

Rubbermaid Healthcare Marketing

# Case Study

## Norwalk Hospital Norwalk, CT



**A one-two punch:**  
Rubbermaid medication cart improves nursing workflow, enhances patient safety

Looking for strategies that would not only improve patient care but also save time and steps for nurses, Norwalk Hospital turned to Rubbermaid Healthcare medication carts.

### The Challenge

When it was decided to implement a bar code medication administration system in 2006, Norwalk Hospital's primary focus was to improve patient safety. At the same time, leadership recognized the organization had an ideal opportunity to re-evaluate its complete medication delivery process. Over the years, Norwalk Hospital adopted various medication delivery solutions, including multiple generations of mobile carts, to facilitate efficient workflow. Though each version had merit, previous innovations missed the mark in terms of uniting patient safety with optimized nurse workflow.

Nurses at Norwalk Hospital historically administered medications at the patient bedside and then returned to the nurse station for charting. Thirty years ago, Norwalk introduced mobile carts designed to be rolled into the patient room. Though the carts offered a convenient option for storing medication and housing computer terminals, the units proved unwieldy and difficult to push. As a result, nurses left the carts outside the patient room, which required that they constantly walk from the bedside to the hallway for computer access.

Norwalk Hospital leaders initiated a search for an updated solution that was better suited to both nurse and patient needs. With nurses as key-decision makers, Norwalk investigated multiple alternatives, assessing the effect each one had on medication administration workflow.

# The Solution

During the selection process, hospital leaders focused on finding a solution nurses would embrace. “We knew the project’s success depended on choosing a product the nurses liked,” said Karl Lewis, a Norwalk Hospital pharmacy informatics specialist. “From the start, we did a lot of talking to the staff and discussed which options supported the best workflow.”

Various mobile carts and medication delivery alternatives were placed in an empty patient room, giving nurses the opportunity to try each approach. Four distinct medication administration methods were evaluated:

- A computer on wheels with attached scanner, but no medication drawers. To obtain medications, nurses had to walk to a centralized dispensing unit on each floor.
- A conventional cart similar to Norwalk’s existing equipment models. This style provided multiple drawers and generous storage, but was heavy and difficult to maneuver.
- A lightweight Rubbermaid Healthcare cart with a smaller footprint, sleek profile and ergonomic design. Though it featured slightly less storage than a traditional cart, it offered ample room for an on-board computer and scanner. This particular unit was adjustable to accommodate the height and preferred work style (sitting or standing) of each nurse.
- An in-room medication storage cabinet for each individual patient’s medication. The built-in unit also held a computer for nurse documentation. This option required clinical staff to transport medications from the pharmacy to patient rooms daily.

About 70 percent of Norwalk’s medical-surgical nurses participated in the project over a four-week period. Nurses were asked to walk through the complete medication administration workflow with each alternative. Testing included pushing carts within the tight confines of a patient room to judge each of the units’ ergonomic design and ease of use. Nurses also evaluated integration of patient and medication bar code scanning, plus assessed medication dispensing and documentation. Finally, participants were asked to complete a survey analyzing each solution’s impact on the overall clinical workflow.

“We found that each alternative had its own pros and cons,” said Patient Care Service Manager Renee Peart, RN, adding that it was highly beneficial for the nurses to be given an opportunity to weigh in on the decision. They were more invested in the process, which in turn drove acceptance.

Norwalk’s leadership reviewed the nurse feedback and consulted with the information technology (IT) department. The in-room cabinet was popular because it eliminated the need for carts. However, per-room cost estimates totaled nearly \$6,000. Plus, the units would require an additional full-time employee to stock the medications each day. Another drawback: the wall-mounted unit could not be adjusted to accommodate the height of the various nurse users.

The computer on wheels option provided an easy means for scanning the patient wristband. The lack of medication drawers, though, meant nurses would be required to constantly walk back and forth to a central medication dispensing machine. This solution was deemed unacceptable because it inadequately addressed workflow improvements.

The traditional cart was appealing because it offered substantial storage for medications and supplies, plus would accommodate the computer. Leaders were concerned, however, that the cumbersome unit would be left in the hallway since it was difficult to push and tricky to maneuver around family and equipment to the patient bedside. This solution previously failed to solve workflow problems if the bar code scanning tools were not employed at the bedside. Unless nurses utilized the patient/drug confirmation technology as intended, medication administration safety would not be advanced.

The team ultimately selected the contemporary, smaller cart offered by Rubbermaid Healthcare. The streamlined design was easier to manipulate than the conventional carts. The drawer space provided sufficient storage for medications throughout a full eight-to-12 hour nursing shift. The compact cart size prevented storage of unnecessary items that could compromise patient safety, such as difficult-to-monitor multi-dose medications. The unit also offered a superior security system with drawers that automatically locked three seconds after the nurse stepped away.

“The Rubbermaid cart has helped create a safer, more positive care experience for everyone.”

Karl Lewis,  
Pharmacy Informatics Specialist

