMA HEALTH SYSTEM

Client Case Study

University of South Alabama Health System Implements More than 49 Order Sets in Seven Months

Stoltenberg Consulting Accelerates USA's Order Set Development, Testing and Implementation Process

Shirley Woodhead, the Orders and Order Set Coordinator with Pittsburgh-based Stoltenberg Consulting, arrived at the Mobile-based, 406-bed University of South Alabama (USA) Medical Center in January 2012 to help implement computerized physician order entry (CPOE) order sets. Working onsite for more than nine months as part of a six-person team, Woodhead coordinated activities with USA analysts in the IT department. Other Stoltenberg consultants included a Meaningful Use expert and four builders to ensure USA's order sets were designed, built and tested according to industry standards.

About the CHALLENGE...

Previously, the hospital had contracted with Siemens to implement an electronic medical record (EMR) system featuring CPOE, nursing documentation and interfaces with laboratory and radiology. In response to Stage 1 meaningful use (MU) requirements, USA was eager to have physicians—not nurses—enter their own orders, thereby qualifying for Stage 1 MU incentives. USA is scheduled to complete attestation for Stage 1 meaningful use in December of 2012.

"Order sets were the primary mechanism available for getting physicians involved in CPOE and making headway on meaningful use," says Clay. "With Stoltenberg, we quickly converted order sets from paper to electronic formats, eliminating a significant amount of trial and error while moving toward an evidence-based standard of care."

Among the first order set users were some 30 physicians at USA's Medical Center, including residents and Internal Medicine physicians. Stoltenberg led the development of 37 order sets for the Medical Center, as well as 12 order sets created for the Women's and Children's hospital. While other patients outside the main order set diagnosis were admitted, physicians were able to enter orders individually on all patients, as well. Once the admission order set was used, physicians were also able to enter daily orders individually as needed for patients.

Involvement in order sets was multifaceted. One physician developed a complete group of order sets for the Internal Medicine Specialty on paper and then worked with Clay and her team to convert them into electronic order sets. Another physician who developed the Obstetrical and Pediatric order sets invited input from nurses, who then validated the accuracy of information during the work sessions. On other occasions, meetings included staff from lab, radiology and pharmacy to participate in order set review.

As of late-2012, Stoltenberg is still in the process of building, reviewing and testing additional order sets, a process that can take as long as a day to review, update, and test one to two order sets at a time. To test, Stoltenberg consultants sign into the Soarian system as if they were physicians, and evaluate order set accuracy, correct functionality, and ease of use. They also verify if interfaced systems such as laboratory, radiology and pharmacy have received the orders quickly and accurately. If problems occur, the Stoltenberg and hospital IT teams work together to modify and restructure the order set until it is correct and approved. Stoltenberg is also leading more work sessions in the review and design of more than 24 additional Surgical Service Order Sets.

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What the client says about Stoltenberg Consulting...

"We had worked previously with Stoltenberg and knew they had the meaningful use and order set implementation resources to get USA over some difficult humps in order set design, conversion and implementation. Stoltenberg has provided dedicated resources with top experience in our areas of greatest need, including meaningful use."

Tracy Clay
Project Manager, Soarian Clinicals,
and Coordinator, Clinical Systems,
Health System Information Services
USA Health System

We Assist Our Clients With...

| | |
|-------------------------|---------------------------|
| Strategic Planning | Current State Assessments |
| Project Management | Change Management |
| Clinical Transformation | Integration / Interfaces |
| Process Improvement | Content Matter Experts |
| Staff Augmentation | Application Development |
| System Selection | Contract Negotiations |
| ...and more | |

About the SOLUTION...

To-date, the Medical Center and Women's and Children's hospital have already implemented some 49 order sets, with an emphasis on patient admission workflow. For example, a heart failure order set prompts a physician for input on the admitting diagnosis, monitoring requirements, patient activities, vital sign data, education and medications. Order sets are carefully built to provide patient safety, by removing the possibility of ordering contraindicated medications, etc.

Internal medicine order sets are high on USA's agenda with more than 40 additional order sets requested to bring live from physicians; the hospital divided these newer order sets into four groups. Now undergoing testing and debugging, the first two groups are slated for production in October, with the second two groups scheduled for November. Surgery order sets will go into production at the beginning of 2013.

The hospital also designed their education for the order entry training to be completed online by nurses, unit clerks, ancillary departments, and physicians. That involves completion of multiple modules via the hospital intranet. Physicians must complete training in exchange for an ID to gain access to the system. Moreover, an 11-person physician advisory group continues to meet semimonthly to ask questions and verbalize concerns about order set use.

LESSONS LEARNED

Clay and Woodhead offer this advice to hospitals working to expand and refine their use of order sets:

- Prepare for disruptions, including vendor staff turnover.
- Flow chart the workflow process of order entry in all areas in advance.
- Develop a plan for the development, testing and implementation of orders and order sets.
- Use an interdisciplinary committee to ensure there is a match between a paper-based order set and prevailing practice.
- Begin with order sets that are already on paper and in use.
- Review orders in order sets for clarity and ability to translate into electronic orders before commencing order set building.
- Use physicians to conduct a review of paper order sets, followed by verification from nurses and ancillaries.
- Tap consultants to provide insight and best practices regarding order set review, building and testing.
- Use clinicians such as nurses to serve as advisors to the IT department.
- Engage in classroom hands-on teaching to supplement online training.

"Electronic order sets will make care at USA more efficient because physicians won't feel compelled to hunt down charts in a nursing unit or notebook," says Clay. "As soon as a physician hits 'sign,' they know their order has reached the pharmacy or lab, cutting down on time consuming faxes and inappropriate use of unit clerks. By receiving timely alerts on dangerous drug interactions, physicians can act without having to wait for a call from the pharmacy."