

Introduction

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The French author, Francois de la Rochefoucauld, famously said that “The only thing constant in life is change.” This maxim certainly applies to the Canadian healthcare system. Viewing the province of Ontario as one microcosm of the national landscape, the rate of change over the last two years has escalated on many fronts, with significant implications for hospital pharmacy practice. Legislative changes, such as the Excellent Care for All Act,¹ have highlighted increasing expectations of accountability and transparency, requiring public posting of quality indicators and creating links between indicators and executive compensation. Clinical performance measures have also been embedded into the funding models for hospitals and other health organizations. Reports from economists such as Don Drummond² have challenged the system to operate more efficiently, recommending changes to the Pharmacy Act that would enable an expanded scope of practice for pharmacy practitioners, similar to those that had previously been approved in Alberta and several other provinces. This was realized in October 2012, when the McGuinty government announced a regulation change permitting Ontario pharmacists limited prescribing and drug administration rights.³ Many pharmacy technicians are also impacted by new regulation requirements as set forth by provincial Colleges. All this has occurred within an environment of shared concern by policy makers and the public about the increasing cost of healthcare and sustainability of the Medicare system. The Canadian Institute for Health Information⁴ reported that, in 2011, hospitals made up the largest component (29.1%) of health care spending at \$58.4 billion. Pharmaceuticals, the fastest-growing component of health care costs in recent decades, accounted for the second-largest category (16%), amounting to \$32 billion. Pharmacy leaders are being challenged to adapt hospital pharmacy services to meet the expanding needs that exist within this shifting environment.

This year’s Hospital Pharmacy in Canada Report summarizes the pace of change within hospital pharmacy practice in the 176 participating organizations that collectively represent some 70,179 inpatient beds across Canada, including for the first time, data collected from the Northwest Territories. Note that for the purposes of this report, data from the Northwest Territories was incorporated into Alberta data. The report has maintained the chapter highlights, initiated in the 2009/10 report, to allow the reader to easily note new and emerging trends.

In the spirit of change, this year’s survey was expanded to incorporate two new sections to capture the perspective of front-line pharmacists and technicians on a number of important issues, such as pharmacy technician regulation, experiential training in the hospital pharmacy setting, and changing practice roles. The editorial board appreciates the time taken both by Pharmacy Directors in forwarding the surveys to their staff, and by front-line staff for generously sharing their insights. The data collected from these supplemental surveys will be analyzed for a future journal publication to complement the information provided within this report.

In the chapter on clinical pharmacy services, Jean-Francois Bussieres reviews the current state of structured patient care programs, both in the inpatient and outpatient setting, against the background of various pharmacy practice models and changing scopes of practice. This chapter also details the evolution of independent and dependent pharmacist prescribing authority in the various provincial jurisdictions across Canada.

Doug Doucette provides a comprehensive overview of drug distribution systems as integral components of a system of safe, effective and efficient drug therapy in the hospital setting. Hospitals reported a trend towards increased centralized unit dose systems as well as increased implementation of decentralized automated dispensing cabinets in most patient care areas. While 67% of respondents reported that a pharmacist reviews at least 95% of all routine medication orders for therapeutic appropriateness before the medication order appears on the Medication Administration Record, this remains limited to the regular operating hours of the Pharmacy department when there is on-site staffing.

Michele Babich and Kevin Hall profile the changing face of hospital pharmacy human resources across Canada. They report that many of the recommendations from the Moving Forward: Pharmacy Human Resources for the Future Report,⁵ a national pharmacy initiative led by the Canadian Pharmacists Association are now being realized. The increased enrolment in the Faculties of Pharmacy and resulting increase in pharmacist supply does not appear to have decreased the hospital pharmacist vacancy rate. While overall, the staffing composition has not changed since the last report, this report highlights the percentage of advanced practice pharmacists of total pharmacy staffing which ranges widely between provinces. Michele and Kevin also report on the trend towards pharmacy

technician regulation with protection of this title in many provinces. The concern that this may lead to a technician shortage has not yet materialized, but is worth monitoring in future reports.

Technological innovations have been instrumental, not only in helping to meet the challenges of human resource shortages but also in optimizing patient safety. Patricia Macgregor and Kevin Hall's review of the level of adoption of information technology highlights the increasing use of technology to embed patient safety strategies such as TALLman lettering, and barcoding throughout pharmacy processes and patient care units. Of note, use of "smart" IV pump technology is on the rise with use of wireless networks to upload or download data to and from smart pumps. From a systems perspective, respondents reported slowly increasing connectivity and interfaces built between pharmacy, laboratory and front-end clinician order entry systems, which opens up the opportunity for increased access to clinical decision support and facilitation of inter-professional communication.

Kevin Hall and Patricia Macgregor's review of adult benchmarking provides data on the pharmacy staff and medication costs that are associated with providing pharmacy services to specific types of clinical programs, including critical care, medicine, surgery, and long term care. These detailed benchmarking analyses provide pharmacy managers with important information that can be used to benchmark existing program performance, or to plan new pharmacy services.

Carolyn Bornstein, CSHP 2015 Project Coordinator, reports on the progress that Canadian hospitals have made in achieving the CSHP 2015 targets, compared to the baseline data that was presented in the 2007/08 and the follow-up data that was presented in the 2009/10 reports. Of note, some of the objectives within this quality initiative have been revised since its inception, which must be considered when this data is being interpreted. Carolyn's thoughtful analysis summarizes areas of strength as well as highlights the need for further improvement in order to attain the vision for pharmacy practice in the hospital setting by the year 2015, as envisioned by the Canadian Society of Hospital Pharmacists.

The Pharmacy Technician chapter, authored by Kyle MacNair and Chuck Wilgosh, provides an insightful synopsis of the evolving role of the pharmacy technician. Highlights include the trend towards provincial legislation to regulate pharmacy technicians with an increasing proportion of technicians receiving certification through the Pharmacy Examining Board of Canada, many of whom have graduated from accredited pharmacy technician training programs. These formal, external programs have decreased the need for internal validation and certification programs previously provided by hospital pharmacy departments. While there is substantial regional variation regarding technician involvement in activities such as medication order entry, respondents reported an increasing role for pharmacy technicians in supporting clinical pharmacy services such as admission and discharge medication reconciliation.

Patricia Lefebvre provides a snapshot of current practices related to the evaluation of pharmacy services in Canadian hospitals. These range from quantifying implementation of medication incident reduction strategies including completion of a medication safety self-assessment, evaluation of the direct patient care services provided by pharmacists and assessment of the use of technology to improve the safety of the medication-use system.

Of note, data from the seven stand-alone pediatric hospitals has been excluded from the general analysis to allow for their analysis as a distinct group, within a new Pediatrics Chapter. Jean Francois Bussieres, Kevin Hall and Patricia Macgregor provide a review of this specialty practice.

This report not only reflects the active contributions of our respondents from across the country, but also the insightful analysis of the Editorial Board members. Their dedication and focus is integral to the development of a report that remains pertinent and relevant to hospital leaders and practitioners. I would especially like to thank our Managing Editors, Kevin Hall and Chuck Wilgosh, whose attention to detail and oversight of both the survey process and report development are invaluable. Two of our long-time board members, Patricia Lefebvre and Michele Babich, will be retiring from the board in June 2013. Patricia brought with her a wealth of experience both from her role as the first Pharmacist-in-Chief of the McGill University Health Centre and her active involvement in governmental advisory groups, interdisciplinary committees, and professional associations. Michele provided great insight from her role as Director of Pharmacy Services for the Vancouver Island Health Authority. We will miss both their wisdom and sense of humour at our editorial table. I would also like to acknowledge the contributions of Iain Smith, our board member previously representing the Atlantic provinces, who resigned earlier this year after assuming the demanding role of Director of Pharmacy Services for Health PEI. We wish him well in his new responsibilities.

The success of the survey also reflects the ongoing support of Eli Lilly Canada. On behalf of the board, I would like to express my appreciation to Linda Chow, who provided active support from Eli Lilly over the past 4 years and acknowledge the ongoing active involvement of France Dube, another valued member of the Lilly support team. Last, but not least, a number of individuals provide the backbone support for the creation of the report. Paul Oeltjen collects and analyzes the data for the editors, Marjorie Robertson provides administrative support and designs the final layout of the chapters, and George Horne electronically publishes the results. Without their contributions the report would not be possible.

On behalf of the editorial board, we present to you this latest report on the state of hospital pharmacy practice in Canada with the hope that the data contained within will support our profession's continued self-assessment to inform further improvement. Mahatma Gandhi's quote is a fitting call to arms with regards to our profession: "Be the change that you wish to see in the world."

¹ Ontario Ministry of Health and Long-term Care. Excellent Care for All Act, June 2010. http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_10e14_e.htm

² Don Drummond, Commission on the Reform of Ontario's Public Services, 2012. <http://www.fin.gov.on.ca/en/reformcommission/>

³ Ontario Regulation 302/12, The Ontario Gazette, Oct 20, 2012 (pages 1538-44). http://www.gov.on.ca/ontprodconsume/groups/content/@onca/@so/@gazette/documents/document/ont06_027964.pdf

⁴ CIHI. (2011). National Health Expenditure Trends, 1975-2011. https://secure.cihi.ca/free_products/nhex_trends_report_2011_en.pdf

⁵ Management Committee, Moving Forward: Pharmacy Human Resources for the Future. Final Report. Ottawa, Ontario. Canadian Pharmacists Association; (2008)