

Weathering Another “Perfect Storm” in Hospital Pharmacy

James L. Mann

On August 3, 2005, an Air France jet crashed and burned on a Toronto runway.¹ The 297 passengers and 12 crew all survived, and only minor injuries were sustained. At least 30 investigators from the Canadian Transportation Safety Board have been investigating the crash.¹ The effects of medication errors have often been compared to those of a plane crash since the number of medication-related deaths that occur annually in our health care system is comparable to the number resulting from many typical plane crashes. However, because fatal medication errors occur at many different sites, they are not subjected to the same quality assurance checks and improvements that society routinely expects after a plane crash.

The health care community has been inundated with medication error reports for years, but the 1999 Institute of Medicine report² focused our attention on the significant numbers of drug-related hospital admissions, errors during hospital stays, and deaths that have occurred far more frequently than any of us want to acknowledge. More recently, Baker and others³ published the results of a Canadian study that identified similar problems. These errors are catastrophic for patients and painful for all of us working within the health care system.

Hospital pharmacists have recognized the limitations of the traditional drug distribution systems used in hospitals, in particular the inherent issues related to medication error and risk management. Although many health care practitioners contribute to the risk, it is the vulnerable patient who suffers the consequences of an inadequate hospital system. Why do we as practitioners try to exert such an enormous and powerful impact on patients’ drug-related care when we know all too well that the traditional system will fail us for 1 in 10 doses of medication given to patients each day? This system induces hundreds of errors per day in every hospital that continues to make do with it (more than half of the hospitals in Canada)!

Medication errors created by outdated medication delivery systems are further compounded by questionable but accepted medication practices within our institutions. These practices consume valuable pharmacy resources and contribute to additional errors; they represent pharmacy’s current “perfect storm”.


Many admitting physicians and surgeons have adopted a “meds as at home” approach to drug orders for hospital inpatients — both legend (prescription) and patient-selected products — without really understanding the impact that these “bagsful” of alternative, self-directed treatments have on patient care. Although prescription drugs are not without their problems, all have passed through a formal, scientific registration process administered by the federal government. Conversely, many alternative therapies are not scientifically proven and may even have caused the hospital admission. Why do we allow (even encourage) patients to adulterate their prescription drug regimens during their stays in acute-care hospitals, while advocating evidence-based drug use?

In the face of the often-insurmountable problem of alternative medications, and perhaps in an effort to rationalize drug therapy, national organizations have recently attempted to redefine optimal drug care for hospital patients. The move toward a medication reconciliation program will involve tracking medications on admission, during the hospital stay, and on discharge. Already, pharmacists routinely intervene with physicians to clarify medication orders during the hospital stay (recommending changes in 10% of the average patient’s 35 to 40 orders). These clarifications are time consuming (10 to 15 minutes each), but they have a direct impact on the patient, since physicians adopt at least 85% of the recommendations.⁴ However, it is estimated that a medication reconciliation program would consume as much as an hour for each patient when clarifications about admission and discharge medications become

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routine. Without adequate resources (about 3.5 full-time equivalents per 100 beds), such a program will consume the pharmacy department, redirecting its very limited resources; existing interventions and direct patient care improvements will be lost, potentially compromising the drug-related care programs in place today.

This “perfect storm” is clouding attempts to prioritize our resources to ensure that every Canadian hospital has a drug delivery system suitable for the 21st century. Our outdated distribution systems detract from the strides made over the past 30 years to enhance our clinical and direct patient care roles.

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James L. Mann, MScPhm, FCSHP, is Associate Professor in the Faculty of Pharmacy, University of Toronto, Toronto, Ontario.

Address correspondence to:

James L. Mann
 Leslie Dan Faculty of Pharmacy
 University of Toronto
 19 Russell Street
 Toronto ON
 M5S 2S2

e-mail: jl442@interhop.net

