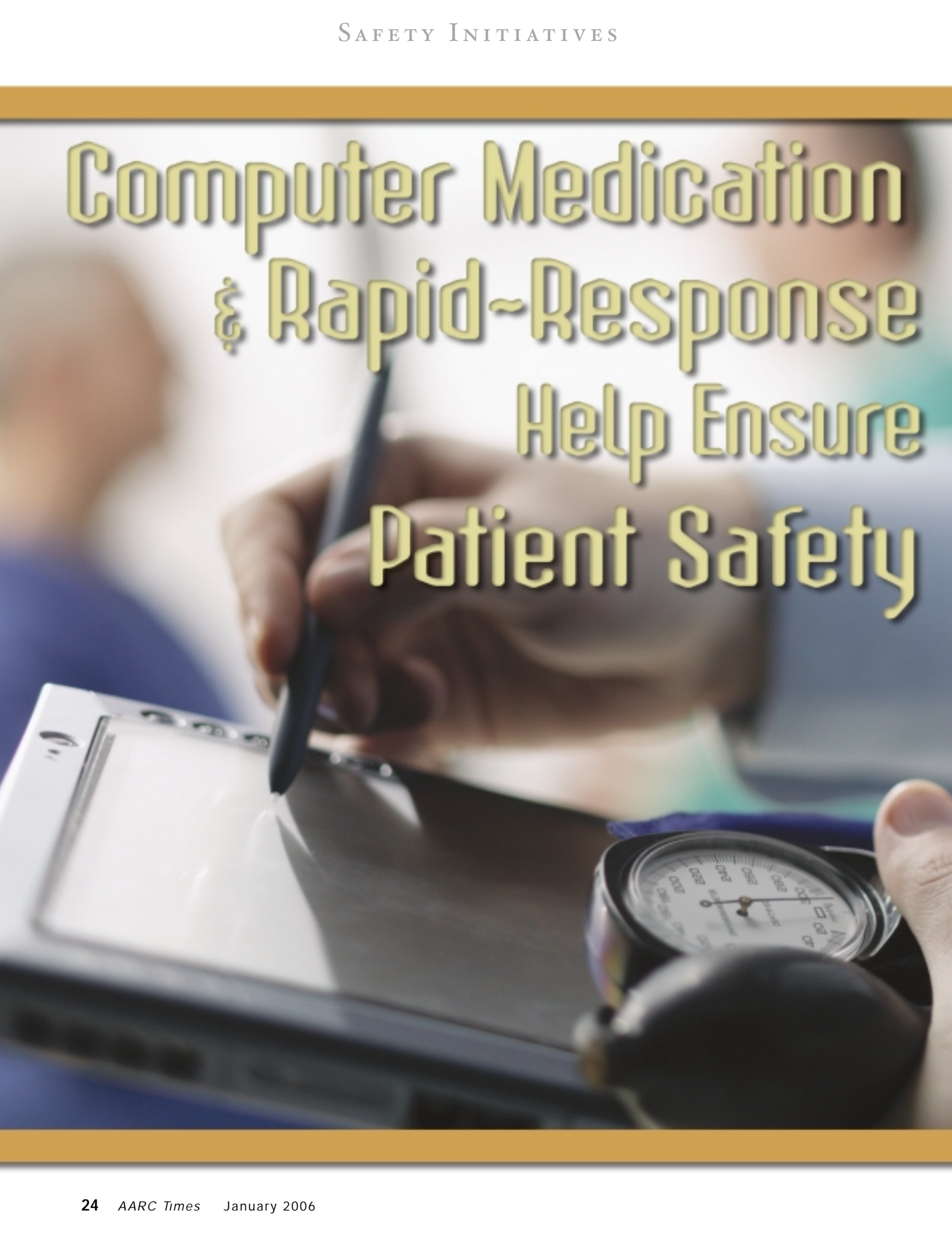


Computer Medication & Rapid-Response Help Ensure Patient Safety

A close-up photograph of a healthcare professional's hands. One hand is holding a black stylus over a white handheld device with a screen. The other hand is holding a blue blood pressure cuff around a patient's arm. The background is blurred, showing other people in a clinical setting.

Delivery Team

by John Campbell, MA, MBA, RRT-NPS, RPFT

For more than four decades, respiratory therapists have been involved in bringing about improvements in patient care through enhanced treatment modalities and mechanical ventilation methodologies. Today, through required reporting of data and the publishing of this data on unrestricted Internet web sites, the public is becoming more consumer aware in choosing quality health care providers who are leaders in performing quality medical procedures and achieving overall good patient outcomes. Globally, respiratory care is in a unique position to have a positive impact on the delivery of quality health care by following the Institute for Healthcare Improvement (IHI) initiatives and by being flexible in adopting new technologies that improve patient safety.

Computerized medication delivery

The respiratory care department at St. Joseph's Mercy Health Center in Hot Springs, AR, has taken an active part in a number of safety initiatives. Many of these initiatives have been adopted system-wide by our corporate sponsor, the Sisters of Mercy Health Care System of St. Louis. A safety initiative that has been in place the last few years for the entire health care system is a computerized medication delivery system that requires the patient, medication, and individual administering the medication to all be correct. The individual administering the medication must scan their own ID badge, the patient's ID wristband, and the medication itself. The computer program alarm helps to

catch problems where individuals are attempting to provide the wrong medication or dose, give the medication at the wrong time, or administer a medication to the wrong patient. Only individuals allowed to administer medications have special barcodes on his/her ID badge; patients and family members are instructed to look for this barcode when medications are being administered.

In getting this medication delivery system up and running, there were some concerns by upper management that the respiratory care staff would have problems adapting to the new processes. The organization decided to first train personnel and then bring up one nursing unit at a time. In the respiratory care department, super users were trained; and these super users then trained the other 45 staff members within the department so that all staff would be prepared when the first nursing unit went live. The training and implementation have all gone very well. Initially, the staff felt that very few (if any) errors were being made in medication delivery; but that belief changed as the computer program began communicating warnings, and potential errors were avoided. Today, our medication delivery system is part of the routine and one that the patients and families have come to expect and trust.

The Sisters of Mercy Health System has opted to participate in the IHI's "100,000 Lives Campaign." As each system hospital was challenged with implementing the various initiatives, the respiratory care department was given direct responsibility for



St. Joseph's rapid-response team includes (from left) Colleen Reid, RN; Chris Hulse, RN; John Lindsey, MEd, RRT-NPS; Gary Hampton, RN; and Lana Lambert, MSN, RN.

planning, designing, and implementing the “ventilator bundle” to prevent ventilator-associated pneumonia (VAP). A team comprised of RTs, nurses, and the respiratory care medical director decided the process and ensured that data was gathered, analyzed, and reported properly.

The IHI guidelines require the assurance that four criteria are met with each ventilator patient on a daily basis:

- Elevation of the head of the bed to between 30 and 45 degrees
- Daily “sedation vacation” and daily assessment of readiness to extubate
- Peptic ulcer disease prophylaxis

- Deep venous thrombosis prophylaxis.

The critical care RTs are charged with gathering data, assuring that the four bundle criteria are met, and questioning staff members and physicians when any of the bundle criteria are not met and fall out of compliance.

Our results with the ventilator bundle have been interesting. The hospital, in general, has had relatively low rates of VAP over the last three years with three- and four-month gaps of no reported VAP. Initially, the team talked of having standing orders for medication to prevent peptic ulcer disease to be given to all ventilator patients.

Luckily, we decided to gather data first as a baseline and found that the physicians were already ordering peptic ulcer medication prophylactically 100 percent of the time; we then dropped the idea of standing orders.

By initially gathering data, we found that all ventilator bundle areas were being met more than 80 percent of the time; however, there was an inconsistency in having all four bundles met at the same time on any given day. This inconsistency matched our VAP data for the past three years. Today, the critical care RTs are getting all caregivers to comply with efforts to assure that all four ventilator bun-

dle criteria are met 100 percent of the time and that our overall VAP is reduced as part of this effort. The respiratory therapist is in an ideal position to oversee this part of the IHI initiatives and can make a difference for improving compliance and, best of all, improving patient outcomes.

Rapid-response teams

Another IHI initiative that will rely on respiratory therapists at St. Joseph's is the use of rapid-response teams to utilize RTs, critical care nurses, and house physicians to assess and treat individuals who may be heading toward (or having) a life-threatening crisis. The idea is to be able to manage these situations earlier, prevent

complications, and reduce overall mortality rates. The RTs are particularly glad to see this initiative being implemented. Often patients with various types of problems show signs of respiratory distress that mask the true nature of the disease process, and RTs are called on to assess and treat these patients. The RTs do a good job of assessing patients but sometimes have problems convincing the floor staff of the true nature and degree of the problem. The rapid-response team, with the added knowledge and skills of the critical care nurses and house physicians, should help in this area by aiding in assessment, speeding up processes, and improving patient outcomes. Along with assessing patients, the

RTs will follow approved treatment protocols and will be responsible for point-of-care testing at the bedside.

Through safety initiatives, RTs are proving their value both to the organizations and to the consumers. Efforts today are helping make the delivery of patient care safer and are improving overall patient outcomes. Every respiratory therapist should be willing and eager to embrace safety initiatives, even if it adds work or costs, in order to ensure that our patients have error-free medical care. 🎧

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