Should Hospital Pharmacy Departments Commit a Larger Proportion of Their Clinical Resources to Ambulatory and Primary Care Services?

THE "PRO" SIDE

Canada is experiencing an increase in the number of individuals living with one or more chronic conditions. These patients account for the majority of hospital and home care costs in Canada.[1] Twenty percent of patients living with chronic conditions such as chronic obstructive pulmonary disease and heart failure are readmitted to hospital within 30 days after discharge.[2] Ambulatory care sensitive conditions (ACSCs) are those for which effective and timely outpatient care can prevent admission to hospital. Examples include angina, heart failure, hypertension, diabetes, asthma, chronic obstructive pulmonary disease, and epilepsy.[3] Many ACSC-related hospital admissions are considered avoidable, and these avoidable admissions are used as a measured indicator of the health system's capacity to manage these conditions in the community.[3] Canadian data have shown that ACSC-related hospital admissions account for nearly 11% of hospital days.[3] Provincial governments have recognized the need for strategies to prevent readmissions and to decrease inpatient hospital days. For example, in 2010, the Ontario Ministry of Health and Long-Term Care established the Avoidable Hospitalization Advisory Panel. This panel identified 3 target areas to reduce avoidable hospital admissions: better management of chronic diseases, fewer preventable adverse events, and more effective care transitions.[4] We argue that providing pharmaceutical care in hospital-based ambulatory care settings affects all 3 of these domains and that allocating resources in this area is essential.

The practice of pharmaceutical care affects important outcomes in patients with chronic diseases who are receiving treatment in ambulatory care settings. A meta-analysis assessing the impact of pharmacists as members of patient care teams demonstrated significant reductions in hemoglobin A1c, blood pressure, low-density lipoprotein cholesterol, and adverse drug events relative to controls.[5] Pharmacist interventions were also associated with improvements in humanistic outcomes, such as medication adherence and general health-related quality of life. Strikingly, nearly two-thirds of the studies included in the review had been conducted in ambulatory care settings. These results are consistent with those of other studies examining the impact of pharmacists on various ACSCs, including hypertension,[6-8] diabetes,[9] and congestive heart failure.[10]

The most recent Hospital Pharmacy in Canada report summarized aspects of hospital pharmacy practice in 160 participating acute care organizations across Canada.[11] On average, in each institution pharmacists were assigned to 3 (standard deviation 2.6) of 17 outpatient practice areas included in the survey. These outpatient pharmacist resources tended to be concentrated in specialty areas (e.g., hematology—oncology, dialysis, hematology—anticoagulation, transplantation), while only 9% of respondents had pharmacists assigned to general medicine clinics. For the analysis of pharmacy services relating to ACSCs, 40% of respondents with existing programs reported involvement of pharmacists in cardiology clinics, and less than 30% had pharmacist involvement in diabetes or asthma clinics. In a meta-analysis of 12 randomized controlled trials evaluating the impact of pharmacist care in heart failure (an ACSC), intervention by a pharmacist was associated with a reduction in both all-cause and heart failure–related hospital admissions.[10] However, in a recent environmental scan of heart failure clinics in Ontario (80% of which are hospital-based), only 32% reported having in-clinic access to a pharmacist.[12] Goal 2 of the CSHP 2015 initiative of the Canadian Society of Hospital Pharmacists is to "increase the extent to which pharmacists help individual non-hospitalized patients achieve the best use of medications".[13] One objective related to this goal is to have pharmacists managing medication therapy for patients with complex and high-risk medication regimens in 70% or more of ambulatory and specialized care clinics. In the most recent survey, only 11% of institutions (14/133) met this target.[11] An increase in ambulatory care clinical pharmacy services is required to meet this target.

Strategies for prioritizing clinical pharmacy services have featured prominently at CSHP's national conferences and in this journal. Hospital pharmacy leaders are advocating for allocation of professional resources to activities and in settings where evidence suggests that pharmacists will have the greatest impact on patient care. The majority of realignment of pharmacist resources to date has been based on evidence from the inpatient setting. One element that is missing from this national discussion is the role of hospital pharmacists in ambulatory care clinics and their impact on ACSC-related conditions.

Positioning pharmacists in clinics that provide comprehensive care for ACSCs represents an opportunity to improve patient outcomes, facilitate chronic disease management, reduce preventable adverse effects, and assist with transitions in care to the community. In turn, these benefits have the potential to translate into parameters valued by decision-makers, such as reductions in emergency department visits and unplanned readmissions.

We believe that there are adequate human resources to fill this role in hospital pharmacy practice. Canadian pharmacy graduates are prepared to provide pharmaceutical care to patients with chronic conditions, the majority of whom are seen in ambulatory settings. The new entry-to-practice educational outcomes have an overall goal of graduating medication therapy experts who are direct patient care providers.[14] Canadian pharmacy curricula are increasingly devoting more time to acquiring advanced pharmacotherapeutic knowledge, learning patient assessment skills, and applying knowledge gained through expanded experiential education. Although faculties of pharmacies in Canada do not specifically educate students to practise in ambulatory care clinics, the focus on medication therapy management of ACSCs, development of patient care and interviewing skills, and community practice placements have direct transferability to this setting. Furthermore, some hospital pharmacy leaders have recognized the role of hospital-based ambulatory care by developing ambulatory care residency programs. Few such programs currently exist; in fact, to our knowledge there are only 3 in Canada. However, they are in demand. For example, in the first year that we offered an ambulatory care pharmacy residency training program at Women's College Hospital, we had more than 40 applications for a single residency position. We encourage hospital pharmacy leaders to put resources into developing these programs or enhancing ambulatory care experiences in existing residency programs.

In summary, an increasing number of Canadians are living with multiple chronic conditions, and it has been demonstrated that pharmacists in ambulatory care settings are ideally positioned to improve the care of these patients. The contributions of ambulatory care pharmacists have the potential to affect important indicators of health system performance that are valued by decision-makers, which further emphasizes the importance of pharmacists in all areas of hospital-based care. Allocation of a larger proportion of clinical resources to non-hospitalized patients is essential to meeting Goal 2 of the CSHP 2015 initiative.

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THE "CON" SIDE

In the Romanow report, *Building on Values: The Future of Health Care in Canada*, the former Saskatchewan premier extolled the virtues of a role for pharmacy in primary care, stating "pharmacists can play an increasingly important role as part of the primary health care team, working with patients to ensure they are using medications appropriately".[1] Perhaps the US-based Board of Pharmacy Specialties read the Romanow report (although this seems unlikely) and responded by creating its new Specialty in Ambulatory Care Pharmacy, implemented in 2011. There is no doubt that important work can be done by pharmacists in providing ambulatory care and primary care services.[2] In fact, it has become trendy for the hospital pharmacy profession to focus attention, energies, and resources in this area. Baggy jeans that expose your underwear are also trendy, but that

does not make them right. Arguing against this recent trend to focus on primary care within hospital pharmacy may seem like arguing against puppies and other things that just make us feel good, but I would advocate a rational, practical, and critical approach to evaluating this trend. Hospital pharmacy departments cannot do everything. What is more, they should not do everything, and in the area of ambulatory care and primary care services, pharmacy as a whole might be better off if they were to do less.

The proposition of this debate suggests that hospital pharmacies commit a larger proportion of their clinical resources to ambulatory care and primary care services. But there is an opportunity cost to this reinvestment of hospital pharmacy resources. From an internal perspective, we should ask what effect this reinvestment will have on our core responsibilities as hospital pharmacists. A case will no doubt be made that there has been a shift from hospital-based care to community-based care, along with a shift from acute care to the care of chronic diseases, and that these shifts justify the increased involvement of hospital pharmacists in ambulatory care areas.[3] The problem with this logic is that it fails to account for the increased complexity and severity of the cases that remain in our hospitals. These patients deserve the full attention of hospital-based pharmacists in fulfillment of our core responsibility, not the watered-down, distracted resources of a hospital pharmacy that is attempting to follow trends and be all things to all people. Even a circumspect review of the goals of the CSHP 2015 initiative of the Canadian Society of Hospital Pharmacists[4] (monitoring and counselling of all patients with complex, high-risk conditions, appropriate drug therapy for myocardial infarction, etc.) reveals that there is still much to do and no justification for pulling resources away from core inpatient services.

There are also implications for the broader pharmacy community of investment by hospital pharmacy in primary care. If "primary care" is defined as accessible health care services addressing a range of personal health needs in a sustained partnership with patients,[5] then it is clear that retail pharmacies and the pharmacists who staff them are already at the front lines of primary care. Furthermore, it is unclear whether hospital pharmacy, in planning for the expansion of primary care services, has sufficiently considered patients' preferences about the setting for service delivery.[6]

Pharmacist human resources are limited and have been relatively scarce.[7] While there are some signs that the situation is improving, there continue to be unmet needs for pharmacists in rural areas of Canada.[8,9] Does it make sense for hospital pharmacies operating in larger urban areas to dedicate human resources to expanding their provision of primary care when there are real unmet needs for hospital pharmacists in rural and remote areas?

Devoting government-subsidized and government-funded hospital pharmacy resources to primary care may also undercut the business model that allows the provision of these services in community pharmacies. Recent pricing reforms for generic drugs have rekindled interest in expanding the provision of cognitive services in retail pharmacies, and these locations may be a cost-effective setting for delivering these new primary care services.[10] The last thing that the retail pharmacy sector needs is hospital-based expansion into primary care areas that could and should be provided in community pharmacies. It is estimated that almost 80% of pharmacists work in the retail sector.[8] Does it really make sense for the small number of pharmacists who practise in hospitals to focus work at their sites on primary care, when the vast majority of the profession already practises in the readily accessible primary care site known as the retail pharmacy? Much needs to be done to enhance the feasibility and capacity for expanded cognitive services in community pharmacies,[11] but it is unfair to distort the marketplace by using subsidized hospital pharmacy resources to expand into primary care.

Trends are trendy, and the expansion of hospital pharmacy into ambulatory care and primary care may give us a warm glow, but we really need to re-examine our priorities before reallocating limited resources. Have we done all we can for inpatient services, to manage the complexity of current cases? Within our health systems and regions, have we allocated sufficient pharmacy resources to hospital patients in underserviced rural and remote areas? In considering primary care, have we fully taken into account the vast majority of pharmacy human resources already dedicated to primary care (in the form of retail pharmacists)? Are we confident that this ambulatory service can be provided only by hospital pharmacists, using hospital pharmacy resources? It seems doubtful that we can confidently answer "yes" to all of these questions.

It may be difficult, but it is our duty to our profession to ignore the trend and to objectively assess the best place to invest hospital pharmacy resources. Viewed in this light, the proposition deserves at least a sober second thought. We may find that, on reflection, we would be better to pull up our baggy jeans, tighten our belts, and focus on the needs of hospital patients. If and when we consider reallocating hospital pharmacy budgets to ambulatory care and primary care services, we should take into account the opportunity cost and ensure that this is truly the best approach to patient-centred care for the whole of the pharmacy community.

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