

# Expanded Technician Roles versus Patient Safety: Finding the Balance

*Robin J. Ensom and Michael Tierney*

Recent medication errors that occurred in the context of a hospital pharmacy “tech-check-tech” system, with catastrophic results,<sup>1</sup> have raised the question, “Have we pushed the role of technicians too far?” We cannot answer this question without considering the evidence for and the experience of expanding technician roles and the alternatives to pursuing these initiatives.

## EVIDENCE

Improvements in the formal training of pharmacy technicians and development of institution-based technician training and certification programs, together with the need to expand the pharmacist’s direct patient care role, have facilitated expansion of the technician’s role. The evidence in favour of this approach is strong. A recent review<sup>2</sup> summarized the results of 10 studies, including research from one of our own institutions,<sup>3</sup> that evaluated “tech-check-tech” systems; the error rates were equivalent to those occurring with a pharmacist final check.<sup>3</sup> Similarly, there is good evidence that with adequate training and quality assurance, pharmacy technicians can perform other roles, such as verified order entry, that have typically been the domain of hospital pharmacists.<sup>4</sup>

## EXPERIENCE

Both of our institutions have a long history of using the knowledge and skills of pharmacy technicians to complete order entry and perform final product checks. This has been made possible by ensuring that technicians receive adequate training and orientation to these functions and that their work is carefully evaluated by quality improvement audits or research.<sup>3,4</sup> Our experience suggests that in each of these cases quality actually improves with technician participation. In the

case of order entry, this improvement can be attributed to the fact that 2 sets of eyes and 2 brains (the pharmacist’s and the technician’s) are involved in processing each order. This additional attention increases the likelihood that errors will be identified and corrected before the drug leaves the pharmacy. In many pharmacies where only pharmacists perform order entry, the pharmacist who prepares a prescription is also the one who performs order review, which increases the possibility of an error being missed. In the case of final product checks, we have created an environment with substantially more quality control than most pharmacist-check systems. Before taking independent responsibility for final product checks, pharmacy technicians are trained and certified (through a rigorous double-checking process) to establish that the technician is able to check final products and has the confidence of the pharmacy manager to take appropriate action when an error is detected. A quality improvement system is in place to ensure that the technician continues to perform his or her duties correctly over time; if quality standards are not maintained, the technician faces a recertification process. It is doubtful that departments where a pharmacist performs the final product check have these kinds of controls.

## ALTERNATIVES

Expansion of the technician’s role has not simply been the result of a desire to reduce costs by shifting tasks to lower-paid staff. In the face of an international shortage of pharmacists, it is extremely important that we use these scarce human resources in the most effective manner. We believe that there would be significant consternation among the pharmacists and pharmacy technicians at our institutions if we were to



turn back the clock and return pharmacists to these roles. Patient safety is at the forefront of our priorities,<sup>5</sup> but safety is not simply preventing errors of commission — it must also include correcting errors of omission. Although an in-depth analysis of the clinical pharmacy literature is beyond the scope of this editorial, there is abundant evidence that pharmacists working directly with patients as part of the patient care team can prevent and resolve drug-related problems and adverse drug events and thereby improve patient outcomes. The success of our clinical pharmacy programs is highly dependent on pharmacy technicians assuming the progressive roles for which they have been trained. To ask pharmacists to refocus their attention on technical tasks such as order entry and final product check, rather than on the cognitive functions necessary for clinical pharmacy services, would be to walk away from this important role and expose patients to significant risks.

## CONCLUSIONS

Health care is a high-risk business, and we must do everything we can to improve patient safety. However, in considering the literature and our own experiences, we do not believe that patients would be better served by reinstating technical functions such as final product checks and order entry as the sole domain of the pharmacist. Errors such as the ones that occurred in Calgary should lead us to review our organization structures and processes and to look for opportunities

to reduce the potential for error. The legacy of these errors should be greater attention on product development and labelling, system processes, and the human factors that cause error, rather than a reduction in the patient care role of our pharmacists.

## References

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**Robin J. Ensom**, PharmD, FCSHP, is Service Director, Pharmacy, Providence Health Care, Vancouver, British Columbia.

**Michael Tierney**, BScPhm, MSc, is Director of Pharmacy, The Ottawa Hospital, Ottawa, Ont.

### Address correspondence to:

Michael Tierney  
Pharmacy Department  
The Ottawa Hospital  
501 Smyth Road  
Ottawa ON  
K1H 8L6

**e-mail:** [mtierney@ottawahospital.on.ca](mailto:mtierney@ottawahospital.on.ca)

