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CE JUST FOR TECHNICIANS

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INSTRUCTIONS

1. After carefully reading this lesson, go to eCortex.ca to complete the questions.
2. Answer the test online at eCortex.ca. To pass, a grade of at least 70% (11 out of 15) is required.
3. Complete the required feedback for this lesson online at eCortex.ca.

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The Pharmacy Technician's Role in Oncology Pharmacy

by Melissa Lo, PharmD, RPh



Learning objectives

After completing this lesson, the pharmacy technician participant will be able to:

1. Outline compounding, dispensing and distribution responsibilities for oncology technicians
2. Review roles and responsibilities beyond chemotherapy manufacturing for pharmacy technicians within the cancer centre and hospital setting
3. Discuss various non-traditional opportunities available to pharmacy technicians in oncology pharmacy
4. List resources for pharmacy technicians relating to oncology pharmacy

Introduction

The role of the pharmacy technician has evolved in the past decade, with technicians becoming increasingly recognized and valued members of the healthcare team. As of 2017, nine out of 10 Canadian provinces had introduced legislation to regulate the profession and

also to protect the title of Pharmacy Technicians.⁽¹⁾ There were 9,564 licensed pharmacy technicians in Canada as of January 1, 2020.⁽²⁾ Oncology pharmacy, as a specialty, is quickly growing and expanding. With an estimate of 229,200 new cancer cases in Canada in 2021, there is an evolving need for pharmacy

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technicians to support this population of cancer patients.⁽³⁾

Foundational roles for pharmacy technicians in oncology consist of compounding, dispensing and distributing sterile hazardous preparations.⁽⁴⁾ Historically, the pharmacy technician performed this work exclusively in the hospital setting. Today, pharmacy technician services in oncology have grown to include ambulatory oncology clinics, aseptic compounding companies, independent/private cancer infusion centres or satellite oncology pharmacies, community or specialty oncology pharmacies, investigational drug services, and practice management oncology.⁽⁵⁾ Developing proficiencies in these areas can often lead to a variety of other exciting roles within oncology. As explored in this article, oncology can be a very fulfilling and attractive career option for technicians in any stage of their career.

Traditional roles in oncology within cancer centres and hospitals

Cancer care in Canada is primarily delivered in large tertiary cancer centres. These centres are often located in large cities and can deliver services such as radiation, surgery, advanced diagnostic imaging and chemotherapy.⁽⁶⁾ Many provinces have developed a regional approach, whereby a network of hospitals work together to deliver quality care. This allows use of affiliate and satellite sites of a regional cancer centre, enabling collaboration across facilities.⁽¹³⁾ As the demand for cancer care is increasing within the community, there has been a push to create community-based ambulatory cancer centres that allow patients to be treated closer to home. Though not as comprehensive as tertiary centres, these ambulatory centres may offer the following services to patients: consultations with oncologists, rehabilitation services, infusions of anti-cancer agents and other services.⁽⁷⁾

The four established areas in which pharmacy technicians play an integral role in hospital or community cancer centres are as follows⁽⁴⁾:

- i) Compounding, dispensing and distribution
- ii) Supply chain management
- iii) Technology and informatics
- iv) Quality improvement/assurance

i) Compounding, dispensing and distribution

In addition to following proper aseptic tech-

niques in sterile preparations, pharmacy technicians working in cancer centres handling hazardous preparations are expected to adhere to additional safety standards. Canadian standards for pharmacy compounding of hazardous sterile preparations are determined by the National Association of Pharmacy Regulatory Authorities (NAPRA) Model Standards for Pharmacy Compounding of Hazardous Sterile Preparations (https://napra.ca/sites/default/files/2017-09/Mdl_Stnds_Pharmacy_Compounding_Hazardous_Sterile_Preparations_Nov2016_Revised_b.pdf).

Proficiencies in proper techniques and skills for compounding hazardous sterile preparation are required to ensure both patient safety and the safety of the individual preparing the product. Typically, the specific training and competency assessments are designed by, and completed at the workplace. A comprehensive training program would cover the following topics: “reading and understanding policies and procedures related to compounded hazardous sterile preparations, theoretical training and assessment covering various topics, individualized practical training and assessment of aseptic technique based on gloved finger-tip sampling and a media fill test for various types of sterile preparations to be compounded.”⁽⁸⁾

Once the training program is completed, individuals are expected to undergo regular competency assessments at their workplaces. As required by NAPRA standards, each pharmacy performing hazardous preparations is required to have a sterile compounding supervisor. The supervisor can be either a pharmacist or pharmacy technician and one of their responsibilities is to implement personnel training and assessment programs. In order to maintain the required level of competency, the compounding supervisor must undergo competency evaluation with the same frequency as the staff and be evaluated by a third party.

Note that cancer centres may procure bulk preparations of commonly used anti-cancer agents from external specialized compounding pharmacies such as Calea and Baxter CIVA. These compounding pharmacies are large-scale operations that focus on preparing large-batch quantities of IV admixtures or patient-specific doses.

They are also expected to follow the same standards as set forth by NAPRA.

ii) Supply chain management

The responsibility of supply chain management can often be designated to pharmacy technicians and may include purchasing or procurement, inventory control, and drug shortage management. Managing the supply chain specifically for chemotherapy and other anticancer agents is particularly challenging as it may require complex purchasing approaches and navigating vendors, group purchasing organizations and manufacturer contracts.⁽¹⁰⁾ Due to the high cost associated oncology drugs, it is prudent to manage expiry of the agents and manage an appropriate supply of these drugs to minimize wastage.

iii) Technology and informatics

As healthcare organizations move towards utilizing more complicated technology systems to improve efficiency and patient safety, there is a growing need for individuals with a strong background in drug systems. Particularly, pharmacy technicians with a strong background in oncology can fill roles in pharmacy informatics relating to automation and technology systems management, supervision of projects, policy and governance, customer service, charge integrity, report interface/database management, automation management, new technology assessment, workflow optimization, and end-user training and education.⁽¹¹⁾

iv) Quality improvement/assurance (AQ)

Due to the complex nature of cancer agents and the potential for critical errors, pharmacy technicians are in a unique position to lead quality review, improvement implementation and quality-assurance evaluations, and to measure workflow for efficiency. An emerging new and exciting area for pharmacy technician-led is the development of technician-led Best Possible Medication History (BPMH). This is an essential role in oncology due to the increased risk of drug interactions between oncology agents and the patient's medications.

Non-traditional roles in oncology within cancer centres, hospitals, private infusion clinics and specialized pharmacies

Due to the complexity of dispensing oral



anticancer agents, specialized outpatient pharmacies focusing on oncology are often located within cancer centres or in other specialized pharmacy settings. Community pharmacies focusing on oncology have a unique and specialized role through dispensing and inventory management of oral chemotherapy agents, targeted molecular therapies and other supportive care medications such as antiemetics, anticancer hormone injections and other cancer-related medications. These medications are often expensive and may require specialized training to handle and dispense. An example of specialized training includes dispensing and managing lenalidomide, pomalidomide and thalidomide through RevAid, a controlled distribution program due to the increased risk of embryo-fetal exposure.⁽¹⁴⁾

Medication reimbursement specialists or drug access navigators are valued members of the oncology care team as they aid in investigating and coordinating funding for a patient's prescribed drug therapy.⁽¹²⁾ Though the role is not limited to pharmacy technicians, many have found it a fulfilling career as it merges their background in oncology drug management with patient care. For those interested in pursuing a career as a drug navigator, Drug Access Canada has released a free training module.

Cancer centres participating in clinical trials often employ pharmacy technicians. Pharmacy technicians in these investigational drug pharmacy services are actively engaged in managing investigational agents in the areas of dispensing, managing drug source/suppliers, maintaining appropriate storage conditions, drug preparation, managing returns, proper disposal and other administrative requirements. Due to the complex nature of drug trials, additional training requires knowledge of Good Manufacturing Practices (GMP), Health Canada's Guidance Document: Part C, Division 5 of the Food and Drug Regulations "Drugs for Clinical Trials Involving Human Subjects", and local ethical regulations.⁽⁴⁾

Non-traditional roles in oncology related to cancer agencies and government organizations/pharmaceutical companies

Within the pharmaceutical industry, pharmacy technicians with experience in oncology can find opportunities as a patient support program (PSP) manager, market access associate or clinical trials associate. Provincial cancer agencies and other regulatory and advisory agencies such as Health Canada and The Canadian Agency for Drugs and Technologies in Health (CADTH) have a number of opportunities available for

technicians. Additional opportunities may be available with third-party consulting and quality management companies focused on helping pharmacies build and certify their sterile preparation clean rooms and the individuals working within them.

Pharmacy technician organizations relevant to oncology pharmacy

The critical role of pharmacy technicians in oncology pharmacy cannot be understated. This is still a largely untouched area with many evolving opportunities for pharmacy technicians. The following associations are trusted resources (see Table 1) for those interested in a career in oncology pharmacy.

Conclusions

As the need for cancer therapy continues to grow, pharmacy technicians will continue to be key members of the oncology team. Common areas of practice are in large cancer centres, but as more patients are being treated in the community, pharmacy technicians will be increasingly involved in pharmacy operations in community-based cancer centres. Beyond the opportunities available in hospital and community cancer centres, fulfilling careers for pharmacy technicians interested in oncology are also found in the pharmaceutical industry and regulatory agencies.

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TABLE 1

Resource	Website
Canadian Association of Pharmacy in Oncology (CAPHO)	www.capho.org
National Community Oncology Dispensing Association (NCODA)- Oncology Pharmacy Technician Association (OPTA) **US Based Organization**	www.ncoda.org/oncology-pharmacy-technician-association-opta/
Hematology and Oncology Pharmacy Association (HOPA)	www.hoparx.org

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QUESTIONS

Please select the best answer for each question and answer online at eCortex.ca for instant results.

- With new advancements in cancer drug therapy and an increasing number of people with cancer, there is a growing need for pharmacy technicians trained in oncology pharmacy.
 - True
 - False
- Pharmacy technicians can practise oncology pharmacy in which of the following practice areas?
 - Hospitals and ambulatory oncology clinics
 - Aseptic compounding companies, independent/private cancer infusion centres or satellite oncology pharmacies
 - Community or specialty oncology pharmacies, investigational drug services and practice management oncology
 - All of the above
- Cancer care is often delivered in large city centres and includes the following services:
 - Radiation and surgery

- Advanced diagnostic imaging
 - Chemotherapy
 - Cardiac angiography
 - All of the above
 - A, B, C
 - A & D
- Pharmacy technicians can play an integral role in oncology in the hospital environment in which of the following areas?
 - Compounding, dispensing and distribution
 - Supply chain management
 - Technology and informatics
 - Quality improvement/assurance
 - All of the above
 - What standards must be followed by licensed pharmacies in Canada for compounding hazardous sterile preparations?
 - USP 700
 - NAPRA Model Standards for Pharmacy

- Compounding of Hazardous Sterile Preparations
 - NIOSH list of antineoplastic and other hazardous drugs in healthcare settings 2012
- The role of sterile compounding supervisor can be filled by a:
 - Pharmacist only
 - Pharmacy technician only
 - Pharmacist or pharmacy technician
 - Hazardous sterile preparation training should include the following:
 - Reading and understanding policies and procedures related to compounded hazardous sterile preparations
 - Theoretical training and assessment covering various topics
 - Gloved finger-tip sampling and media fill test
 - All of the above

8. Which advanced roles can a pharmacy technician participate in relating to revenue management and finance?
 a) Prior authorizations
 b) SAP and compassionate programs
 c) Reimbursement from funding bodies
 d) All of the above
9. Managing supply chain for chemotherapy and other anticancer agents is very simple and very few errors can occur.
 a) True
 b) False
10. A pharmacy technician can perform which of the following roles relating to pharmacy informatics?
 a) Automation and technology systems management
 b) Managing group purchasing organization
 c) BPMH
 d) Chemotherapy order entry
11. Medication reimbursement specialists or drug access navigators are responsible for investigating and coordinating funding for a patient's cancer therapy.
 a) True
 b) False
12. Pharmacy technicians working in a specialized outpatient oncology pharmacy may dispense the following medications:
 a) Oral chemotherapy and targeted agents
 b) Supportive care medications
 c) Radiopharmaceuticals
 d) Veterinary products
 e) A & B
 f) C & D
13. Investigational Drug Services Pharmacy Technicians should attain additional training relating to regulatory issues by being familiar with:
 a) Board Certification of Pharmacotherapy Specialist (BCPS)
 b) Good Manufacturing Practices (GMP)
 c) Health Canada's Division 5 Drugs for Clinical Trials Involving Human Subjects
 d) B & C
 e) A & B
14. Pharmacy technicians with a strong background in oncology can find many different roles in the pharmaceutical industry.
 a) True
 b) False
15. Which of the following organizations supports pharmacy technicians practising in oncology?
 a) NCODA (OPTA)
 b) HOPA
 c) CAPhO
 d) ACCP
 e) All of the above
 f) C & D
 g) A, B, C

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