A 16-year-old patient is recovering at an extremely busy, understaffed hospital from a chest injury sustained while riding his skateboard. The physician in the ED orders morphine 10 mg IV for pain, but the nurse mistakenly selects hydromorphone. Both drugs were stocked in the same area in 1-mg/mL and 10-mg/mL ampules. As a result, the patient receives the 10 mg hydromorphone—the equivalent of 50 mg to 60 mg of morphine. The error is not discovered until after the patient arrests and dies from the first IV dose.

Who is responsible for this error? Is it the nurse, for picking up the wrong medication during a busy shift in an understaffed unit? Is it the pharmacy, for stocking these medications in close proximity? Is it the manufacturer, for not providing greater differentiation in names of medications and their appearance (such as differences in size and color containers)? Or is it the hospital, for not staffing the ED more adequately?


The Institute of Medicine has published several reports that have increased the nation’s awareness about the problem of errors in health care and their impact (www.iom.edu/focuson.asp?id=8089). But in the November 11, 2004, issue of the New England Journal of Medicine, Drew Altman (president and CEO of the Kaiser Family Foundation), Carolyn Clancy (director of the Agency for Healthcare Research and Quality), and Robert Blendon (professor of health policy and management at the Harvard School of Public Health) noted that errors in health care continue to undermine the public’s confidence in and the quality of our health care system. They called for all of us to “expand and accelerate current efforts.”

Consider medication errors—something clearly in the realm of nursing’s influence. In 1995 and 1997 Bates and colleagues reported in the Annals of Internal Medicine and the Journal of the American Medical Association, respectively, that medication errors (MEs) are the most common type of patient error, occurring at the rate of five in every 100 medications administered and accounting for more than 7,000 deaths annually. According to Pronovost in a 2003 issue of the Journal of Critical Care, about 46% to 56% of all medication errors occur during times of transfer of the patient from one unit or setting to another, such as from nursing home to hospital, ED to critical care, or surgical unit to a rehabilitation facility. For example, before a recently graduated nurse hung a “little bottle of lipids,” a nurse coworker looked carefully at the bottle and recognized that it was propofol—not lipids. The patient had been receiving propofol in the ICU and the bottle was left over and transferred with the patient to the medical unit. A “medication reconciliation” process (see “Medication Reconciliation,” page 31) that might have prevented such an occurrence was not in place.

One of every three adverse drug events from medication errors occurs when a nurse administers medications, according to a study by University of Utah nurse researcher Ginette Pepper.
published in a 1995 issue of the American Journal of Health System Pharmacy. But Cook and colleagues reported in the July 2003 issue of AJN that nurses are often blamed for medication errors even when the source of the error can be traced to the person prescribing the medication. And they are blamed when the medication error occurs in the face of short staffing, distractions, and unavoidable interruptions.

Despite the nursing profession's recognition of and intuition about medication errors, nurses have not been in the forefront of developing policies and procedures to reduce errors. For example, "reconciliation" of medications during times of transition in patient care (such as transfers within and between health care facilities or home) is the deliberate review of a patient's medications before and after the transition. It is only beginning to be recognized as a necessity, but nurses haven't yet defined the best practices for doing so or developed the forms for tracking it. Although nurses have been working with companies that manufacture bar coding, “smart” IV pumps, and other equipment designed to prevent medication errors, the companies have noted that nurses often work out detours that compromise safety design. For example, one company representative told AJN that some nurses were printing a list of patient names with bar codes, then scanning these bar codes instead of the ones on the patients' wristbands. The nurses probably thought this would save time, but does it? And to what extent is it resulting in more errors?

In addition, national conferences on patient safety often fail to include nurses, or include only a token nurse; bedside nurses, in particular, are not always included in efforts to identify root causes of medication errors and to define ways to reduce these errors. And although physicians, pharmacists, sociologists, and psychologists have conducted and published extensive research on medication safety, nurses are just beginning to turn their attention to this area. Without nursing input, physicians and pharmacists are currently defining practice in medication safety.

In July 2004 more than 40 nurses and other professional experts gathered in Philadelphia to analyze the state of the science on safe medication administration and to develop recommendations for research, practice, education, and public policy. Supported by unrestricted grants from the Agency for Healthcare Research and Quality (AHRQ 1 R13 HS14836-01) and the industry, the group hopes that this report will provide the guidance and impetus for nurses to lead in this important area of patient safety. This supplement constitutes the report of this invitational symposium and includes an executive summary, papers reviewing the research that was discussed by participants, a synopsis of an industry panel discussing the role of technology in reducing medication errors, a list of the priorities for nursing research, the barriers to reducing medication errors, and the participants’ recommendations for strategies to overcome these barriers in practice, education, administration, research, and policy.

The patient’s voice is essential for helping us to determine our priorities, and it was present at the symposium. Ilene Corina, president of Persons United Limiting Substandards and Errors in Health Care (PULSE) of New York spoke about her own son dying from a health care error when his complications after a tonsillectomy were repeatedly dismissed by nurses and physicians. She described the tragedy of errors in health care delivery and the importance of educating and involving consumers in reducing their risk of being a victim of an error. As patient advocates, nurses can and must be in the forefront of encouraging patients to question the care they’re receiving and to demand more information about their treatment plans and medications.

So who is responsible for medication errors? We all are. But since nurses serve as the final filter for the myriad errors that could harm or kill patients, shouldn’t we take a leadership role in understanding medication errors—whether through research or root cause analyses of errors that occur in our workplaces—and develop approaches for reducing them? We urge you to read this document and discuss it with colleagues. It is available online at www.nursingcenter.com/ajnmedsafety.