

Leading Change: Understanding the Stages of a Successful Transformation

SPEAKER

André Côté

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André Côté introduced himself by noting that he had worked in the pharmaceutical industry for more than twenty years, starting as a sales representative with Eli Lilly in 1993. Over those two decades, he said, he has become a student of change – both in his personal and professional life. The changes that have occurred at Eli Lilly Canada have been profound, he said. And so have the technological and attitudinal changes in society at large. Managing change and embracing it are the only way to survive, he said.

In the last twenty years, changes in the industry have been profound, Côté said. Development costs and times for new molecules have been drastically reduced. Industry representatives are no longer “salespersons,” they must now be subject matter experts.

Health care leaders must embed change in their organizations, Côté said.

He cited three modes of failure, identified by J. Stewart Black and Hal Gregersen in *Leading Strategic Change: Breaking Through the Brain Barrier* – failure to see, failure to move, and failure to finish.

In health care, Côté said, not everyone is willing to embrace the need to evolve. One of the greatest challenges in organizations is to create a compelling vision so that people see not just where they’re going but why they’re going there.

Even after a great vision is created, there can still be a great reluctance for people and organizations to move, he continued. People have a natural reluctance to resist change. He pointed out that people don’t like to admit that what they have been doing is wrong, so they are reluctant to make significant changes. He pointed to Alan Deutchman’s research in *Change or Die*, which asserts that nine out of 10 heart bypass patients fail to make the lifestyle changes that will prolong their lives, even after surgery.

The solution to the challenge, Côté said, is to create the right environment to encourage and celebrate successful manageable change. “Change leadership is about celebrating small successes and the mere fact that they’re moving forward . . . people who are the beacons of optimism will help others to see the light and become the advocates of change along with you.”

Finally, a lot of change fails because it gets ignored and there is a failure to truly embed and institutionalize the change, he said. There is a natural tendency to ignore change and hope it goes away, that it is just a “flavour of the month.” So, it’s important to hold people accountable and ensure that they’re actually taking action, not just paying lip service. “When you’re focused on the obstacles, your efforts will be resisted, but when you focus on the opportunity, beautiful things will happen.”

Sterile Compounding in the Hospital Setting

SPEAKER

Danielle Fagnan

Chef, Département de pharmacie et unité de recherche en pratique pharmaceutique

Director of Professional Services

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Danielle Fagnan presented an overview of a number of the events that created an urgent need to update standards for sterile compounding, then described Quebec’s inspection process and some of the results of that process.

The urgency driving the need for better standards and inspection for sterile compounding comes from events in both the US and Canada, Fagnan explained. The FDA in the US has issued numerous warnings regarding the quality of compounded drugs since 2000. These have highlighted problems with potency and sterility, the presence of particulates and contaminants. A number of serious fungal infections were linked to contaminated steroid injections in 2012, which involved 20 States and resulted in 750 cases with 64 deaths.

In response to these serious events, Fagnan explained, USP 797 was adopted in 2004 to establish consistent standards for compounding, which could be applied by State Boards of Pharmacy that are primarily responsible for ensuring regulatory compliance in the US.

In Canada, serious concerns regarding sterile compounding emerged in 2013 when Cancer Canada announced that four Ontario hospitals had been providing lower doses of chemo drugs than intended. These drugs had been prepared by an outside contractor and, ultimately, affected 1202 patients in Ontario and New Brunswick. In response, the Ontario Minister of Health and Long-Term Care commissioned a report that made recommendations. These included recommendations that the Ontario College of Pharmacists and the National Association of Pharmacy Regulatory Authorities (NAPRA) work quickly to define best practices and establish standards and licensing for compounding, and that the federal government consult with the provinces to introduce national standards for labelling concentration and non-concentration-specific drugs and admixtures.

Ultimately, these recommendations led to new NAPRA standards of practice, which were approved earlier in 2015. Health Canada and several provincial health ministries are currently in the process of reviewing and adopting standards.

Fagnan explained that the targeted inspection program implemented in Quebec was in response to some “alarming reports” regarding sterile compounding and the need to update standards in light of USP 797. The first phase of the program began with inspections of 40 private practice community pharmacies. Even using the old standards, she said, many problems were identified, particularly with aseptic techniques and the absence of final process verification.

In 2010, all hospitals doing sterile compounding in Quebec were sent a questionnaire and were, subsequently, inspected, Fagnan explained. A report was generated for each facility with recommendations and follow-up. The process is ongoing, and re-inspection/follow-up or inspections of new facilities continue to take place.

Fagnan identified some of the most common deficiencies identified in the hospital inspections:

- Non-compliant biological safety cabinets for the preparation of hazardous sterile products (air not 100% vented to the outside)
- No pressure or pressure gradient: risk of product contamination or risk of venting hazardous particles outside the sterile areas
- Inadequate ventilation preventing the maintenance of air quality required to guarantee the quality of the preparations: risk of product contamination
- Sinks, printers, excessive amount of equipment/material present in aseptic preparation area: risk of microbial and particulate contamination
- Holes, cracks, unsealed joints, blinds, refrigerators, air-conditioning units, wood furniture, etc.: risk of microbial and particulate contamination
- Improper maintenance: lack of respect for hygiene measures
- Lack of respect for hygiene and aseptic measures (apparel, hand washing, wearing of sterile gloves, aseptic techniques, etc.)

After the inspection process was introduced, some hospitals asked for new standards and clarity, she said. In response, the Order of Pharmacists undertook a process of consultation, communication, and feedback. A new set of standards was developed and released in 2014, based largely on USP 797 and insight gained from the inspection process.

The inspection process was designed to run from 2008 to 2016, Fagnan explained. The process requires constant adjustment and ongoing evolution and improvement of inspection tools. Flexibility and good communication with hospitals and pharmacists is critical to the program’s success, but maintaining a consistent, credible message focused on public protection is equally important.

The inspection program begins with a survey for chief pharmacists and meetings with staff and senior management to explain the process. The inspection itself is quite exhaustive and inspectors take photographs to help identify issues. Once the report is generated and sent to the hospitals, compliance plans are designed with the chief pharmacists, and targets and follow-up are established. The approach is successful because there is good communication and an interdisciplinary approach, she said.

Major risks to patients and handlers are identified, Fagnan continued, and the hospitals are asked to implement short-term measures immediately and medium-term measures for corrections or repairs. The next step is the co-operative creation of an action plan with timelines that will permanently remedy the problems. Those may require re-engineering existing facilities or new builds, depending on the extent of non-compliance.

The Quebec standards for sterile compounding have three principle components, she said: conditions required for compounding, pharmacy compounding, and quality assurance. There are two mirror standards – one for hazardous and one for non-hazardous sterile products. They were based on a combination of evidence-based and expert-derived premises using sound risk-management principles. Fagnan said it was important to develop an acceptable balance that provided standards, rather than legislation or regulations.

Fagnan identified some of the more significant and somewhat controversial components of the Quebec standards:

- Annual assessment/evaluation of all pharmacists, including supervising pharmacists who don't actually do any compounding and on-call pharmacists
- Appropriate HVAC systems to ensure public protection
- (At least) two controlled rooms and a support area for non-hazardous sterile production and the maintenance of positive pressure between rooms
- Maintenance of negative pressure in the preparation of hazardous sterile products to prevent air escape from the clean room
- Separate storage areas outside the clean room for hazardous products
- Discouragement of shared ante-rooms but ensuring, where they do exist, that they are both microbiologically and chemically clean
- For Best-Use Date (BUD), use of a risk-management balance, allowing 24 hours use after product puncture, rather than the six hours that exist in other standards, in order to balance cost concerns with safety and efficacy

Fagnan concluded by noting that the first cycle of inspections in Quebec is nearly complete and that the cost of the process was approximately \$250,000 annually for eight years. A continuous process of review and revision is underway to look at ways of improving future inspections.

Integration of Information – Sharing a Train of Thought

SPEAKER

Pegi Rappaport

Chief Information Officer

Toronto East General Hospital

Toronto, Ontario

Pegi Rappaport began by explaining the “HIMSS” Analytical Adoption Model and its application to pharmacy information management, particularly with respect to integrated pharmacy, eMAR, CPOE systems, regional data repositories for drug information, medication reconciliation, and patient access to information.

The Healthcare Information and Management Systems Society (HIMSS) is an international not-for-profit organization with 52,000 members that aims to achieve better health through information technology, Rappaport explained. HIMSS Analytics is a wholly-owned not-for-profit subsidiary that collects and analyzes health care information from every hospital in Canada and the US and many European, Middle Eastern, and Asian hospitals on a country-sample basis.

HIMSS Analytics has developed the Electronic Medication Record Adoption Model (EMRAM) that tracks the adoption of EMR applications within hospitals and health systems. Institutions using the model work to complete each of eight stages, from zero to seven, she said. The model is, essentially, a gated roadmap of progressively more sophisticated steps that increase the accessibility of information within an EMR. It requires all the technologies in any given stage to be accomplished successfully before moving to the next stage. The stages are defined by cumulative capabilities:

- Stage 0 – All three ancillaries not installed
- Stage 1 – Laboratory, Radiology, Pharmacy ancillaries installed
- Stage 2 – CDR, Controlled Medical Vocabulary, CDS, HIE-capable
- Stage 3 – Nursing/clinical documentation, CDSS (error checking), PACS available outside Radiology
- Stage 4 – CPOE; Clinical Decision Support
- Stage 5 – Closed loop medication administration
- Stage 6 – Physician documentation, full CDSS, full R-PACS
- Stage 7 – Complete EMR; CDD transactions to share data; data warehousing; data continuity with EDD, ambulatory, OP

In the US, Rappaport said, 54% of hospitals are Stage 5 or above. While in Canada, only 1.5% are at that level. Although there continues to be progress, it is very slow compared to the US level of uptake.

There are significant benefits to medication automation, she explained. For example, Computerized Physician Order Entry (CPOE) order sets make it easier for physicians to make the right decisions and are faster. With CPOE, more patients have order sets and the number of overall order sets is higher.

Data from several downtown Toronto hospitals indicates a significant reduction in medication turnaround time after the introduction of CPOE, Rappaport continued. At Toronto East General Hospital (TEGH), there was a 60% decrease in turnaround for all medications. St. Michael's Hospital and University Health Network also saw significant turnaround decreases after the implementation of CPOE (ranging from 23% to 46%). Significantly, at TEGH, medication incidents have fallen by 25% and transcription errors are virtually non-existent.

Rappaport cited a *Healthcare IT News* article from April 2015 that revealed that 200 hospitals had reached the top of the EMRAM scale. The secret to their success, she said, was the use of a single clinical data repository. Core clinical data repositories provide a "single source of truth without interfaces" and a single-vendor solution for Pharmacy, CPOE, and eMAR, so that medication reconciliation is integrated with CPOE, pharmacy systems, and with Smart IV pumps, and allergies are tracked in a single database.

Regional data repositories for drug information require technology standards that allow information from disparate systems to populate a single repository, Rappaport explained. Canada Health Infoway (CHI)'s drug information system is built to create a patient medication profile across a continuum of care and supports e-prescribing, dispensing, patient medication queries, drug queries, and contraindications. She noted that there are no standards for medication reconciliation at this point and no work being done in that area.

Rappaport presented CHI data that underscored the value of drug information systems, pointing to reduced adverse events, timely access to information, enhanced communication, and more efficient medication reconciliation. To date, the adoption of drug information systems has been slow, particularly compared to laboratory and radiology information systems. However, the CHI's data indicates that where shared repositories are in place and are mature, they are used with good results. The greatest value in getting drug information from hospitals would be on discharge, she said.

Access to information for patients is a whole new horizon, Rappaport said. In the US, patients have consistent access to their whole health record. In order to create the kind of document that will most benefit patients, it's necessary to have a core system with pharmacy integrated into it. There are currently patient portals available in Alberta, and at Sunnybrook Hospital and University Health Network in Toronto, where information on things such as blood pressure, glucose levels, over-the-counter medications, and contacts can be shared and updated.

Medication reconciliation notes would be very appropriate in patient access systems, she noted, stressing the importance of using clear language.

Crossing the Transitions of Care through Information Integration

SPEAKER

Dr. Robyn Tamblyn

Professor, Department of Medicine and Department of Epidemiology and Biostatistics

McGill University, Faculty of Medicine

Montreal, Quebec

Robyn Tamblyn presented an overview of a medication reconciliation (Med Rec) research project being conducted as a joint venture between the McGill University Health Centre (MUHC) and three other partners to coincide with the implementation of “Right Rx,” a medication reconciliation software tool.

The majority of challenges with Med Rec occur at transitions of care, Tamblyn stressed. The aim of the “Right Rx” program introduced at MUHC is to reduce the risk of adverse drug events and hospital readmissions. Two-thirds of inpatients have at least one error in their medication history at admission, while 19% to 23% of patients will have an adverse drug event within 30 days of discharge. One in seven patients will be readmitted to hospital, over 70% of them due to events related to prescribed medications. The cost of these readmissions, she noted, is \$2.6 billion annually.

In order to confront this challenge, both US and Canadian accreditation bodies are requiring medication reconciliation on admission, discharge, and transfer by 2018. Electronic Med Rec is a system that can standardize and streamline this process, but it’s critical to get all of those providing care, in hospital and the community, to buy into the same approach and to communicate effectively and clearly. The current situation is complicated because there are multiple prescribers and incompatible paper and computer records.

Of the first 500 patients in the MUHC trial, one-third were on more than ten medications, with multiple prescribers and pharmacies, Tamblyn said. To succeed, it’s necessary to communicate back to everyone involved in care. The current Med Rec system is extremely time intensive, she said. In Geriatrics, the process takes 1.5 hours, while it takes 1 full hour in General Medicine. Not surprisingly, she said, there are discrepancies that result in 41.5% of medications being undocumented, ranging from skin products to anti-coagulants. These contribute to the massive number of adverse drug events.

The MUHC Trial was based on the premise that automating this process would result in safer, faster, more accurate Med Rec and, as a consequence, reduced adverse drug events. The first part of the trial dealt with using an electronic pre-admission medication list, Tamblyn explained. Research suggested that this simple intervention would significantly reduce

medication errors. The challenge, however, is encouraging all those involved in the provision of care to adopt it. Tamblyn stressed the importance of a user-centred design approach. In the MUHC “RightRx” trial, they established a link with the provincial insurance system that allowed them to access information about all the drugs administered to patients by 1800 participating pharmacies. This provided information for 80% of patients admitted to the hospital about on what has been dispensed, by which pharmacies and physicians.

The next step, Tamblyn described, was linking to the hospital’s pharmacy system. There were a number of complex issues that had to be ironed out involving contact information for dispensing physicians and pharmacies, consent, and standardizing formats. Once those were dealt with, drugs were aligned by class, and classes of drugs were listed together in the electronic record with the most important medication classes at the top.

“What became clear,” she said, “is that Med Rec is a very idiosyncratic process.” It was important to align hospital and community medications and to get clear dosing information. The importance of documenting reasons for stopping or changing a drug also became clear, and “RightRx” automatically generates a letter regarding changes that can be sent to pharmacists and physicians. Creating clarity on whether medications needed to be re-prescribed post-discharge and who would prescribe community prescriptions was also critical.

Tamblyn explained that the MUHC trial was about halfway complete, and she presented some preliminary data:

- There have been fairly significant time savings for both community drug lists (from 3.33 minutes to 2.43 minutes) and discharge recording (from 2.37 minutes to 1.63 minutes).
- The adoption rate was fairly high, at around 83%.
- There is a significant challenge communicating back to the community, and the rates of error were even higher in the study group than in the control group:
 - Of newly-started drugs, 48.1% were not dispensed
 - 46.7% of continuing or amended drugs were not dispensed.
- The number of medications that were not stopped after discharge significantly decreased, from 16.5% in the control group to 1.1% in the study group.

It’s critical to escalate this interface to community pharmacy DIS or Claims data and to begin standardizing drug and directive data, Tamblyn said. In addition, it’s important to monitor and enish best practices and to create mechanisms for communicating them.

Redefining Future Roles of Pharmacists

Planning Your Pharmacist Workforce in a Time of Budgetary Constraint

SPEAKER

André Bonnici

Chef du département de pharmacie

Centre universitaire de santé McGill

Montreal, Quebec

Based on experiences at his own hospital, **André Bonnici** presented some strategies for using the *Hospital Pharmacy in Canada Report* to advocate for pharmacy workforce maintenance with hospital administrators. Bonnici explained that the McGill University Health Centre (MUHC) is comprised of six institutions, most of which are university teaching and research hospitals, with one community hospital.

In an environment of constant budget constraints, he said, workforce planning is always a significant challenge. Complicating the situation for MUHC was the fact that four of its facilities were being moved to a new-build, while the remaining facilities were undergoing significant renovations and upgrades. Part of the redeployment is actually downsizing, he explained. The number of acute beds is falling by 12%, while some specialized units are actually being increased in size.

The process of such a significant move and upgrade required preparation and the re-examination of many pharmacy practices and approaches, including unit dose, CMAR, CPOE, harmonization of medication protocols, harmonization of clinical practices, smart pumps, and a pharmacy-controlled laboratory. At the same time, workforce planning had to occur and be coordinated with plans for the actual move, Bonnici said.

Complicating matters, he said, sterile compounding inspections identified many urgently needed renovations in 2013, even though the rooms were scheduled to close within two years. In addition, the Order of Pharmacists released new professional practice guidelines that led to major practice changes.

Perhaps the biggest challenge, though, was that these major changes were taking place in the context of a \$1.4 million budget decrease, with a hiring freeze and instructions not to recapture retirees. All of that necessitated highlighting different aspects of pharmacy service in order to justify necessary workforce maintenance, Bonnici said.

At the beginning of the process, the finance department demanded that pharmacy FTEs (full-time equivalents) be reduced by 12% to match the overall reduction in beds. Bonnici said the Department of Pharmacy fought the reduction by pointing out that, while overall beds were

being reduced, complex specialty beds were increasing, and those were the areas in which pharmacists are most heavily involved.

The finance department also maintained that total pharmacy work hours per patient day were higher than the average in Quebec hospitals. Bonnici replied that average hospitals are not teaching and research hospitals and pointed out the importance of acute versus chronic beds and inpatient/outpatient ratios.

The *Hospital Pharmacy in Canada, 2011-2012 Report* proved invaluable in clinically verifying the comparison data to justify outcomes, Bonnici said. By comparing its budget to other similar institutions in the rest of Canada, it was possible to demonstrate that the staffing and budget levels were aligned with other teaching and research hospitals.

Bonnici explained that his department engaged in a very detailed analysis of their pharmacy services and designed a relatively simple tool that allowed them to examine key data to determine where they should deploy or redeploy staff and matched that with a scientific review.

They used the report to determine what percentage of hospitals had a pharmacist in a specific program. Then, it was necessary to decide on the model. If the pharmacist was taking 20% or less of their time on order entry, the pharmacist would continue to do it. If more than 20%, the central pharmacy would handle it.

Next, he said, it was necessary to determine which services should be provided. That was based on services present in 70% or more of teaching hospitals. Then, using the report, the department determined what could be delegated to technicians.

Using the survey report, Bonnici said, they created a model to compare what was happening at MUHC with the Quebec and national averages. Because the clinicians accepted the model and the data that underpinned it, there was buy-in even when workforce decreases were indicated. Clinicians assisted in prioritizing tasks and duties to fit the new model.

In Internal Medicine, there was a higher workforce ratio than average, he said, but the department decided to keep the status quo. In the Coronary Care Unit, however, where ratios were higher, the pharmacist identified ways to better utilize a technician, which allowed the pharmacist to perform more advanced clinical tasks. Because of the highly specialized care in some units, it was not possible to find exact comparators from the survey.

However, Bonnici said, it was possible to get valuable data that helped underscore what needed to be done and helped assess where to add, keep, or cut workforce. The *Hospital Pharmacy in Canada Report* helped to identify how to adequately cover all sectors and how to appropriately

adapt. It was also easier to get buy-in and support from staff pharmacists for the necessary changes because they saw and understood the data. Because of the strength of the report data, MUHC was able to maintain its complement of pharmacists, although they required savings in other areas.

Technician Regulation in Ontario: Challenges and Lessons Learned

SPEAKER

*Mario Bedard
Director of Pharmacy
The Ottawa Hospital
Ottawa, Ontario*

Mario Bedard presented an overview of the process of moving to a regulated pharmacy technician model at his large urban hospital in Ottawa. The Ottawa Hospital has 1100 beds on three campuses with over 14 thousand employees, physicians, and volunteers. There are a total of 300 employees in Pharmacy, with 75 pharmacist FTEs and 125 technician/assistant FTEs. It is a unionized environment.

Prior to regulation by the Ontario College of Pharmacy (OCP), there was no standardized education and no minimum requirements for pharmacy assistants/technicians, Bedard said. In fact, it was not unusual that employees would move from other job classifications and receive all their pharmacy training on the job. Over the years, the role grew to include tech-check-tech and medication reconciliation. Still, there was no formal training or qualifications.

Then, in 2007, Bedard said, the passage of the Health System Improvement Act in Ontario required the regulation of pharmacy technicians. The regulation was proclaimed in 2010 and the first technicians were licensed shortly thereafter. Bridging courses were mandated for technicians already in practice, and there was a five-year window in which they could obtain licenses. The process required evaluating exams, bridging courses, final examinations, and paying for certification – all prior to obtaining a license.

The process created a massive change-management challenge, he said. The hospital required that all technicians have the credential to continue to work and there was no grandfathering. The lack of any grandfathering provision created anger at the government, the hospital, and the union. In order to move forward, the hospital committed to some basic principles: transparency, consistency, fairness, and an appeal mechanism.

Bedard said it was necessary to have realistic but firm timelines. Once the process had begun, it would not have been fair to those who had spent the time and money upgrading if the hospital changed its mind and no longer required certification. At the same time, it was necessary to

ensure continued service provision, so there couldn't be a sudden, drastic loss of staff. It was also necessary to align with the rest of the province.

In order to manage the change, he said, the hospital's human resources department sat down with the union and tried to work out ways of supporting staff throughout the process. A big part of that support was monetary. Employees received about \$3000 each to assist them with the costs of upgrading. However, the union agreed that people not certified by the deadline would be laid off.

A key component to implementing such a drastic change was ongoing, clear communication with the technicians themselves and with pharmacists and other hospital staff, Bedard said. Support from senior hospital leadership was also critical. Not only did the hospital provide money for upgrading employees, it also worked with local colleges to ensure that courses were provided within the institution, and the hospital provided scheduling support and mock examinations to help technicians succeed.

Despite those efforts, there are still some resisters, he said, and some staff seem convinced that they will, ultimately, be grandfathered even as the compliance deadline is drawing nearer. As the deadline approaches, it may be necessary to issue layoff notices, which will trigger bumping throughout the workforce and be very disruptive.

Bedard identified some important lessons learned through the process. They included the need to support people who had difficult personal circumstances, were on various types of leave, or had varying degrees of language skills. Also, it has been necessary to manage significant increases in stress levels in the workplace. Despite the required certifications, there is no wage increase for technicians, which is adding to the staff discontent. Finally, there is a real likelihood that the deadline will result in 30 layoffs, he said. This poses a significant risk to operations, as it will not be possible to recruit, hire, and train that many people all at once.

Fast Track to Success: Think Tank Workshop

Participants broke into small groups to engage in intensive "think tank" workshops focused on three topics: sterile compounding in the hospital setting, integration of information, and redefining future roles of pharmacists.

The groups were asked to consider the following questions and report back to the conference:

- What are the influencers for and against your topic?
- What successes on your topic have you had in your own organization?

- What are the barriers or challenges that exist, and what do you recommend to overcome them?
- What does the future look like with respect to your topic?

Group 1: Sterile Compounding in the Hospital Setting

The group identified a broad range of influencers with respect to sterile compounding and outlined some of the complicated factors that impact such influencers:

- **Standards:** there is an extraordinary range of influencing standards that goes far beyond USP 797, including such things as building standards, and these standards are additionally complicated because some of them are mutually contradictory.
- **Cost:** the expense associated with standards compliance can be significant and include everything from supplies to building costs and extend from construction to actual production.
- **Supply chain:** despite costs, geographic location or drug shortages can make outsourcing impossible; short product stability may force small facilities to provide compliant compounding space that is not cost-effective; the private sector is not always interested in producing all products, forcing in-hospital compounding.
- **Training:** the clarity of required competencies, the existence of external certification, and the presence of established training and education impact the quality and availability of appropriate training.
- **Expectations of others:** nurses prefer pharmacists to mix drugs; at the same time, there are external public trust and confidence issues.
- **Stewardship of financial resources:** professional obligations to do the most to ensure good patient outcomes and safety with limited resources require difficult choices.

Several barriers and challenges to sterile compounding in the hospital setting were also identified, including the following:

- Standards aren't always clear and they aren't always "standardized." There are often contradictions, inconsistent levels of understanding and expertise, and different interpretations on application.
- Cost, as always, is a significant impediment.
- Physical space constraints and the limitations of existing structures make compliance untenable in some cases.
- Support services, like housekeeping and laboratories, may not have the knowledge, expertise, or equipment to comply and some requirements, like the use of bleaches, and present health and safety issues for other non-pharmacy employees.
- Documentation demands are high, and it might be necessary to create documentation infrastructure from scratch.

- The lack of supporting research can make quality assurance difficult, and it is not feasible to replicate research on site.
- There is significant pressure from physicians and others to do very high-risk compounding; it can be very difficult to balance the risk of providing the service with the risk of not doing so, or eliminating sterile compounding in hospitals altogether.
- While standardization is a benefit, it can be a challenge in areas like pediatrics, which require flexibility.

Despite the challenges and barriers, though, the group also presented some impressive successes. These included improved partnerships with facilities management that have led to clear standards for renovations and new-builds. In addition, the identification of high-level risk assessment has helped in prioritizing what improvements need to be made. There has also been support for centralization within regions or health authorities and more inter-hospital collaborations.

Overall, the process has helped drive improvements in competencies at the same time as it has driven standardization. Improved practice standards have created pride and a sense of ownership among pharmacy staff and clear direction has helped drive more policy-directed development.

On the basis of its discussions, the group made several key recommendations:

- Improving coordination and research sharing
- Better supporting centralization and outsourcing
- Regulating outsourced facilities
- Supporting more creativity in medication delivery systems, such as the use of robotics
- Communicating better with patients and physicians so they understand sterile compounding decisions
- Working with regulators to standardize the inspection process
- Creating centres of excellence so not everyone has to meet the same high standards that may be unattainable for small or remote hospitals

Group 2: Integration of Information

This group began by outlining its vision for the future because, they said, it is not possible to talk about successes, challenges, and influencers without “understanding where we’re going.” The ideal future would see total transparency of information, with access available to care providers and patients. Information would be fully integrated in a user-friendly format and care providers would view themselves as information-driven organizations.

This vision would result in benefits for direct patient care at the point of service, but it would also drive better population health management by informing the overall health system,

enabling better, evidence-based choices. Ideal information integration would be portable and accessible, the group noted. It should be possible for providers to get the information needed, when and where it was required, and would provide ample opportunities for patient interfaces, while allowing patients to be the gatekeepers for information.

In all likelihood, they said, a future vision would see provincial, rather than national, data repositories. However, organizations like the Canadian Institute for Health Information (CIHI) would have standardized tools available, which would make it possible to interpolate, compare, and compile data across provincial jurisdictions.

The group commented that pharmacy information integration and informatics have suffered because there has been a tendency “not to see the forest for the trees.” A great deal of effort has been expended implementing Medication Reconciliation (Med Rec), but patient outcomes are not improving in tandem because the focus is incorrect. It’s important to bear in mind that pharmacy practice continues after patients are discharged from hospital, and solutions need to focus on the whole scope of care.

Provincial bodies, regulators, accreditors, and standard-setters are also influencers – both positive and negative. Their focus on specific programs, like Med Rec, has resulted in improved practices, but the failure to focus on continuing care has limited the overall success of information technology applications.

“People” were also identified as significant influencers. Patients, physicians, and politicians can all be internal and external champions driving change. The expectations around the value of good data are evolving, partly due to funding strategies like the Health-Based Allocation Model (HBAM) and the hospital funding formula. Patient care and better outcomes will influence funding in the future, which should drive the adoption of more information integration. Faculties of pharmacy could also be significant influencers.

The group reported that there were relatively few examples of successes. In Ontario, the Hospital Report Manager System and the BC Excel system in British Columbia are basic interfaces that allow reports from hospitals to go directly to family physicians – an example of “push” technology for integration. Manitoba’s d-Med-Chart program is more of a “pull” technology that is driving integration. In general, having better information improves efficiency, and some saw it as a success whenever a jurisdiction created an appropriate consent model.

Some significant barriers to information integration were also identified, including:

- The need to compete for funding and make information integration a priority
- A lack of information on qualitative and quantitative benefits

- A history that includes some spectacular failures of large IT systems, such as the federal gun registry
- Competing priorities with organizations
- Failure to create healthcare-wide visions, as opposed to focusing on individual departments, initiatives, or hospitals
- A general lack of informatics training
- The lack of strong relationships between hospital and community pharmacy and across the continuum of care
- The need for standardized metrics and indicators

The key, it was concluded, is making sure that information integration is not seen as an IT project but as an important part of the way we provide care. Pharmacists tend to be too quiet when it comes to information integration. There are full Drug Information repositories in many jurisdictions that include private and hospital laboratories, but pharmacy is not following their lead. To succeed will require higher profiles, reduced duplications, and stronger advocacy.

Group 3: Redefining the Future Roles of Pharmacists

The group began its report by identifying some of the influencers and drivers that will shape the future roles of pharmacists, including:

- Ministry mandates in some provinces, particularly with respect to providing care for people with chronic disease
- Competition with other inter-professional practice members
- Scope of practice changes
- Cost-effectiveness pressures for pharmacy services
- The evolution of indicators for financial and ministry benchmarking
- The evolution of technology
- Increasingly more complex drugs and treatments like nanotechnologies and biologics and the related expenses
- A trend toward the provision of more ambulatory care
- The regulation of pharmacy technicians
- Accreditation Canada's focus on managing medications and medication reconciliation
- The PharmD curriculum and changes to entry to practice, particularly the exponential expansion of experiential care rotations
- Shortages of pharmacists and technicians
- An increasing focus on medication errors
- Drug shortages
- Increasing counterfeit medications
- Increasing press attention to pharmacy issues and negative coverage of some pharmacy issues
- Better informed, involved, and educated patients

- The impact of patient-centred care and its influence on decision makers
- The *Hospital Pharmacy in Canada Report's* findings on innovations, best practices, and role models
- Canadian Society of Hospital Pharmacists (CSHP) advocacy on behalf of pharmacy at the national level

The group also identified a number of successes in redefining the role of hospital pharmacists. These included:

- Movement toward models of 24/7 services
- The development of clinical metrics and performance indicators that move beyond workload measurement
- The use of the *Hospital Pharmacy in Canada Report* as a benchmarking tool
- The use of software for pharmacist-centre triage, clinical decision tools, and as a high-risk screening tool
- Pharmacist practice research using pharmacist-sensitive outcomes
- Use of staff redeployment as an opportunity to reprioritize pharmacy goals
- Layered learning models that use students, residents, and other learners as pharmacy care extenders
- The development of inter-professional, collaborative care models and pharmacist integration into care delivery
- The use of Smart Pumps and drug management libraries

Overall, the group reported, the pharmacist's role in medication safety has increased and is increasingly recognized. There are more pharmacy specialized networks, and pharmacists have a more united and prominent voice. As hospital pharmacists demonstrate their value, other professions are asking for more input from pharmacists and pharmacy.

There do, however, continue to be barriers to the evolution of future pharmacy roles, it was noted. These include a tendency for pharmacists to be resistant to change, fear of change, lack of public recognition for the importance of pharmacy, and an incomplete or inaccurate public image. In many cases, pharmacists are viewed as an expensive resource that could easily be replaced by technology or technicians. The continued focus on health-system physicians and on ambulatory patient care is also a challenge, as is the lack of recognized credentials for pharmacy sub-specialties.

The ideal future for pharmacy roles must focus its vision on activities that impact patient outcomes, sub-specializations, and credentializing, the group said. To truly flourish in the future, hospital pharmacy must embrace technology and provide follow-up after discharge – increasing its role in care outside the hospital and in ambulatory care. To do so, the group concluded, pharmacists must embrace change and communicate their role better to patients and colleagues across the full continuum of care.

“Headline News” Recap

SPEAKERS

Jean-François Bussières

Chef, Département de pharmacie et unité de recherche en pratique pharmaceutique

CHU Sainte-Justine

Professeur titulaire de Clinique, Faculté de pharmacie

Université de Montréal

Montreal, Quebec

On the opening night of the conference, attendees participated in a simulation exercise, led by **Jean-François Bussières**. Participants viewed slides depicting various news headlines and were asked to rate whether or not they believed them to be true and how strong that belief was. Participants were also asked whether or not they were familiar with the topics that the headlines covered. They also filled out a brief questionnaire regarding their personal demographics.

Bussières provided an analysis of the group’s background demographics and responses. Overall, he said, the responses indicated that the participants were extremely skeptical and somewhat less aware of many of the actual headline topics than might have been expected.

He reviewed the various headlines and revealed whether they were completely true, partially true, or false. “Change is something important; to make sure you’re able to embrace the change, you must be able to distinguish between what’s true and false,” he said.

One of the big challenges in dealing with change, Bussières said, is the ability to manage all the information that is out there, and to assess its validity and veracity. The simulation exercise indicated a correlation between participants’ familiarity with an issue and their veracity score. If you know about a subject, you tend to be able to find inaccuracies. Particularly in science, he said, it is important to make sure the source is reliable, the information is adequate, and any correlations are justified.

Bussières stressed the importance of making sure that scientific sources are independent. When many articles cite the same source, it’s a good idea to go back to the original values and check them to make sure they warrant the conclusions drawn. In conclusion, he encouraged participants to use different strategies to uncover fraud or falsehood or bad science and to reconsider pharmacy training in order to be able to reinforce the ability to identify the true and the false in order to make better informed decisions.

Thirty Years of the Hospital Pharmacy in Canada Report

Part 1: The Hospital Pharmacy in Canada Report: A brief look at the past – the origin of the HPC Report, the key issues addressed in each of the three decades, lessons learned

A Walk Down Memory Lane

SPEAKER

Ron McKerrow

Founder, Concilio Consulting Inc.

Co-Founder, Hospital Pharmacy in Canada Report

Vancouver, British Columbia

Ron McKerrow shared some of the original motivations and inspirations that prompted the creation of the *Hospital Pharmacy in Canada Report* thirty years ago and highlighted some notable landmarks in its evolution.

In 1983, it became clear that there was no meaningful and reliable Canadian data regarding hospital pharmacy, he said. The adoption of integrated medication management in Canada was very slow, and it became clear that better data would help pharmacists show value, do better business planning, and compete better with other segments fighting for hospital funding. The survey was founded, with the help and support of Eli Lilly Canada, in order to create a national focus and reliable national data that would help drive and support the evolution of hospital pharmacy practice.

McKerrow said that Eli Lilly agreed to provide staff support and data analysis but that the editorial board was independent. In the early days, it wasn't clear that the profession would actually support the process. An expert meeting was called, and it quickly became clear that while all of the experts had different opinions, they were committed to a shared vision. Eventually, tasks were distributed and there was agreement that the survey would be published in written form and distributed. The original data analysis was done on a Mac 512, using Excel spreadsheets.

McKerrow noted that pharmacy practice was very distribution-centred at this point in time. Computerization did not really exist. There were significant drug cost increases and a lot of push-back from hospital administration. Clinical programs were in their infancy and tended to exist only where physicians "tolerated" them. Charts had a space for doctors' and nurses' notes and a small section for comments from "health professionals." Pharmacy had a very low profile.

The early surveys collected all kinds of management data, even though it wasn't clear that the data was collected by pharmacists. There was early disagreement about whether to just present the raw data or to provide editorials analyzing the data.

The first survey was mailed out to every hospital pharmacy that the board could find an address for. Surprisingly, the response rate was more than 50%, much higher than Lilly's support staff thought was likely. The final report was 16 pages long and it was distributed by mail. It contained no pictures and tables but no graphs.

Some of the interesting findings included the average salary of a hospital pharmacist (\$30,000), the extent of clinical practice (26%), and the low use of computers in dispensing programs (only 35%, and most of the computing devices were quite primitive). The most commonly identified challenges were clinical visibility, budgetary problems, and staff shortages.

The survey continued to be published and distributed annually. As the survey results became larger, McKerrow explained, it became necessary to hire an outside company to manage the database. Over the years, the report became more broad-ranging and sophisticated:

- 1991: the first chapter on clinical pharmacy services was published
- 1993/94: there was enough data to provide trending analysis, and a comparative worksheet was included
- 1996: patient outcomes and centralization were introduced as topics
- 1997: the survey was published in the *Canadian Journal of Hospital Pharmacy*
- 1997/98: the decision was made to run the survey every two years, instead of annually, and the leadership conference was introduced

There were external health care events that also were a major influence on the survey, he said. These included the 1999 release of *To Err is Human: Building a Safer Health System* in the US and the Romanow Report in Canada. More recently, the release of CHSP 2015 clearly established pharmacy objectives and changed the view of and about pharmacists and technicians.

Over the entire 30-year history of the survey, McKerrow said, there have been consistent themes like staffing shortages, competition for budgets, image problems, and limitations on clinical practice. However, there have also been significant changes. For example, half the pharmacies have disappeared over the life of the survey; hospitals used to receive 50% of health care spending but now receive just 30%. Also over the history of the survey and report, the number of pharmacists has doubled and technicians quadrupled.

One of the big changes for the survey occurred when its publication moved from print to online, he said. That allowed the expansion and explosion of data and data correlation. The focus changed from the publication of averages to data designed to promote excellence. The key www.lillyhospitalsurvey.ca

to the survey's success has been the people who have supported it over the years. "What's clear," he said, "is that the survey has made a difference . . . it has contributed and enabled many positive changes in pharmacy, particularly in clinical program expansion."

Part 2: The Hospital Pharmacy in Canada Report: A brief look at what the HPC Survey tells us about where we stand today

Notable Findings from the 2013/14 Directors' Survey

SPEAKER

Chuck Wilgosh

Managing Editor

Hospital Pharmacy in Canada Report

Chuck Wilgosh prefaced his remarks by explaining how the Editorial Board develops questions for the survey. He noted that many changes are prompted either by comments or suggestions from respondents or by identified problems interpreting or analyzing data. The board reviews and adds questions at meetings held twice annually.

Wilgosh highlighted some of the more noteworthy results from the 2013/14 survey:

- The number of pharmacists in certain clinical programs has changed significantly from the last survey; in Renal Dialysis they have fallen from 51% to 42%, while in Infectious Diseases and Transplantation, there have been fairly significant increases (Infectious Diseases from 69% to 82%; Transplantation from 56% to 70%).
- 56% of pharmacists practice in an integrated drug distribution practice model, while those in the clinical practice model have increased only slightly to 19%.
- The percentage of pharmacists with independent prescribing rights of any kind has not changed from 2012 and is still at 55%.
- Unit dose drug distribution systems continue to rise slightly at 86%, while automated dispensing cabinets have increased from 18% four years ago to 25%, and the use of traditional drug dispensing systems continues to fall and is only 11%.
- The use of automated dispensing cabinets has more than doubled since 2007/08; 71% of hospitals now use them in some department and their use in emergency departments, adult critical care and adult medicine continues to be high and increasing.
- Training practices for sterile compounding products are being provided in 98% of cases, but technicians are more likely to take refresher courses than pharmacists by a margin of 67% to 56%.
- Only 10% of pharmacies provide medical surveillance for employees involved in cytotoxic drug preparation and only 4% used a closed system for all drugs.
- Staff shortages persist and hover around 5% for pharmacists; and Nova Scotia is the only province with zero vacancies but, overall, pharmacist vacancies have decreased;

interestingly the vacancy rate for technicians has increased slightly to 3.5% from 1.5% four years earlier.

- The budgeted use of pharmacists per total acute patient days has increased to 0.95 hours; and the budgeted hours per inpatient day has also increased to 0.86 hours, pointing to an increased utilization of pharmacy services in most hospitals.
- The ratio of pharmacists to technicians and assistants has not changed significantly.
- The amount of time spent in clinical practice has slowly risen and is now at 56%.
- Over the last two years, pharmacists' salaries have increased by nearly 7% to \$100,859 annually.

Wilgosh said that the CHSP 2015 Objectives could constitute an entire presentation on their own. He noted some of the objectives that had seen the most significant increases. These included:

- Med Rec on discharge (↑37%)
- Med Rec on admission (↑23%)
- Unit dose distribution (↑19%)
- Emergency preparedness plans (↑16%)
- Computerized pharmacy order entry with CDS (↑15%)
- Med Rec on transfer (↑15%)
- Evidence based Rx for CHF (↑13%)
- Using medication relevant portions of patient's EMR (↑13%)

Another set of interesting data came out of the technician sub-topics, he said. There are significant increases in the use of technicians for function checking and function validation and the involvement of technicians is increasing across the board. The lowest increases have been in medication entry and chemotherapy. The use of technicians for validation is increasing so significantly that these duties may soon become the sole responsibility of technicians.

The use of technicians to support clinical services varies widely from province to province, he said. In Alberta, 92% of technicians are involved in the collection of pre-admission drug therapy information, while only 41% do so in the Prairies. Approximately 80% of facilities have made decisions about the use of non-regulated pharmacy technicians: 14% will move those employees to other positions, while over 40% expect to terminate their employment.

The survey data on the evaluation of clinical services reveals that there are only small number of institutions that have a mechanism to assess patient outcomes, Wilgosh said.

There have not been significant changes in the approach to the sterile compounding process, he said, but only 25% of facilities are performing product sterility.

Finally, with respect to pediatric programs, Wilgosh noted that, on average, pharmacists were assigned to support more inpatient and outpatient programs in pediatric hospitals.

Notable Findings from the 2013/14 Front-Line Pharmacists' Survey

SPEAKERS

Jean-François Bussières

Chef, Département de pharmacie et unité de recherche en pratique pharmaceutique

CHU Sainte-Justine

Professeure titulaire de Clinique, Faculté de pharmacie

Université de Montréal

Montreal, Quebec

Kevin Hall

Clinical Associate Professor, Faculty of Pharmacy

University of Alberta

Edmonton, Alberta

Jean-François Bussières and **Kevin Hall** presented some of the noteworthy findings from the Front-line Pharmacists Survey in a lively interactive exchange. Hall began by explaining the setup of the survey and how it was circulated to front-line pharmacists. He noted that there were 718 responses. Interestingly, Bussières said, there was some reluctance at the outset because there was concern that the front-line survey might contradict the results from the directors' survey.

Survey participants were given probability statements and asked to strongly agree, agree, somewhat disagree, or strongly disagree. The strongly agree and agree responses were combined.

Hall highlighted some key results about training and credentializing:

- More than 80% agreed that "by 2019, preference should be given to hiring pharmacists who have completed an accredited hospital pharmacy residency/ M.Sc. program.
- 69% agreed that there should be a "meaningful" salary differential paid to those with a residency/M.Sc.

Bussières pointed out the dissonance between the survey response and the reality with respect to the number of residency positions actually available across the country. Despite the fact that increasing residencies is a CHSP 2015 goal, there is little progress outside of Quebec.

Participants noted that it will require a national agenda and a national discussion to truly advance this agenda but that residency programs have always relied on hospital funding, which has steadily decreased over the years. In Quebec, it was noted, the residency programs are funded by the Ministry of Health, not hospitals, which might explain their greater success.

Hall noted that 88% of those surveyed said that there should be a Canadian specialty certification process, similar to the BPS program in the US, suggesting a significant interest in formalized specialty training. Participants agreed that there was general front-line support for specialized training but questioned its practicality. It's important to take success stories, such as those coming out of Quebec's experience, and use them to help determine how to build those programs on a larger scale.

Both directors and front-line pharmacists were asked to rate the amount of time that was spent in various activities, such as clinical activities and drug distribution. Their ratings were similar for most activities, Hall said. The exception was administrative and other non-patient care activities, which pharmacists said they spent 15% of their time on, while directors estimated only 6%.

Hall said the survey found that 63% of front-line pharmacists said their current practice model was integrated drug distribution. When asked what they thought the model *should* be in five years, 63% said it should be a clinical practice-centred model. Conference participants expressed doubt that there would be such a significant shift within five years, noting that the result might represent "wishful thinking."

Several other interesting findings were noted:

- 85% of pharmacists said technicians should be the ones doing drug distribution.
- The overwhelming majority (96%) agree that there should be pharmacy practice expectations.
- 89% agree that pharmacists should have to adhere to practice guidelines and that they should be accountable for instances of non-adherence and document non-compliance.
- 86% of pharmacists say they should be regularly evaluated to ensure practice expectation compliance.
- While only 37% of front-line pharmacists think that clinical services are necessary on a 24/7 basis, 72% believe that drug distribution services are; however, only 48% of them say they are willing to work on a rotational basis to provide 24/7 coverage.
- 70% of respondents agreed that students should be integrated into the care process and that there are certain levels of activity they can perform.

Bussièrès concluded by challenging participants to come up with ways to use these survey results to drive positive change at their home institutions.

Notable Findings from the 2013/14 Front-Line Technicians' Survey

SPEAKER

Kyle McNair

Regional Director, Pharmacy

Southern Health – Santé Sud

Winnipeg, Manitoba

www.lillyhospitalsurvey.ca

Kyle McNair said that the pharmacy technician profession is currently undergoing a great deal of change. Legislative changes are in place in seven provinces and are pending in others. Because of that, and because of the pending deadline for regulation in Ontario, all of the systems associated with technicians have been ramped up in a relatively short period of time, and there is a great deal of change and stress as a result.

The *Hospital Pharmacy in Canada Report* survey received responses from 550 technicians, half of whom were from Ontario and Quebec. The survey consisted of 35 knowledge-based questions, asking respondents to determine if they possessed the knowledge and skill necessary to perform specific core and advanced scope activities. In 32 of 35 questions, the majority of responses indicated that they believed they possessed the necessary skills.

The weakest responses were in three areas, he said:

- Collect and assemble laboratory test results and other patient-care data that is used by pharmacists in the care of their patient – 42%
- Use established protocols and lab values to calculate changes to parenteral nutrition therapy – 41%
- Gather and collate information on non-compliance with formulary rules – 42%

Even though fewer than half of technicians responding said they had the skills necessary to perform these three tasks, the number of technicians who said they did was still quite high, McNair said. This reinforces the general sentiment that more tasks can and should be passed off to technicians.

When asked if their departments had held appropriate information and education sessions regarding technician regulation, the results showed a distinct disconnect between the experience of technicians and the impression of directors participating in the survey, McNair said. Nationally, 67% of directors surveyed said technicians had received appropriate education. However, only 51% of technicians surveyed said they had received that training. The disparities get even larger in some of the jurisdictions where regulatory legislation is in place. In British Columbia, all directors said they'd provided training, while only 72% of technicians agreed. In Alberta, 92% of directors said training had been provided, while 55% of technicians agreed. In Ontario, where the regulatory deadline is looming, 90% of directors said appropriate education had been provided, in contrast to only 63% of technicians.

The survey found that 41% of technicians across Canada said they were already certified by the Pharmacy Examining Board of Canada (PEBC) or similar body. Nearly 58% of those without certification said they intended to become certified, McNair said. Unsurprisingly, the numbers were higher in jurisdictions where legislation was already in place. Overall, knowledge regarding provincial regulatory change, and the 2018 PEBC deadline and its implications regarding education and title reform, was higher than 50%, except in Quebec.

Participants noted that technician regulation had not even been raised for discussion in some jurisdictions, which are still in the process of reviewing pharmacist competencies. They pointed out the importance of aligning actual needs with legislative changes and, potentially, moving toward establishing standards of practice for technician specialization.

The survey provided an opportunity for respondents to provide open comments. One hundred forty-eight people submitted remarks, one-third of them from Quebec. McNair noted that this response rate is three times higher than in the pharmacists' survey. Some general themes arose in those comments:

- **Theme 1: Duties and Responsibilities:** there was split sentiment regarding the value of changing duties and responsibilities arising from regulatory change; some strongly expressed that it was a “cash grab” and a “waste of time”; others seemed to welcome and embrace the potential expansion of duties.
- **Theme 2: Labor Relations:** several comments raised concerns about the Union representation they had received with respect to the new regulatory environment and 10% of comments said that technicians should have been grandfathered in.
- **Theme 3: Financial Concerns:** many respondents voiced complaints regarding the costs of certification and the lack of associated compensation increases once certification had been achieved.

McNair concluded that the technicians' survey revealed a degree of both optimism and pessimism and some significant disconnection between the experiences of technicians, pharmacists, and directors with respect to regulatory and scope changes.

Part 3: A Brief Glimpse of What the Future Might Hold

Notable Findings from the Future Trends in Hospital Pharmacy Practice Surveys of Directors, Pharmacists, and Discussion of the Importance of the Trends Addressed in These Surveys

SPEAKERS

Jean-François Bussières

Chef, Département de pharmacie et unité de recherche en pratique pharmaceutique

CHU Sainte-Justine

Professeure titulaire de Clinique, Faculté de pharmacie

Université de Montréal

Montreal, Quebec

Kevin Hall

Clinical Associate Professor, Faculty of Pharmacy

University of Alberta

Edmonton, Alberta

Kevin Hall explained that, two years ago, the American Society of Hospital Pharmacists (ASHP) introduced a strategic planning tool called *Pharmacy Forecast*. The efforts to capture future directions for hospital pharmacists in Ontario is a variant on the same theme.

Forty statements were developed, each addressing a pharmacy practice issue that the HPC Editorial Board had identified as a future challenge, Hall said. The statements covered five domains of pharmacy practice:

- Hospital pharmacy leadership
- Pharmacy practice models
- Ambulatory care services
- Pharmacy Informatics
- The pharmaceutical marketplace

Respondents rated each of the statements as very likely, likely, unlikely, or very unlikely. Using Kotter's Change Model, Hall said, respondents could be characterized as follows by their responses:

Very likely:	Early adopters
Somewhat likely:	Early majority
Unlikely:	Late adopters
Very unlikely:	Laggards

Hall and **Jean-Francois Bussièrès** presented some selected results and invited participants to discuss their implications.

Despite the fact that it is a generally accepted best practice, only 63% thought it was likely or very likely that their hospital would have a documented succession plan by 2019, Hall said. In many cases, it was noted, even when departments say they have a plan, it is not widely known by all those involved. Participants talked about talent assessment exercises their hospitals had used, but others noted that identifying successors could have negative impacts on the morale of those who were not chosen. It was also noted that it can be problematic to appear to be making a future promise of promotion.

Another problem that participants identified is that "high performers are not necessarily the same as high potentials." That's why, in many cases, new leaders come from outside the organization. One participant questioned whether there is any evidence that succession planning actually leads to better outcomes.

Others pointed out that conversations with future leaders should focus on career growth, rather than succession planning. Identifying people's talents and helping to manage them by creating future opportunities ensures a pool of qualified talent when succession becomes an issue.

Hall noted that 92% of respondents said it was likely or very likely that there will be a meaningful strategic planning process in place at their institutions in 2019. Bussièrès asked conference participants if they believed that front-line pharmacists and technicians should be involved in that process. The overwhelming majority indicated that they did.

Despite the fact that only 19% of hospital pharmacy departments were using a clinical practice based model in 2012/13, Hall noted that 83% believe that the model that will be in place by 2019. He asked if this seemed like a reasonable expectation. Participants replied that there were inconsistencies in the interpretation of what constituted clinical versus distribution tasks and also noted that there is very little clinical work for those working evenings and weekends. Bussièrès agreed that there isn't really agreement on the optimal balance of tasks in the clinical model. He stressed the importance of ensuring that the list of what is being done is clear in each department's pharmacy practice model.

Another participant noted that the move toward CPOE and more electronic systems would change some duties from distribution to clinical-based. There's a clear consensus that a clinical practice based model is the future ideal for most; the challenge is to ensure that the profession keeps moving in the right direction.

The next statement related to the increased utilization of students and experiential learning, Hall explained. Only 46% said they thought this was likely by 2019. Considering that some think this is one of the most important changes to the practice model, Hall said, this seems like a low figure. Participants identified some of the challenges in increasing students' experiential learning in unionized environments and noted that there might be higher levels of experiential learning in teaching hospitals.

Hall said that 56% of respondents thought it was likely or very likely that pharmacists would have the authority to write discharge prescriptions in the next five years. Participants expressed doubt that this was a reasonable expectation, given the required regulatory changes. In a lot of cases, it was noted, these responses indicated what people would like to see rather than what was actually likely.

Bussièrès noted that when you compare the raw data in the survey with the anticipated or desired changes in practice, scope, and accreditation, there are some significant gaps between perception and reality and real and ideal practice. He encouraged participants to take the information and data that the survey and conference provide and apply it in their own settings to improve practice and outcomes.

Finally, Bussi eres extended his thanks to Kevin Hall for the many years he has spent working to advance hospital pharmacy practice and the mentorship he has provided. On behalf of the Editorial Board and conference participants, he wished Hall well in his retirement.

The Last Word

CONFERENCE CHAIR

Emily Musing

Executive Editor, Hospital Pharmacy in Canada Survey Report

Executive Director of Pharmacy, Clinical Risk, and Quality Patient Safety Officer,

University Health Network

Toronto, Ontario

Emily Musing thanked attendees for participating in the process of creating a roadmap for change and sharing their individual journeys and experiences. The opportunity to bring leaders from across the country together to provide their insights is unique and of inestimable value.

The conference speakers demonstrated the journey that the report has made over the past 30 years and gave some hints as to future directions. Change is a recurring theme, she said, and the only thing that remains consistent. "What this weekend really taught me is that when you put a whole group of pharmacy leaders together, important things can happen.

Musing thanked all the conference speakers and support staff for making the meeting a success and extended a special thanks to Eli Lilly Canada for their continued support. She challenged participants to leave the conference inspired and take what they've learned back out into the world.