

## Pharmacy

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## A. Occupations

### 1) Pharmacist

- Regulated health profession in Ontario - Ontario College of Pharmacists [www.ocpinfo.com/](http://www.ocpinfo.com/)

#### Role

Source: <http://www23.hrdc-drhc.gc.ca/2001/e/groups/3131.shtml>

There are two main categories of Pharmacists: 1) community, hospitals and retail pharmacist and 2) industrial pharmacist.

Community pharmacists and hospital pharmacists perform some or all of the following duties:

- Check prescriptions for proper dosage
- Compound prescribed pharmaceutical products by calculating, measuring and mixing the quantities of drugs and other ingredients required and filling appropriate containers with correct quantity
- Dispense prescribed pharmaceuticals to customers or to other health care professionals and advise them on indications, contraindications, adverse effects, drug interactions and dosage
- Maintain medication profiles of customers including registry of poisons and narcotic and controlled drugs
- Ensure proper preparation, packaging, distribution and storage of vaccines, serums, biologicals and other drugs and pharmaceuticals
- Order and maintain stock of pharmaceutical supplies
- Advise customers on selection and use of nonprescription medication
- May supervise and co-ordinate the activities of other pharmacists, pharmacy assistants, pharmacy technicians and other staff.

Industrial pharmacists perform some or all of the following duties:

- Participate in basic research for the development of new drugs
- Formulate new drug products developed by medical researchers
- Test new drug products for stability and to determine their absorption and elimination patterns
- Co-ordinate clinical investigations of new drugs
- Control the quality of drug products during production to ensure that they meet standards of potency, purity, uniformity, stability and safety
- Develop information materials concerning the uses, properties and risks of particular drugs
- Evaluate labelling, packaging and advertising of drug products
- Promote pharmaceutical products to health professionals.

#### Educational Requirements

- 4 years Bachelor of Science degree in pharmacy
- The Faculty of Pharmacy at the University of Toronto is the only school of pharmacy in Ontario
- You must also complete a period of supervised practical training

- To obtain certification, graduates must pass the Pharmacy Examining Board of Canada Qualifying Examination and be licensed with the Ontario College of Pharmacists

### Skills/Qualities

#### *Technical*

- Basic computer skills: word processing, internet, email, presentation programs, spreadsheet and database knowledge

*Source: Pharmacist Computer Skills and Needs Assessment Survey, Robert M Balen<sup>1</sup>, PharmD; Peter J Jewesson<sup>2</sup>, PhD, FCSHP, Journal of Medical Internet Research, 2004 <http://www.jmir.org/2004/1/e11/>*  
 This study was conducted to gain a better understanding of the baseline computer skills and needs of our hospital pharmacists immediately prior to the implementation of an applied informatics program.

- Few respondents reported experience with handheld computers
- Software use experience varied according to application. Although patient-care information software and e-mail were commonly used, experience with spreadsheet, statistical, and presentation software was negligible
- The respondents were familiar with Internet search engines, and these were reported to be the most common method of seeking clinical information online
- Although many respondents rated themselves as being generally computer literate and not particularly anxious about using computers, the majority believed they required more training to reach their desired level of computer literacy
- Lack of familiarity with computer-related terms was prevalent
- Self-reported basic computer skill was typically at a moderate level, and varied depending on the task. Specifically, respondents rated their ability to manipulate files, use software help features, and install software as low, but rated their ability to access and navigate the Internet as high
- Respondents were generally aware of what online resources were available to them and Clinical Pharmacology was the most commonly employed reference.
- In terms of anticipated needs, most pharmacists believed they needed to upgrade their computer skills. Medical database and Internet searching skills were identified as those in greatest need of improvement

#### *Communication*

- Superior oral and written communication skills

#### *Other*

- Ability to identify, prevent and resolve drug related problems
- Excellent personnel management skills
- Excellent planning, organizational and time management skills
- Ability to direct and teach staff
- Ability to keep up with latest development of new drugs
- Strong interpersonal (client-focused) skills
- Excellent teamwork skills
- Good mathematical skills
- Attention to detail, accurate

### Typical Employers

Pharmacists typically work in community and hospital pharmacies, pharmaceutical firms, government departments and agencies, and pharmacies and other retail organizations.

Source: <http://www.worthknowing.ca/client/ocp/WK.nsf/web/Your+Pharmacist!OpenDocument>

- Nearly seven out of 10 Ontario pharmacists practice in the community setting. Community pharmacies include independent and franchise retail pharmacies, medical clinics and pharmacies offering specialized services such as long-term care support.
- One in six of Ontario pharmacists practice in hospitals. Hospital pharmacists work in hospital inpatient pharmacy departments overseeing the dispensing and storage of all medicines given to all patients in the hospital

<http://www.ocpinfo.com/client/ocp/ocphome.nsf/web/e-factsheet!OpenDocument>

- A few pharmacists with a degree in pharmacy (who are not registered with the Ontario College of Pharmacists) also work in other positions in industry (i.e., insurance, pharmaceutical), education and administration. A Certificate of Registration may not be required for some of these positions.

### Average Hourly Wage

Source:

[http://www.labourmarketinformation.ca/standard.asp?ppid=81&lcode=E&prov=35&gaid=9219&occ=3131&search\\_key=1&search\\_type=&employer\\_potential=&new\\_search=](http://www.labourmarketinformation.ca/standard.asp?ppid=81&lcode=E&prov=35&gaid=9219&occ=3131&search_key=1&search_type=&employer_potential=&new_search=)

\$35.00 (high) \$26.00 (low)

Salaries vary according to such factors such as experience, level of responsibility, seniority, size of company, size of city, etc.

## **2) Pharmacy Technician/ Assistant**

- Not currently a regulated profession in Ontario
- Pharmacy technicians/assistants may wish to request certification from the College of Pharmacists. This certification is strictly voluntary. Pharmacy technicians/assistants may be eligible to write the certification exam. Some employers require that pharmacy technicians/assistants be certified.

### Role

- The terms pharmacy 'technician' and 'assistant' are often used interchangeably. In most cases the term 'assistant' implies less responsibility than 'technician', but this is not always the case.
- Pharmacy technicians/assistants provide technical and clerical support to pharmacists. Unlike pharmacists, they cannot counsel patients and cannot take prescription information over the phone.

Source: <http://www.onip.ca/article/71/#s1>

Pharmacy technicians duties are varied depending on the specific pharmacy:

- Assist the pharmacist in the day-to-day operation of the pharmacy
- Measure, mix, package, label and deliver drugs
- Restock medications and related supplies
- Identify expired products for disposal, destruction, or return to manufacturer
- Input prescriptions into the computer system
- Maintain computerized lists of medications taken by patients
- File medication orders
- Maintain inventory
- Deal with clients on a one-to-one basis, direct them to items or the pharmacist for medication consultation
- Look after home health-care products such as canes, vision aids and hearing aids
- Pre-package medications (including unit dose packaging)

Source: <http://www23.hrdc-drhc.gc.ca/2001/e/groups/3414.shtml>

- Assist pharmacists by compounding, packaging and labeling pharmaceutical products and by maintaining prescription records and inventories of medications and pharmaceutical products

### Educational Requirements

- Pharmacy technicians require completion of 2 years college diploma program ( i.e., Humber, Mohawk, Niagara colleges etc.)
- Pharmacy assistants require completion of secondary school and several months of on-the-job training, or a five- to nine-month college program in pharmaceutical services  
<http://www23.hrdc-drhc.gc.ca/2001/e/groups/3414.shtml>

### Skills/Qualities

#### *Technical*

- Basic computer skills: word processing, internet, email, spreadsheet and database knowledge; may require presentation programs
- Source: <http://www15.hrdc-drhc.gc.ca/english/profiles/27.asp>  
Note: complexity scale 1-5
  - Use word processing. For example, they may enter patient information into templates. (2)
  - Use a database. For example, they may access the hospital's patient information records using specialized software, such as Pharm Net. (2)
  - Use other computer applications. Pharmacy assistants may print computer-generated dispensing orders.

#### *Communication*

- Very good oral and written communication skills

#### *Other*

- Excellent problem recognition and problem solving-skills
- Excellent organizational skills
- Ability to multi-task
- Excellent interpersonal skills
- Ability to work with minimal supervision from the pharmacist
- Able to perform repetitious work accurately
- Able to deal pleasantly and tactfully with customers
- Willing and able to take directions
- Possess good math skills
- Have the ability to see slight differences in color and size
- Possess the ability to use your hands and fingers to move small objects

For a detailed breakdown of skills and complexity levels of 'Other Aides and Assistants in Support of Health Services NOC 3414' see the HRSD web site:

<http://www15.hrdc-drhc.gc.ca/english/profiles/27.asp>

For more information on what is expected see Ministry of Training Colleges and Universities Pharmacy Technician Program Standard

<http://www.edu.gov.on.ca/eng/general/college/progstan/health/pharma.html>

### Typical Employers

Pharmacy technicians/assistants usually work under the supervision of pharmacists in hospital and community pharmacies, and retail pharmacies. Some pharmacy technicians work in pharmaceutical and insurance companies.

### Average Hourly Wage

\$13.79(average)    \$20.35 (high)

Salaries vary according to such factors such as experience, level of responsibility, seniority, size of company, size of city, etc.

## **B) Labour Market Prospects**

Source: <http://jobfutures.ca/noc/3131p3.shtml>

The employment growth rate for pharmacists will likely be significantly above average, occurring primarily in retail businesses. Retirement and employee turnover will likely add significantly to the number of job openings. The number of job openings will likely exceed the number of recent graduates/immigrants.

Source:[http://www.hamiltonhealthsciences.ca/careers/upload/file\\_collection/Healthcare\\_factsheets\\_2003.pdf](http://www.hamiltonhealthsciences.ca/careers/upload/file_collection/Healthcare_factsheets_2003.pdf)

The demand for pharmacists in Hamilton is related to the aging population and the increasing need for prescription drugs. The rapid development of new drugs for treatment and diagnosis means that pharmacists must update their knowledge continually. In addition, use of computerized customer and pharmaceutical databases will require pharmacists to develop appropriate skills. However, mail order pharmacies, discount chains and the substitution of pharmaceutical assistants for pharmacists are other trends which may decrease the demand for pharmacists. Today's pharmacists must have strong communication and phone skills as the trend over the past 8-10 years is that pharmacists have become a stronger part of the patient's primary care.

## **C) ITPs in the Field**

All ITPs have completed university courses in pharmacology and have knowledge of medications such as drug indications, contraindications, adverse effects, interactions, dosage, mechanism of action and monitoring. As physicians, they have the skills to advise patients on the selection or usage of prescribed and nonprescription medications.

ITPs have the knowledge of medications, medical terminology, communication skills and experience working with people that are required of pharmacy technicians/assistants. They are able to maintain patient profiles and take inventory of prescriptions and over-the-counter medications.

ITPs may lack job satisfaction in the role of pharmacy technician/assistant as there may not be enough responsibility and authority in the position to sufficiently challenge them.

## D) Links

### *Educational Institutions*

- Faculty of Pharmacy, University of Toronto <http://www.utoronto.ca/pharmacy/index.htm>
- Mohawk College Pharmacy Technician program:  
<http://www.mohawkcollege.ca/dept/fachshs/phrmashp.html>
- Humber College Pharmacy Technician program <http://postsecondary.humber.ca/07731.htm>

### *Professional Organizations*

- Ontario College of Pharmacists [www.ocpinfo.com/](http://www.ocpinfo.com/)
- The Ontario Pharmacists' Association (OPA) <http://www.opatoday.com/OPA/home.html>
- Canadian Pharmacists Association <http://www.pharmacists.ca/flash.cfm>
- Council of the Ontario College of Pharmacists <http://www.ocpinfo.com/>
- Canadian Association of Pharmacy Technicians <http://www.capt.ca/menu.html>
- Canadian Society of Hospital Pharmacists <http://www.cshp.ca/>

### *Related Web Sites*

- Ministry of Training Colleges and Universities - Pharmacists  
<http://www.edu.gov.on.ca/eng/general/postsec/openingdoors/occupations/pharmac.html#c>
- Ontario Network of International Professionals - Pharmacy technicians  
<http://www.onip.ca/article/71/>
- Canada's Research-Based Pharmaceutical Companies <http://www.canadapharma.org/>
- Job search <http://healthcare.monster.ca/>
- The Pharmacy and Pharmaceutical Industry Career Center and Job Board  
<http://www.rxcareercenter.com/>