

Rubbermaid Medical Marketing
Case Study

Cookeville Regional Medical Center
Cookeville, TN



Mobile carts help ease move to electronic medical records

During a facility renovation and transition to an EMR system, Cookeville Regional selects mobile carts from Rubbermaid Medical Solutions to enhance clinical workflow and medication management

As it took steps to improve quality of care several years ago, Cookeville Regional Medical Center had to overcome a range of clinical workflow and medication management challenges.

A 247-bed referral center serving middle Tennessee, the hospital had always handled clinical documentation manually using paper charts. In early 2008, however, Cookeville was about to open a new medical tower as part of a facility renovation and, at the same time, transition to electronic medical records (EMR) — with an electronic medication administration record (eMAR) system to follow.

With the systems placing demands on Cookeville's clinical staff, the hospital looked for a mobile computer and medication cart that would give it flexibility at the point of care and minimize the physical demands of a more decentralized workflow.

The Challenge

Cookeville, like an increasing number of U.S. hospitals, undertook these initiatives as a way to improve patient safety through enhanced access to more accurate, more comprehensive and timelier information. Staff members were aware that these clinical systems, though highly beneficial, were not necessarily measures that would save time and boost nurse productivity.

On the contrary, unless special efforts were made, nurses and other clinicians would lose valuable time working through software interfaces or tracking down equipment.

“We were committed to going paperless and improving medication administration for the clinical impact,” says Amanda Burgess, RN, BSN, clinical informatics manager. “But the layout of the new facility and the additional structure around documentation and medication were going to affect our clinicians. So we wanted to redesign our clinical workflow and deploy equipment that would prevent any significant drop-off in productivity.”

The newly constructed tower had long corridors, giving Cookeville another reason to reconsider how care givers would chart and how medications would reach the bedside.

Cookeville realized that its choice of mobile cart was an important link in the clinical workflow chain. With more charting, medication scanning, and other activities happening in patients’ rooms, for example, management saw the need to help nurses by minimizing the number of trips they would have to make to the central medication cart.

Depending on the equipment selected for each area of the hospital, a nurse’s or patient care assistant’s job could be either more stressful or more streamlined. To achieve the latter, Cookeville leadership dedicated itself to an exhaustive process to identify the most appropriate computer and medication cart solution.

The Solution

A group of representatives from the information technology, biomedical engineering, nursing, pharmacy, infection control and maintenance departments led the search and selection process. Such broad-based input produced a wide range of cart criteria and requirements spanning clinical, ergonomic and operational issues.

Cart form factor was the most critical consideration in terms of helping Cookeville staff leverage the new EMR system. Reviewers evaluated weight and ease of maneuvering, how well the units fit in patient rooms, stability, and difficulty of adjusting height and position.

Because nurses would be pulling medications at the start of their shifts, the team also evaluated how effectively carts could house and secure medication envelopes.

After the selection committee chose six vendor finalists, Cookeville hosted sessions for nurses to review vendor products, communicate their preferences and suggest additional features for consideration. The nursing staff appreciated that their needs were considered and that they had a voice in the selection.

“We did a tremendous amount of research, so it was exciting when nursing, the IT steering committee and everyone else involved agreed,” says Burgess. “We went with Rubbermaid Medical Solutions (RMS) computer carts for the cancer center and patient intake. In all the other units, we deployed RMS combination computer and medication carts.”

To ease the transition into the new medical tower, project leaders wanted to have clinical documentation in place and establish familiarity with the new cart equipment prior to the move. The hospital’s 750 nurses had the opportunity to learn about the new cart features in a classroom setting, at their own pace, with additional instruction available for new employees through a DVD provided by RMS. To avoid overwhelming the staff, they were trained on the clinical documentation system separately.

In September and October 2008, Cookeville launched its EMR, supported by about 70 computer and medication carts.

“In most cases, it’s ideal to have more face-to-face time with the patient,” explains Burgess. “But sometimes, if a room is crowded or hectic, it’s better for the nurse to have the option of moving out into the hall or another room to complete their charting. That flexibility is good for accuracy and chart completeness as well as for the nurses’ job satisfaction.”

Amanda Burgess,
RN, BSN, Clinical Informatics Manager



The Benefits

"We were apprehensive that clinicians would think of new mobile carts as just one more change they were being required to adapt to," says Burgess. "But they've been very receptive. The new carts are durable, and they have a stable base so they don't tip over. They're easy to maneuver in and out of rooms and push down long corridors when necessary."

The design features and reconfigured workflow eased nurses' transition to the new facility in two ways: by providing adequate flexibility while working with patients in the rooms and by streamlining the medication delivery process. In the ICU, there is a cart in each room and one outside the room. On the floors, each nurse uses one mobile cart for every four or five patients.

"Based on our observations, nurses are charting while at the bedside instead of 15 minutes later at a workstation," says Burgess. "It's changed the role of patient care assistants, too. They're also documenting immediately rather than handwriting paper notes and transcribing that later at the central nursing station." More immediate data capture, Burgess adds, reduces the risk of errors due to manual record-keeping. Patients also appreciate the thorough recordkeeping because they don't have to repeatedly answer the same questions.

The project team did not fully anticipate one advantage of the RMS cart solution—clinicians have taken advantage of the flexibility they have to chart away from the bedside. "In most cases, it's ideal to have more face-to-face time with the patient," explains Burgess. "But sometimes, if a room is crowded or hectic, it's better for the nurse to have the option of moving out into the hall or another room to complete their charting. That flexibility is good for accuracy and chart completeness as well as for the nurses' job satisfaction."

Cookeville's mobile carts have also changed the medication delivery process for the better. The hospital uses a hybrid medication delivery process, by which a robot dispenses drugs in the pharmacy and they are delivered in patient-specific envelopes. Nurses pull the envelopes for all of their patients at the beginning of each shift and store them in one of two large drawers.

"With these carts, nurses don't have to walk back and forth to the main medication cart as much," says Burgess. "That's especially important in the new facility, with its longer hallways. But it also helps us maintain faster medication turnaround times."

Cookeville's choice of RMS carts has been a key to success during a challenging transition. Nurses, respiratory therapists, physical therapists and other healthcare professionals have embraced the equipment and clinical documentation. Even physicians, notorious for their attachment to paper charts, have been receptive.

"Computerized documentation has positively influenced my nursing practice. I feel it has decreased my stress in charting due to the fact that all requirements are there, all I have to do is insert the information," said Brenda Holloway, RN. "Assessments

are much easier to chart, and easier to read than handwritten assessments. Having computerized carts means taking less time to chart information and having more time for patient care."

Cookeville also finds itself with a solid foundation for its planned eMAR, which will go live in November. According to Burgess, the hospital has also begun to consider computerized physician order entry. "There's a lot of competition out there among hospitals," says Burgess. "We're under pressure to improve quality while maintaining a positive patient experience. RMS carts are an important part of our efforts to provide the best possible care."

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