

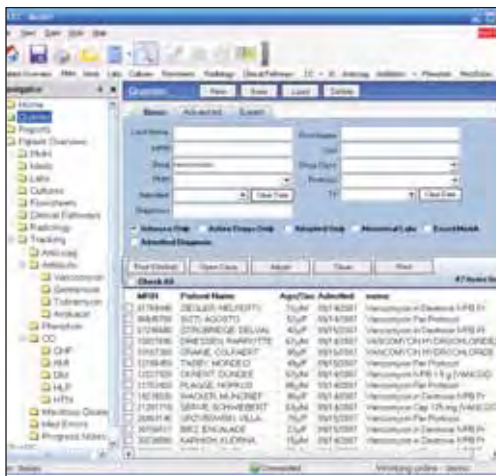


Medici from Asolva, Inc.

The 325-bed Kaiser Permanente Santa Clara Medical Center has an average patient census of 250. Due to an ever-increasing number of standards and higher levels of regulatory scrutiny, we constantly assess the pharmacy department's performance to identify opportunities for improvement and raise our standards of excellence. Although we plan to implement CPOE and bar coded medication administration (BCMA) in 2009, in the meantime, we wanted to find an application that could capture our clinical activities in a more organized manner and electronically share that information within the pharmacy department.

System Requirements

To ensure the continuity of high-quality care and patient safety we needed a more effective hand-off system for clinical information between shifts. We wanted an application that would provide a central location for loading and sharing information. With the rising demand for pharmacy services in multiple disciplines, we needed to find a better way to manage our resources and use real-time patient care information, rather than intuition, to make clinical decisions. It is essential to focus on patients who can benefit the most from clinical pharmacy services, while supporting more care areas. Because convincing data is needed to effect change and practice evidence-based medicine, we needed a tool that would enable us to spot trends and analyze medication utilization.



System Development

Asolva was the contracted program developer for a regional project, in which Kaiser Permanente participated, that focused on developing electronic tools to capture evidence of success in achieving regulatory compliance. The scope of the project was later expanded to include the development of Medici, an application to capture the cost and effect of pharmacy clinical programs and to enable information sharing within the Kaiser Permanente hospital network. Because of our comprehensive clinical pharmacy program, Santa Clara Medical Center was selected as a pilot site. We soon realized Medici would enable us to meet our aforementioned goals.

Features and Functions

The Web-based application can be accessed from multiple platforms, such as tablet and desktop PCs, allowing pharmacists to use it on the nursing floor and in the pharmacy. Medici harvests patient information from our pharmacy information system and employs a user interface that meets the workflow needs of our clinical pharmacists as they perform in-depth medication profile reviews. Providing patient information at the point of care, Medici enables our pharmacists' to view patient medical profiles by protocols; view data, such as lab results and medical records, from other hospital information systems; and document pharmacist interventions and medication monitoring progress with user-entered or template-driven notes.


Prior to implementing Medici, our pharmacists used a paper-based system to capture interventions, review comments, and share information among themselves. Obviously, this system had drawbacks in terms of recordkeeping and storage, as well as information sharing. Medici enables the electronic documentation of interventions – with information on progress notes and clinical pathways, for instance, which are then stored on and accessible from a centralized server.


Medici's pre-defined alerts for renal insufficiency, non-targeted INR (internationalized normalized ratio), deviated drug therapeutic levels, or specific drug classes save us the time we used to spend prowling through hospital census reports to identify patients in need of clinical pharmacy services. Medici allows our pharmacists to focus on high-priority patients and care for more patients in the same amount of time – contributing to a higher level of clinical pharmacist productivity.

Medici's query feature allows us to perform in-depth data mining with ad hoc or routine reports. We regularly run intervention, patient census, patient status, recently discontinued IV, and antibiotic surveillance reports, and have run ad hoc medication usage reports based on an age group, i.e. over 65, or medication class. Queried results can be exported to a spreadsheet for further analysis. We can view data from as far back as the inception of the application or review current data in real time. Pharmacy management uses these reports to assess our needs and better assign pharmacy's resources. For instance, we use Medici reports to quantify our clinical pharmacists' workload and the fulfillment of our five basic services/or best practices – anticoagulation monitoring, renal dosing, injectable-to-oral conversions, aminoglycoside monitoring, and vancomycin monitoring. Medici also allows our pharmacists to share information within the department and with other Kaiser hospitals in real time. By entering the patient medical record number into the application with an approved log-in, the user can view all documented information.

Conclusion

After implementing Medici, we requested feedback from clinical pharmacists across different specialties, including internal medicine, chronic care, intensive care, and neonatal and pediatric intensive care, as to what additional documentation tools, templates, and trigger alerts would assist them in providing services more efficiently. Based on their feedback, Asolva revamped Medici to meet our workflow and documentation needs. The company continues to provide ongoing support, marking our experience with the Medici system as continually positive. ■

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