# Determining Adequate Pharmacist Staffing in Hospitals to Optimize Patient Care

*Lauren Bresee*

Numerous studies have demonstrated that clinical pharmacists improve health outcomes in hospitalized patients[1,2]; however, pharmacists require adequate time and resources to provide optimal patient care. Two studies recently published in the *Canadian Journal of Hospital Pharmacy* highlight the importance of this topic.

Rahnama and others[3] conducted a survey of the current patient discharge processes used by hospital pharmacists in British Columbia, and strategies for optimizing these processes. According to the survey responses, participating pharmacists were responsible for an average of 31 patients at a time, and only 51% of patients received discharge care from a pharmacist during the survey time frame.[3] These results are consistent with the *Hospital Pharmacy in Canada Survey Report 2020/21,*[4] according to which only 18% of hospitals reported providing discharge education to patients in most or all areas of the facility. In terms of barriers, Rahnama and others[3] noted that time constraints and a lack of resources or staffing prevented respondents from providing care at the time of patient discharge. Importantly, the majority of survey respondents suggested that timely notification of discharge, pharmacist prescribing, and improved pharmacy staffing would optimize the discharge process.[3]

Given that adequate pharmacist staffing is vital for the provision of patient care in hospitals, an important consideration is how to determine the optimal pharmacist-to-patient staffing ratio. Damji and others[5] first conducted a modified Delphi study to prioritize components of comprehensive pharmaceutical care; they then performed a work sampling study to determine the frequency and time required for completion of each component. Lastly, they used a workforce calculator to determine optimal pharmacist-to-patient ratios, specific to internal medicine and surgical units.[5] To complete 100% of the identified comprehensive care tasks, the ideal pharmacist-to-patient ratio was 1:13 on a teaching internal medicine unit, 1:26 on a nonteaching or hospitalist unit, and 1:14 on a surgical unit.[5]

Although the absolute ratios calculated by Damji and others[5] may not be applicable to other unit types or other hospitals in Canada because of differences in patient acuity and other relevant factors, the methods used to calculate pharmacist-to-patient ratios in this study could be applied to determine optimal ratios at other locations. In addition, estimating site-specific optimal ratios would allow for evaluation of the concordance between optimal and actual pharmacist-to-patient ratios in individual hospitals and the impact of a lack of concordance on patient health outcomes. This information could also be used to develop more efficient approaches to patient care through prioritization of activities based on real-life data. For example, as described above, survey respondents in the study by Rahnama and others[3] were responsible for an average of 31 patients, a patient load that may prevent pharmacists from completing all comprehensive care tasks for all of their patients.

Consideration also needs to be given to hospital pharmacist vacancy rates (estimated at 8.0% in 2020/21, as reported in the *Hospital Pharmacy in Canada Survey Report*[4]); high vacancy rates may further limit the ability to achieve adequate pharmacist-to-patient ratios. Ultimately, pharmacists want to be able to provide the best possible pharmaceutical care to their patients. Ensuring they have adequate time and resources to provide that care is essential for improving patient health outcomes.

## References

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**Lauren Bresee**, BScPharm, ACPR, MSc, PhD, is a Scientific Advisor with the Canadian Agency for Drugs and Technologies in Health (CADTH), Ottawa, Ontario; an Adjunct Assistant Professor with the Department of Community Health Sciences, Cumming School of Medicine, University of Calgary, Calgary, Alberta; and a member of the O'Brien Institute for Public Health, University of Calgary. She is also an Associate Editor with the *Canadian Journal of Hospital Pharmacy*.

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**Address correspondence to:**
Dr Lauren Bresee
CADTH
865 Carling Avenue, Suite 600
Ottawa ON  K1S 5S8

**email:** LaurenB@cadth.ca