



Drug Distribution Systems: The Evolving Role of Technicians and Technology

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WRHA Regional Pharmacy Program

- Single integrated pharmacy service for 6 hospitals and 2 LTC facilities
- Employs approximately 140 pharmacists and 140 technicians
- Patient care is organized around clinical programs (e.g. emergency, critical care, medicine, surgery, pediatrics, geriatrics, long term care, etc.)

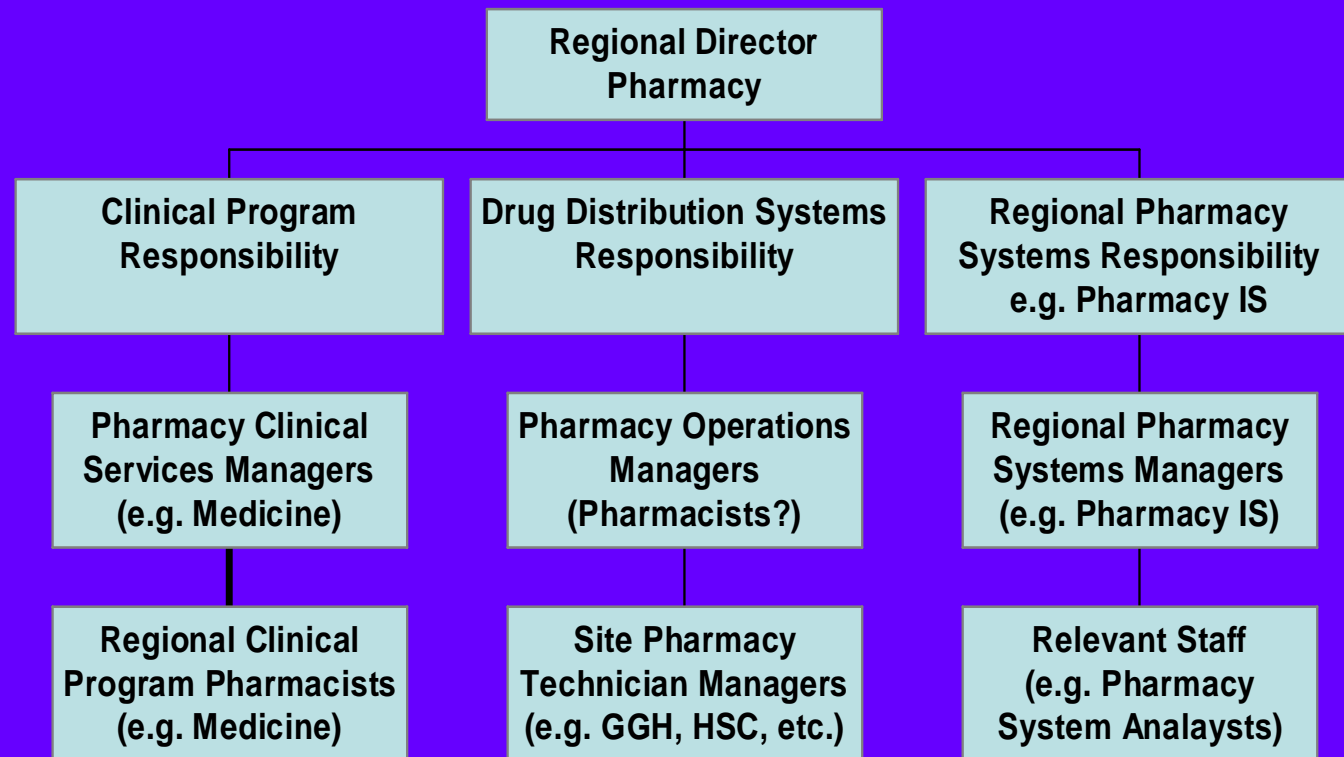
WRHA 2010

Pharmacy Organizational Structure

- Will largely separate the technical drug distribution services from the clinical (direct patient care) services of the department, creating two fairly separate operational units
- Will be supported by the technology enablers (Pyxis and contemporary Pharmacy Information Systems) that allow the technical and direct patient care activities of Pharmacy to be handled separately
- Will create a largely technician run and managed drug distribution system
- Will create teams of pharmacists, managed and lead by Pharmacy Clinical Services Managers, in which the pharmacists will have minimal responsibility for drug distribution activities and will be primarily focused on the delivery of direct patient care activities to regional clinical programs.



2010 Organizational Model - Simplified



Nothing New

- “The counting and pouring often alleged to be the pharmacist’s chief occupation will in time be done by technicians and eventually by automation. The pharmacist of tomorrow will function by reason of what he knows, increasing the efficiency and safety of drug therapy and working as a specialist in his own right. It is in this direction that pharmaceutical education must evolve without delay.”
- Linwood F. Tice Dean, Philadelphia College of Pharmacy, 1966





In the healthcare system generally

- Manpower shortages are perhaps the most significant issue facing the healthcare system
- Current system does not make the best use of its human resources
- The Health Council of Canada has advocated for changes such as automation, using support personnel more extensively, and having professionals practice to their full scope of practice
- Nursing and other professions are being given, and are embracing, expanded scopes of practice
- Automation and information technologies are facilitating changes in the delivery of healthcare services

The Situation in Pharmacy

- In the US, between 1990 and 1999, community retail prescription volumes increased 44%, while pharmacist numbers increased only 5%.
- In 2001, chain pharmacists filled an average of 86 prescriptions a shift, a 54% increase over 5 years.
- Since 2000, it has been widely recognized that we have a major pharmacy manpower shortage in North America, while prescription volumes continue to rise



However....

- Do we really have a manpower shortage?
- Or is it a willpower shortage?
- How willing has Pharmacy been to delegate drug distribution activities to pharmacy technicians?





The Question for Pharmacy?

- “The issue will be whether needed changes occur only grudgingly as a reaction to external forces, or whether they occur proactively as a result of professional leadership.”
- Kenneth Shrine 2002



Has Pharmacy in Canada reached the “tipping point”?

- “Moving Forward: Pharmacy Human Resources for the Future”
- “Blueprint for Pharmacy”



“Moving Forward” Recommendation:
IDENTIFY and ADDRESS the current regulatory opportunities and challenges in enabling the health system to incorporate expanded and innovative roles for pharmacists and pharmacy technicians in the delivery of health care.

- “Provincial legislation governing pharmacy practice often limits what pharmacists and pharmacy technicians may do, and in some cases has not kept pace with advances in research, technology, training, and public expectations
-without the clear legislative authority, many pharmacists and pharmacy technicians are reluctant to carry out certain acts to the extent that their professional competence, and expected standards of practice, would permit.”

Role Change Implications

Maybe.....

- Technicians and technician managers will be the primary pharmacy contacts for drug distribution issues
- Technicians and technician managers will be the primary interface with the pharmaceutical industry (e.g. contracting, purchasing, product issues, etc.)
- Pharmacists and pharmacist managers will focus their efforts on clinical practice issues
- There will be increased specialization of pharmacists
- Pharmacists will have a prescribing role





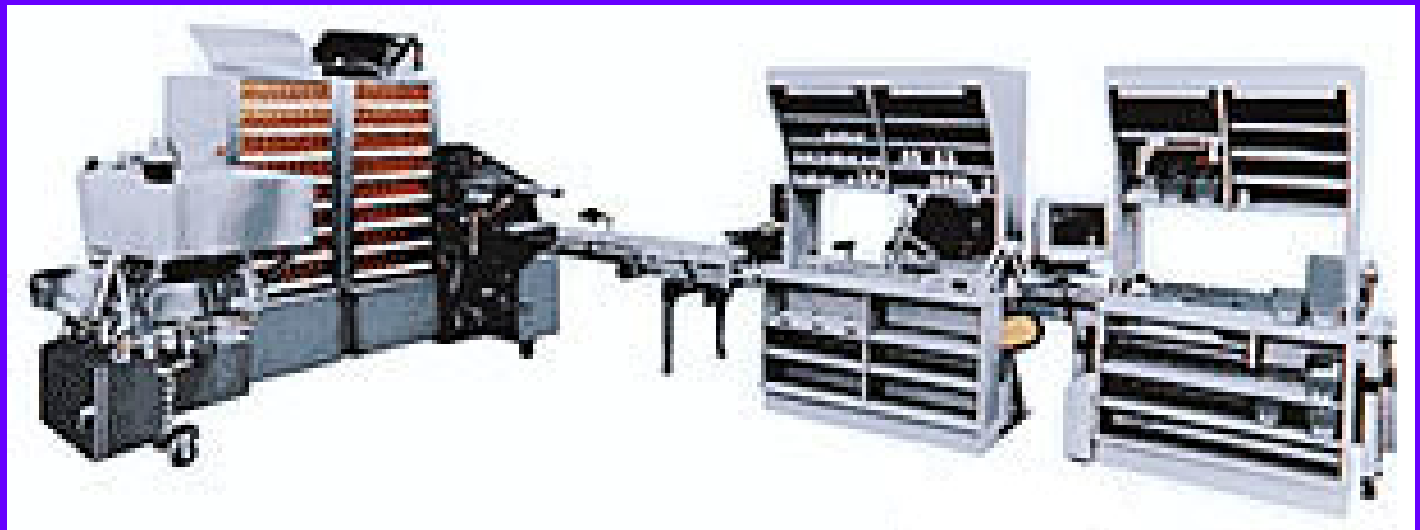
Moving Forward Recommendation: SUPPORT the adoption of technologies that enhance the efficiency and safety of drug distribution

- “In the future, pharmacists will spend more of their time delivering pharmaceutical care to their patients, as regulated pharmacy technicians take on more advanced functions in the technical aspects of drug distribution.
- Adopting appropriate drug distribution technologies in pharmacy practice sites will support both pharmacists and pharmacy technicians in their future health care roles.
- Drug distribution technologies designed to streamline and safeguard the dispensing process include robotics applications, automated dispensing systems and unit-dose packaging equipment.”

Hospital Technologies



Traditional Prescription Filling Technologies



Automation/Technology Implications – Maybe

- Technology will change the way pharmacy services are delivered in the community setting:
 - Central-fill pharmacies using high-volume equipment?
 - Drugless pharmacies? (Office practice environments using central fill pharmacies for prescription filling?)
 - Pharmacists working in multidisciplinary clinic settings transmitting orders to central-fill pharmacies?
 - Dispensing kiosks managed remotely



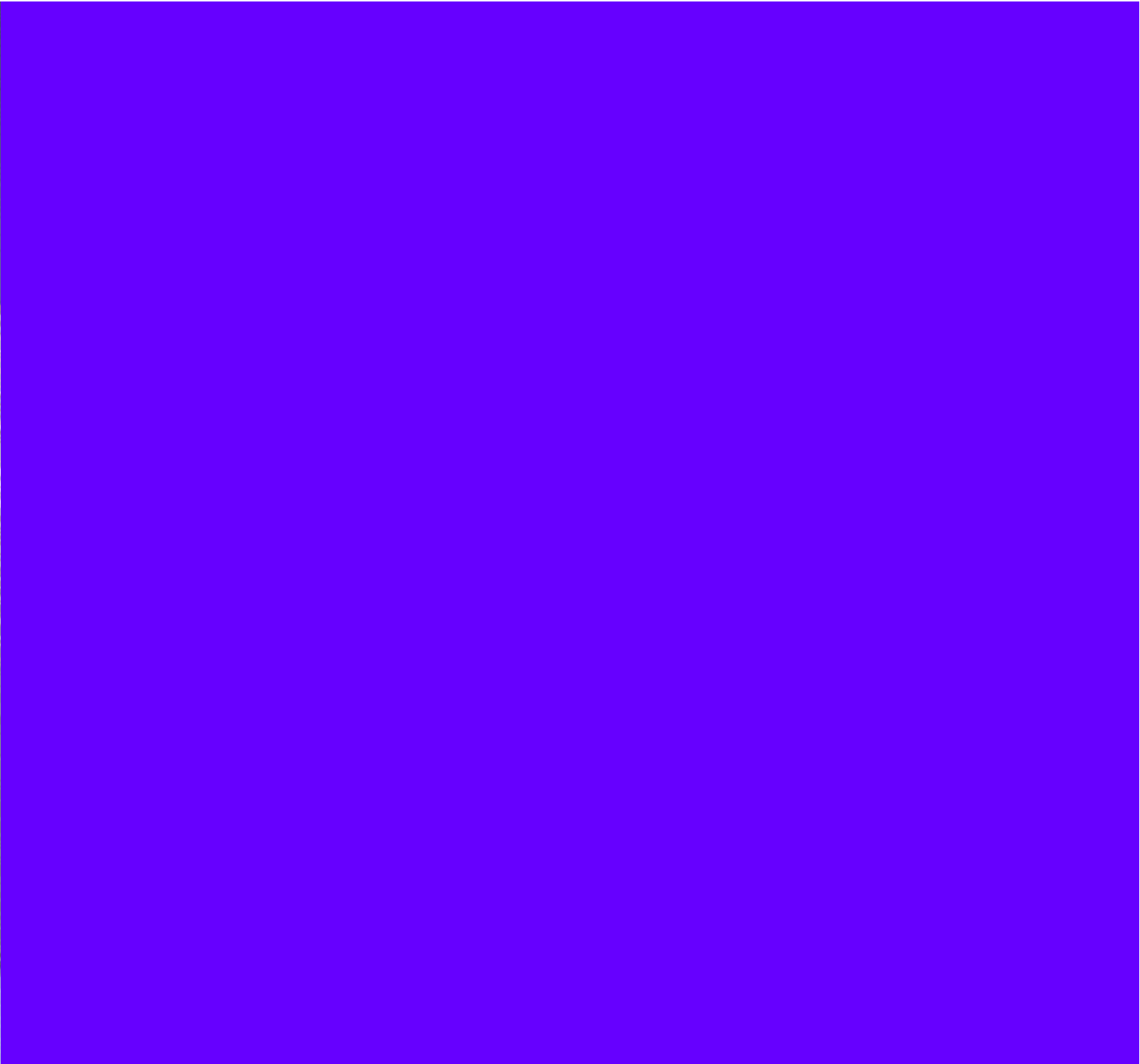


Technicians and Technology

- The combination of adequately trained technicians and drug distribution technologies
- does it finally negate the need for pharmacist participation in the drug distribution system?



The best way to
predict the future is to
create it.



Consequences of the shortage

- Deterioration in working conditions, stress, less time to provide direct patient care, increased risk of medication errors, and less professional satisfaction, particularly for new graduates
- Widespread implementation of pharmaceutical care/drug use management has not occurred, despite the evidence that provision of these services can improve patient outcomes, reduce negative therapeutic outcomes, and reduce overall costs of care



Recent Accomplishments

Technician Role Change

- National entry-to-practice competencies developed for pharmacy technicians (NAPRA)
- Educational outcomes for technician training programs (CPTEA)
- Process and standards to accredit pharmacy technician training programs (CCAPP)
- First trial in 2009 of a national certification/evaluation exam for pharmacy technicians (PEBC)
- Progress on pharmacy technician registration/regulation (ON, BC and AB)



Recent Accomplishments Pharmacist Role Change

- Regulatory changes that enable pharmacist prescribing (eg Alberta)
- Entry-level Pharm D. programs (Montreal, Quebec are started, Alberta has approval in principle)
- Significant evidence of actual role change in some sectors (e.g. Hospital Pharmacy in Canada survey data on the evolving roles of pharmacists and technicians in that sector www.lillyhospitalsurvey.ca)

