



## HEALTH CARE OCCUPATIONS IN DURHAM REGION

One of the most significant labour force challenges we face in our region is the shortage of health care practitioners, particularly nurses, physicians and technologists. This trend will continue as our population continues to age and grow, and many current health care professionals retire over the coming years.

Collaborative efforts and strategies to attract new entrants to the field and retain current practitioners in this highly competitive sector will be required to meet our present and future needs.

There are many exciting career opportunities in health care. This catalogue or guide, first created in 2003 and now in its 4<sup>th</sup> edition, was created by the Durham Region Local Training Board to provide more specific information about the different occupations that can be found in the health sector. This edition offers insight into 32 different occupations, and includes the addition of Medical Physicist. Many of these occupations are in current demand in Durham Region. The information has proven to be valuable to students and individuals considering their career choices and educational pathways. It has also been helpful to teachers and others who provide career counselling and guidance.

We want to thank Kerry Delaney of K.C. Consulting in Whitby for her research and assistance in updating the 4<sup>th</sup> edition of "Health Care Occupations in Durham Region". We especially thank Randy Fallis from Lakeridge Health, Janet Harris from Durham Access to Care, Mary MacDonald from Community Advantage Rehabilitation, Rita Winn from Lovell Drugs, Linda Skene from Durham Mental Health Services, Richard Armstrong from Durham Region Emergency Medical Services, and Annette Laferriere from the Region of Durham's Health Department, for their assistance in helping us review and update the occupations listed in this 4<sup>th</sup> edition.

The entire catalogue is available on the Local Training Board's web site. ([www.drltb.com](http://www.drltb.com)) Links to it from other Internet sites are also encouraged.

If you have any comments on the catalogue or suggestions for improvement, we urge you to give us a call. If you have any ideas on future strategies or collaborative efforts that will help bolster our supply of health care professionals, we would be happy to hear from you.

Rick Lea, Executive Director  
Durham Region Local Training Board  
March 2007



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## **OUR INVITATION TO YOU**

Thank you for taking the time to look more closely at the fascinating world of health care. The opportunities that are available to you as a health care provider are unlimited. The work that awaits you is as rewarding as it is challenging.

This catalogue has been prepared by health care providers in Durham Region in partnership with the Durham Region Local Training Board. It has been designed to help you to find out more about the broad range of occupations that are available to you within the life and health sciences sector, and to identify the ones you may be interested in pursuing as your career. We invite you to browse through it, and to investigate further the occupations that are of interest to you through the resources that are provided.

Every day, as practicing health care providers, we experience the joys and the sorrows that are part of our work. We chose our health care occupations because we wanted to help other people and we were interested in the biological sciences. We remain dedicated to them both because of the personal satisfaction they provide and because of the environment of support and team work in which we work.

We invite you to join us, and we look forward to working with you in the future as a new member of our health care team in Durham Region.

## USING THIS CATALOGUE

### How It is Organized

The Introduction provides an overview of the range of opportunities that the health care field can offer, as well as the personal qualities that are required of effective health care professionals. The Inventory Section provides a two page fact sheet about each occupation.

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### \* Regulated Health Professionals

Some health care practitioners are regulated by law and some are not. The professions that are listed above with an asterisk are regulated health professions. This means that these professionals are required, by law, to fulfill certain training and continuing education criteria in order to receive and maintain a license to practice. They also must belong to a professional organization, called a College, which is responsible for setting standards for the profession in order to protect the public's interest and for disciplining members of the profession who do not live up to professional standards. (Source: [www.legalline.ca/health/694.html](http://www.legalline.ca/health/694.html)). (Note: Human Services Counsellors may be regulated health professionals if they are registered as Social Service Workers)

### People Who Are Trained Outside of Canada

People who are trained outside of Canada should contact the appropriate professional College, Association or training facility to assess their eligibility to practice in that field in Ontario.

## **INTRODUCTION**

### **What Kinds of People are needed as Health Service Providers?**

Health care providers are a special group of people, each of whom brings their own skills and expertise to work in a coordinated system. The personal qualities that you need to bring to the health care system are your:

- compassion,
- good judgement and analytical skills,
- interpersonal and communication skills,
- ability to work independently and as a member of the health care team,
- flexibility and organizational skills, and
- ability to maintain strict confidentiality.

### **What Kinds of Opportunities and Challenges exist in Health Care?**

#### **Opportunities**

Once you are trained in your chosen health care occupation you will be in high demand by employers in Durham Region. There are shortages of many medical specialists throughout the Region. This is a trend that is expected to continue because many current practitioners will be retiring while the population continues to grow. Although the majority of jobs are in the public sector, there are private companies in the Region that provide health care and diagnostic services, and many drug stores that require professional pharmacists and pharmacy technicians on site.

If you live in Durham Region you will be able to train and work in your occupation of choice without leaving home. If you live outside of Durham Region it is a short commute both from Toronto and the Peterborough area to work here. If you live further away, why not consider moving here? Read on to find out more about Durham Region and the employment opportunities it provides.

#### **Challenges**

Canadians are proud of their health care system. As in the rest of Canada, massive changes have taken place in health care in Ontario over the past decade to make sure it will continue to serve us well in the future.

Change is never easy. Many of the service system changes that were needed in Durham Region have taken place. Change is still to come in developing the community mental health service delivery system, in cancer care services, and in the further integration of local health services. As always, health service providers in Durham Region remain focused, first and foremost, on meeting the health care needs of a growing population.

#### **About Durham Region**

Durham Region is one of the fastest growing regions in all Canada. It is located in Ontario, immediately east of Toronto. The 600,000 people who live in Durham Region live mostly along the shore of Lake Ontario in an urban belt that is linked with Toronto by frequent commuter train service (GO Train) and a multi-lane highway system (the 401). The north part of Durham Region is rural. Ideally located between the resources of Canada's largest city and within a 2 hour drive of 'cottage country', residents of Durham Region benefit from both worlds. The cities of Oshawa and Pickering, and the towns of Ajax, Whitby, Port Perry, Uxbridge and Bowmanville are the main centres in Durham Region. For more information about Durham Region see [www.region.durham.on.ca](http://www.region.durham.on.ca).

## **About Health Care Services in Durham Region**

### **Services**

Most medical and health care services in Durham Region are funded by the Government of Ontario ([www.gov.on.ca/health](http://www.gov.on.ca/health)), as part of Canada's publicly funded health care system ([www.hc-sc.gc.ca](http://www.hc-sc.gc.ca)). The major publicly funded health care employers in Durham Region include:

- three general hospital corporations (Lakeridge Health, the Rouge Valley Health System, and the Markham-Stouffville Hospital) at six hospital sites in Ajax, Whitby, Oshawa, Uxbridge, Bowmanville and Port Perry,
- 18 Long-Term Care Facilities located throughout the region,
- a tertiary centre for mental health services (Whitby Mental Health Centre),
- a children's rehabilitation centre (Grandview Children's Centre),
- comprehensive in-home services that are provided primarily by Durham Access to Care (now a branch of the new Central East Community Care Access Centre – Durham), Personal Attendant Care, and Community Care Durham,
- a range of community-based mental health services that are provided primarily by the Canadian Mental Health Association, Durham Mental Health Services, COPE, and the Alzheimer Society of Durham Region, and
- The Regional Municipality of Durham – Health and Social Services Departments.

Durham Region is served by a full range of medical specialists. The many centres of excellence in Toronto are Durham Region's referral centres for people who need very specialized diagnostic, medical and hospital services.

### **Training**

Access to world-class training for health care occupations is currently available in Oshawa at Durham College ([www.durhamc.on.ca](http://www.durhamc.on.ca)) and the new University of Ontario Institute of Technology ([www.uoit.ca](http://www.uoit.ca)). Because it is close to Toronto, initial training and education for many of the health service professions, as well as world-calibre continuing education, are easily accessible there. Close by, McMaster University (Hamilton), the University of Toronto and Ryerson University (Toronto), Michener Institute of Applied Health Sciences (Toronto), George Brown College and Centennial College (Toronto) and Queen's University (Kingston) all offer comprehensive health care curricula.

### **Sources of Information for the Catalog**

Sources of further information for each occupation are included at the end of each two-page profile or fact sheet, as Professional Associations or Related Websites. Other sources of information specific to occupations in health care include:

Ontario Job Futures 2000: [www.on.hrdc-drhc.gc.ca](http://www.on.hrdc-drhc.gc.ca)

Ontario Ministry of Education/Ministry of Training, Colleges and Education: [www.edu.gov.on.ca](http://www.edu.gov.on.ca)  
Job Futures 2000: <http://jobfutures.ca>.

## DENTIST

### What is a Dentist?

Dentists are self-regulated health professionals who diagnose and treat disorders of the teeth and mouth. There are nine recognized dental specialties in Canada. They are dental public health; endodontics; oral and maxillofacial surgery; oral medicine and pathology; oral and maxillofacial radiology; orthodontics and dentofacial orthopedics; pediatric dentistry; periodontics; and prosthodontics. Dentists may choose to work in a general dental practice or in one of the specialty areas after receiving specialty training.

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### About the Work....

#### Responsibilities

The work that dentists do depends upon in which field they practice. In general their responsibilities may include some or all of:

- Examining patients' teeth, gums and surrounding tissue to diagnose disease, injury and decay and plan appropriate treatment,
- Restoring or extracting diseased and decayed teeth,
- Performing oral surgery, periodontal surgery and other treatments,
- Cleaning teeth and instructing patients on oral hygiene,
- Designing bridgework, fitting dentures and providing appliances to correct abnormal positioning of the teeth and jaws, or writing fabrication instructions or prescriptions for use by denturists and dental technicians, and
- Supervising dental hygienists, dental assistants and other staff.

#### Education, Training and Certification Required

To practice as a dentist in Ontario you must graduate from a 4 year program at an accredited dental school, be certified by the National Dental Examining Board, successfully complete an Ethics and Jurisprudence Exam, and then be certified with the Royal College of Dental Surgeons of Ontario. Dentists who wish to specialize in a particular field of dentistry must complete an accredited residency program, of at least one year, in that specialty and then pass certification exams.

#### Potential Earnings

Earnings vary greatly depending on dentists' billings, and the nature and location of their practices. Most dental procedures are not covered by publicly administered health insurance in Canada. However, many private insurance companies provide coverage for dental procedures, often through workplace benefit packages.

#### Typical Workplaces and Working Conditions

Dentists usually work in very clean environments in their own dental practices. Independent dental practices with a small support staff that includes dental hygienists and dental assistants is the most common work arrangement, although practices with teams of dentists are also common. Dentists' offices are usually open during regular business hours for 4 or 5 days per week and on some evenings and weekends. Dentists may also work in hospitals or in Public Health Units. Dentists are always in contact with patients' saliva and frequently with blood, both of which can transmit infections. They wear masks, gloves and safety glasses to protect themselves from this risk. They may also be at risk for bites and must be able to manage anxious patients.

#### Durham Region Employers

Most dentists are in private practice, however employers of dentists in Durham Region include:

- Region of Durham Health Department: [www.region.durham.on.ca](http://www.region.durham.on.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)

#### Employment Outlook

Opportunities for dentists will increase in Durham Region as the population continues to grow. Changes in the technology available to dentists will continue to influence the type and amount of work they do. Expanded or contracted coverage by dental insurance plans and the amount of public awareness of the importance of dental health will also affect the demand for dental services. Cosmetic and aesthetic procedures are the highest growth areas in today's market. The aging population is likely to increase demand for restorative dental work.

Durham Region Employment Outlook:	2009	2013	2017
	Medium	Medium	Medium

### **Where can I go from here?**

Dentists can specialize in a particular field of dentistry, further their education at a masters and doctoral levels, teach at a dental school either as full time academics or part-time demonstrators or instructors, or conduct research as a clinician-scientist.

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### **To Become a Dentist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Ability to relate to people and to apply principles of psychology and education to address the psychological and knowledge based needs of clients,
- Excellent manual dexterity and an ability to apply complex scientific theory to daily dental practice,
- Excellent communication, and problem-solving skills; and the ability to work independently and manage a case load while leading a dental care team,
- Good business, management and entrepreneurial skills, and
- A sense of professionalism that includes a self-directed approach to continuing education and ensuring a current knowledge base to support dental practice.

#### **Entry Requirements for Education Programs**

The dental education programs in Ontario have varying educational requirements. At least 2 or 3 years of university education is required that includes laboratory supported courses in a range of health sciences, chemistry and physics. Competition for entry to programs may affect the marks required for admission. Successful recent completion of the Dental Aptitude Test, which is offered twice yearly, is a requirement for admission.

#### **Educational Institutions**

2 Universities in Ontario offer accredited dental education programs. They are:

University of Western Ontario: [www.schulich.uwo.ca/Dentistry/](http://www.schulich.uwo.ca/Dentistry/)

University of Toronto: [www.utoronto.ca/dentistry](http://www.utoronto.ca/dentistry)

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#### **Professional Associations and Related Websites...**

Royal College of Dental Surgeons of Ontario: [www.rcdso.org](http://www.rcdso.org)

Ontario Dental Association [www.oda.on.ca](http://www.oda.on.ca)

Canadian Dental Association: [www.cda-adc.ca](http://www.cda-adc.ca)

Ontario Association of Orthodontists: [www.oao.on.ca](http://www.oao.on.ca)

## DENTAL HYGIENIST

### **What is a Dental Hygienist?**

Dental Hygienists are self-regulated health professionals who contribute to overall health through the prevention of oral disease and the promotion of oral health. In clinical practices dental hygienists work directly with patients prevent, and treat gum disease and tooth decay by assessing tooth and gum health, preparing and implementing individualized dental hygiene treatment plans, and referring patients to a dentist for dental treatment. In addition to looking after the cosmetic appearance of the teeth and gums, dental hygienists also perform complex services such as scaling and root planing to treat and prevent some diseases. Dental hygienists who work in community based practices work with a variety of health care professionals and the public to teach about dental health, design health promotion plans, and evaluate the effectiveness of current dental health practices.

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### **About the Work....**

#### **Responsibilities**

The work that dental hygienists do depends upon in which field they practice. In general their responsibilities may include:

- Using the Dental Hygiene Process, and working with clients and the community by applying a problem-solving framework, basing all decisions, judgements and interventions on current dental hygiene research and theory,
- Screening individuals for dental problems, using radiographic equipment to produce diagnostic information, and educating people about how to care for their teeth and gums,
- Cleaning the teeth and application of preventative treatments,
- Independently managing a caseload in collaboration with other health care professionals,

#### **Education, Training and Certification Required**

To practice as a dental hygienist in Ontario you must graduate from a n accredited 2 year program at Community College and then successfully write the Canadian National Dental Hygiene Board Exam. Dental hygienists are then eligible to apply for registration with the College of Dental Hygienists of Ontario. All practicing dental hygienists in Ontario must be registered with the College. The profession is moving toward a 4-year baccalaureate degree as the minimum education required for entry to practice.

#### **Potential Earnings**

Hourly wage rates range from approximately \$23.00 to \$40.00 and vary considerably between individual private practices and the public sector.

#### **Typical Workplaces and Working Conditions**

Dental hygienists usually work in the very clean environment of a dental practice. They may also work for Public Health Units. They are required to maintain their practice area and tools in an appropriate clean or sterile state. Dental hygienists working in clinical practice usually work regular business hours for 4 or 5 days per week and some evenings and weekends. Because they are in contact with patients' saliva and frequently with blood, both of which can transmit infections, dental hygienists wear masks, gloves and safety glasses to protect themselves. Dental hygienists who work in community practice may work in a variety of settings that are not specifically designed for the delivery of dental services, and they may speak to and teach groups of people of varying ages.

#### **Durham Region Employers**

Most dentists are in private practice, however employers of public health dentists in Durham Region include:

- Region of Durham Health Department: [www.region.durham.on.ca](http://www.region.durham.on.ca)
- Private dental practices.

#### **Employment Outlook**

There is currently thought to be a general oversupply of dental hygienists. However, opportunities for dental hygienists may be greater in Durham Region than in other areas as the population growth rate is relatively high in this region.

<b>Durham Region Employment Outlook:</b>	2009	2013	2017
	Medium	Medium	Medium

### **Where can I go from here?**

Dental hygienists can specialize in a particular field of community practice such as working with cancer patients, expectant mothers or homeless teens. In Ontario, dental hygienists can also own their own dental hygiene practices. Other opportunities exist in sales and marketing, administration, and research or education.

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### **To Become a Dental Hygienist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Ability to relate to people and to apply principles of psychology and education to address the psychological and knowledge based needs of clients,
- Excellent manual dexterity, good vision, and be able to sit for prolonged periods of time,
- Excellent communication, and problem-solving skills; and the ability to work independently and manage a case load while working as a member of a health care team,
- Good business, management and entrepreneurial skills, and
- A sense of professionalism that includes a self-directed approach to continuing education and ensuring a current knowledge base to support dental practice.

#### **Entry Requirements for Education Programs**

Dental hygienist education programs in Ontario have varying educational requirements. An OSSD is required with an emphasis on English, Biology and Chemistry. Certification in First Aid and C.P.R., and proof of specific immunization status may be required.

#### **Educational Institutions**

A diploma in dental hygiene is available from the following accredited colleges in Ontario:

**Durham College:** [www.durhamc.on.ca](http://www.durhamc.on.ca)

Algonquin College: [www.algonquincollege.com](http://www.algonquincollege.com),

Cambrian College: [www.cambrianc.on.ca](http://www.cambrianc.on.ca)

Canadore College: [www.canadorec.on.ca](http://www.canadorec.on.ca)

College Boreal (en française): [www.borealc.on.ca](http://www.borealc.on.ca)

Fanshawe College: [www.fanshawec.on.ca](http://www.fanshawec.on.ca)

George Brown College: [www.gbrownc.on.ca](http://www.gbrownc.on.ca)

Georgian College: [www.georgianc.on.ca](http://www.georgianc.on.ca)

Niagara College: [www.niagarac.on.ca](http://www.niagarac.on.ca)

St. Clair College: [www.stclairc.on.ca](http://www.stclairc.on.ca)

La Cite Collegiale (en française): [www.lacitec.on.ca](http://www.lacitec.on.ca)

Confederation College: [www.confederationc.on.ca](http://www.confederationc.on.ca)

Canadian Institute of Dental Hygiene Inc. : [www.cidh.on.ca](http://www.cidh.on.ca)

Canadian Academy of Dental Hygiene: [www.canadianacademyofdentalhygiene.ca](http://www.canadianacademyofdentalhygiene.ca)

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### **Professional Associations and Related Websites...**

College of Dental Hygienists of Ontario: [www.cdho.org](http://www.cdho.org)

Ontario Dental Hygienists Association [www.odha.on.ca](http://www.odha.on.ca)

Canadian Dental Hygienists Association: [www.cdha.ca](http://www.cdha.ca)

Canadian Dental Association: [www.cda-adc.ca](http://www.cda-adc.ca)

## FAMILY PHYSICIAN

### What is a Family Physician?

Family physicians, also referred to as General Practitioners, diagnose and treat the diseases, disorders and injuries of individuals and families in the community, and some choose to deliver babies. Family physicians see the various facets of people's lives, and look not just at the symptoms of illness but also the impact of social factors on health.

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### About the Work...

#### Responsibilities

In general, the responsibilities of Family physicians include:

- Examining patients, ordering laboratory tests, X-rays and other diagnostic procedures and consult with other medical practitioners to evaluate patients' health,
- Prescribing and administering medications, treatments and vaccinations,
- Performing and assisting in routine surgery,
- Advising patients on health care,
- Reporting births, deaths and communicable diseases to government authorities,
- Referring patients to medical specialists and other health care professionals as appropriate.

#### Education, Training and Certification Required

To be a family physician you must graduate from an approved medical school and then successfully complete a 2 or 3 year residency in Family Medicine. Following completion of the residency training, physicians must then successfully complete a qualifying exam of the College of Family Physicians of Canada. All physicians in Ontario are required to be licensed by the College of Physicians and Surgeons of Ontario. Medical school programs are 4 years in length. Medical school tuition incentives are currently available in Ontario for people who will agree to work in an underserved area when they graduate.

#### Potential Earnings

Earnings vary greatly depending on physician's billings, and the nature and location of individual practices.

#### Typical Workplaces and Working Conditions

In addition to working in their offices or clinics, some family physicians also work in hospital in-patient and emergency units and/or long-term care facilities. Although these working conditions are clean, well lighted and well ventilated, family physicians come in contact with diseases, blood and other body fluids in the course of their work. Family physicians often perform invasive and other medical procedures to screen, diagnose or treat their patients. Typically, other health care workers are available to support family physicians in their clinics and other settings. Family physicians work an average of 51 hours per week not including on-call hours, and three-quarters of them work shared on-call activities (CFPC, 2002). On-call physicians must be available to respond quickly to patient needs at any time. Family physicians usually work in private practices, either alone or with other doctors and most are paid through a fee-for-service arrangement with the Ontario government. Approximately one half of family physicians are hired on a salaried agreement with various health service agencies.

#### Durham Region Employers

Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)

Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)

Oshawa Community Health Centre: [www.ochc.ca](http://www.ochc.ca)

Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)

The Youth Centre: [www.theyouthcentre.ca](http://www.theyouthcentre.ca)

#### Employment Outlook

Currently, most family physicians in Durham Region are unable to accept new patients because of high workloads. This emphasizes the shortage of family physicians in relation to demand. Increasingly family physicians are working in primary practices that include other health care professionals that can perform some of the routine functions and non-medical functions in the practice so that the physicians' time can be maximized. The shortage of family physicians is expected to increase as physicians retire and aging 'Baby-Boomers' begin to require more medical services. There is a need to better service rural and remote communities in Ontario, in particular those that have been designated as underserved areas. Incentives are available to recruit family physicians to underserved areas. 5 of the 8 municipalities in Durham Region are currently designated as underserved.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

#### **Where can I go from here?**

Research, management and involvement in medical education are career options for physicians. There are also many opportunities to work in different countries and for different humanitarian causes.

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#### **To Become a Family Physician...**

##### **Personal Qualities and Applied Skills You Will Need**

- Genuine concern about other people, understanding, patient, able to work well under pressure and able to remain calm in emergencies while directing the health care team,
- Ability to learn and apply a large body of knowledge to the human conditions of your patients,
- Self-disciplined and emotionally balanced to be able to prioritize workload demands and weather the stress related to very ill and dying patients and their families,
- Awareness of the importance of healthy lifestyle choices and the ability to practice them both for your own benefit and as a role model for others.

##### **Entry Requirements for Education Programs**

The amount of university preparation required to be eligible for admission to medical school varies between universities. Some require completion of a 3 or 4-year undergraduate degree while others do not. Similarly other entrance requirements vary between universities with different emphasis on academic and personal achievements and character. Successful completion of the Medical College Admission Test is required by some medical schools in Ontario.

##### **Educational Institutions**

13 Medical Schools in Canada offer medical programs in English, and three schools in Quebec offer French language education. The Universities with medical schools in Ontario are:

- McMaster University: [www.mcmaster.ca](http://www.mcmaster.ca)
- University of Ottawa (French language instruction): [www.uottawa.ca](http://www.uottawa.ca)
- Queen's University: [www.queensu.ca](http://www.queensu.ca)
- University of Toronto: [www.utoronto.ca](http://www.utoronto.ca)
- University of Western Ontario: [www.uwo.ca](http://www.uwo.ca)
- Northern Ontario School of Medicine (Lakehead and Laurentian Universities): [www.normed.ca](http://www.normed.ca)

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##### **Professional Associations and Related Websites...**

College of Physicians and Surgeons of Ontario: [www.cpso.on.ca](http://www.cpso.on.ca)

College of Family Physicians of Canada: [www.cfpc.ca](http://www.cfpc.ca)

Ontario College of Family Physicians: [www.cfpc.ca/ocfp](http://www.cfpc.ca/ocfp)

Ontario Medical Association: [www.oma.org](http://www.oma.org)

Canadian Medical Association: [www.cma.ca](http://www.cma.ca)

The Royal College of Physicians and Surgeons of Canada: [www.rcpsc.medical.org](http://www.rcpsc.medical.org)

The Coalition of Family Physicians of Ontario: [www.cofp.com](http://www.cofp.com)

## PHARMACIST

### What is a Pharmacist?

Pharmacists are self-regulated health professionals whose ultimate goal is to improve people's quality of life by working with them to determine if any drug-related needs exist that are preventing him/her from attaining their desired quality of life, and then meeting those needs by focusing on the safe and effective use of medication. There are two main types of pharmacists. Retail and hospital pharmacists compound and dispense prescribed pharmaceuticals (drugs) to customers and other health care professionals, and provide advice on their administration and side-effects. Industrial pharmacists participate in the research, development and manufacture of pharmaceutical products. Most pharmacists are employed in retail or health services.

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### About the Work...

#### **Responsibilities**

In general, the responsibilities of retail and health service Pharmacists include:

- Checking prescriptions for proper dosages and compounding prescribed pharmaceutical products by calculating, measuring and mixing the quantities of drugs and other ingredients required and filling the appropriate containers with the correct quantity,
- Dispensing prescribed pharmaceuticals to customers or health care professionals and advising them on the administration, uses, effects of the medication, drug incompatibilities and contra-indications,
- Maintaining customer medication profiles and registries of poisons, narcotics and controlled drugs,
- Ensuring proper storage of vaccines, serums, biological and other pharmaceutical products, and
- Advising customers on the selection and use of non-prescribed medications.

#### **Education, Training and Certification Required**

A 4-year Baccalaureate degree (BSc in Pharmacy) is required, followed by a 1-year internship. Prior to beginning internships new graduates must successfully pass a National Board Exam from the Pharmacy Examining Board of Canada. Pharmacists in Ontario must be registered with the Ontario College of Pharmacists. Pharmacists must continually update their drug knowledge and participate in regular Quality Assurance.

#### **Potential Earnings**

Hourly wage rates range from \$40.00 to \$50.00.

#### **Typical Workplaces and Working Conditions**

Nearly 80% of pharmacists are employed in retail, and nearly 20% are employed in hospitals. Other employers may be pharmaceutical firms, government and the military. Pharmacies consist of a secure area to which admission can be controlled. Pharmacies are typically clean, bright and well ventilated. Gloves, masks and fume hoods are required when dealing with potentially dangerous substances or to maintain sterility. Pharmacists usually work with pharmacy technicians, and may work long hours without breaks. Typically pharmacists work shift work including evenings, weekends and holidays. Pharmacists are often required to stand for long periods, and walk long distances in hospital settings.

#### **Durham Region Employers**

In the health sector, employers of Pharmacists in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private drug stores throughout the region.

#### **Employment Outlook**

Professional associations state that pharmacists are currently in high demand in Ontario. It is expected that demand will increase as the population ages and consequently requires more medication. Mail order pharmacies, discount chains and advances in technology are trends that may impact on the demand for pharmacists. Approximately 20% of pharmacists now work part time. Few are self-employed.

<b>Durham Region Employment Outlook:</b>	2009 High	2013 High	2017 High
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### **Where can I go from here?**

Pharmacists can pursue clinical specialties. Pharmacists who chose to pursue education and research interests typically get a Masters degree, or a PhD or Doctor of Pharmacy. Some pharmacists become specialists in other professions such as law, journalism or consulting.

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### **To Become a Pharmacist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Ability to work with a multi-disciplinary team,
- Ability to work effectively under pressure and in emergency situations,
- Excellent communication, problem-solving skills; and enjoy preciseness and attention to detail in carrying out tasks,
- Good business, management and entrepreneurial skills
- Ability to use computerized customer and pharmaceutical databases

#### **Entry Requirements for Education Programs**

One full year of university that includes completion of 7 specified subjects is required. OAC credits in English, Biology and Physics are part of these subjects. In addition to the academic requirements for which at least a 70% average must be attained, candidates must successfully complete the Pharmacy Admission Profile test.

#### **Educational Institutions**

9 Universities in Canada offer undergraduate programs in Pharmacy. In Ontario, the only university with a Pharmacy program is the University of Toronto: [www.utoronto.ca/pharmacy](http://www.utoronto.ca/pharmacy). The first class will be admitted to a new Pharmacy program at the University of Waterloo in January of 2008 [www.pharmacy.uwaterloo.ca](http://www.pharmacy.uwaterloo.ca).

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#### **Professional Associations and Related Websites...**

Canadian Pharmacists Association: [www.pharmacists.ca](http://www.pharmacists.ca)

Ontario Pharmacists Association: [www.opatoday.com](http://www.opatoday.com)

Ontario College of Pharmacists: [www.ocpinfo.com](http://www.ocpinfo.com)

Canadian Association of Chain Drug Stores: [www.cacds.com](http://www.cacds.com)

Canadian Society of Hospital Pharmacists: [www.cshp.ca](http://www.cshp.ca)

Canadian Society of Consultant Pharmacists: [www.cscpharm.com](http://www.cscpharm.com)

Canadian Council on Continuing Education in Pharmacy: [www.cccep.org](http://www.cccep.org)

New Ontario Pharmacist: [www.newontariopharmacist.com](http://www.newontariopharmacist.com)

## PHARMACY TECHNICIAN

### What is a Pharmacy Technician?

Under the direction of a pharmacist, a pharmacy technician, in accordance with the guidelines of the Ontario College of Pharmacists, assists with the dispensing of prescriptions, prepares and distributes pharmaceuticals, assists with the control of drug inventories and other selected duties such as drug information filing and third party billing. In general pharmacy technicians assist pharmacists by performing duties that do not require the professional skills and judgement of a pharmacist, and assisting in those duties that do require the expertise of a pharmacist.

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### About the Work...

#### Responsibilities

In general, the responsibilities of a pharmacy technician may include:

- Taking and processing prescriptions from customers
- Maintaining customer accounts and files
- Obtaining and distributing appropriate medications, and ordering and stocking supplies and equipment,
- Packaging and labelling medications,
- Cleaning and labelling equipment,
- Answering patient questions and referring them to the pharmacist when appropriate,
- Preparing sterile products as required.

#### Education, Training and Certification Required

Employers generally require that pharmacy technicians have a diploma/certificate from a recognized Community College and be certified by the Ontario College of Pharmacists. Certification is currently a voluntary process, but it is expected to become mandatory in the future. 10 Community Colleges in Ontario offer 2-year full-time programs to train pharmacy technicians. Some schools offer the program on a part-time evening basis, or through distance education.

#### Potential Earnings

Hourly wage rates range from \$20.74 to \$24.30 (in hospitals).

#### Typical Workplaces and Working Conditions

Most pharmacy technicians work in hospitals, long-term care facilities or drug stores. Pharmacies consist of a secure area to which admission can be controlled. Pharmacies are typically clean, well-lighted and well ventilated. Pharmacy technicians normally work regular week day hours, although they are more likely to work shift work including evenings, weekends and holidays in retail. Pharmacy technicians are often required to stand for long periods, and walk long distances in hospital settings.

#### Durham Region Employers

In the health sector, employers of pharmacy technicians in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private drug stores throughout the region

#### Employment Outlook

In addition to the traditional settings and with formal training, opportunities are increasing for work in a variety of industries such as insurance companies, pharmacy software vendors, pharmaceutical manufacturing, drug information sites and clinical research.

<b>Durham Region Employment Outlook:</b>	2009	2013	2017
	High	High	High

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### To Become a Pharmacy Technician...

#### Personal Qualities and Applied Skills You Will Need

- Willing to take directions and also be able to work competently without constant instruction,
- Enjoy performing precise work and have good manual dexterity,

- Thorough knowledge of drug names and ability to recognize medication orders from other orders on physicians' order sheets

#### **Entry Requirements for Educational Programs**

All Colleges require prospective students to have an Ontario Secondary School Diploma or be age 19 or older (a mature student). There are varying requirements for high school prerequisite courses, and for requirements for criminal record checks, health status, and transportation requirements for field placements.

#### **Educational Institutions**

Community Colleges in Ontario that offer the pharmacy technician program are:

- Centennial : [www.centennialcollege.ca](http://www.centennialcollege.ca)
- Fanshawe : [www.fanshawec.on.ca](http://www.fanshawec.on.ca)
- Humber: [www.humberc.on.ca](http://www.humberc.on.ca)
- Mohawk: [www.mohawkc.on.ca](http://www.mohawkc.on.ca)
- Niagara: [www.niagarac.on.ca](http://www.niagarac.on.ca)
- Sheridan: [www.shericanc.on.ca](http://www.shericanc.on.ca)
- St. Clair: [www.stclairc.on.ca](http://www.stclairc.on.ca)
- Lambton: [www.lambtonc.on.ca](http://www.lambtonc.on.ca)
- La Cite: [www.lacitec.on.ca](http://www.lacitec.on.ca)
- College Boreal: [www.borealc.on.ca](http://www.borealc.on.ca)

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#### **Professional Associations and Related Websites...**

Canadian Association of Pharmacy Technicians: [www.capt.ca](http://www.capt.ca)

Ontario College of Pharmacists: [www.ocpinfo.com](http://www.ocpinfo.com)

American Society of Health System Pharmacists: [www.ashp.org/technicians](http://www.ashp.org/technicians)

Canadian Pharmacists Association: [www.pharmacists.ca](http://www.pharmacists.ca)

Ontario Pharmacists Association: [www.opatoday.com](http://www.opatoday.com)

Canadian Association of Chain Drug Stores: [www.cacds.com](http://www.cacds.com)

Canadian Society of Hospital Pharmacists: [www.cshp.ca](http://www.cshp.ca)

Canadian Society of Consultant Pharmacists: [www.cscpharm.com](http://www.cscpharm.com)

Canadian Council on Continuing Education in Pharmacy: [www.cccep.org](http://www.cccep.org)

## DIETITIAN

### **What is a Dietitian?**

Dietitians are self-regulated health professionals who are uniquely trained to advise on diet, food and nutrition. They plan, organize, conduct and supervise programs in nutrition, diet, and food services. Dietitians play a major role in health care, industry, government and education. They influence the development and promotion of consumer products, manage quality food service in health institutions, and provide information and counsel that allows decision makers, including consumers, to make informed and wise judgements about food choices. Dietitians may specialize in such areas as administrative, clinical, community, public health or research dietetics.

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### **About the Work...**

#### **Responsibilities**

The work that dietitians do depends upon in which field they practice. In general their responsibilities may include some or all of:

- Developing administering and supervising nutrition and food preparation and service programs in hospitals, nursing homes, schools, company cafeterias or similar settings,
- Evaluating nutritional status of individuals and providing nutrition counselling,
- Consulting to health professionals, dietetic interns, community groups, government, and media,
- Aiding in the prevention and/or treatment of inadequate nutrition by working in health promotion and disease prevention programs,
- Planning, evaluating and conducting nutrition education programs and developing educational materials for various audiences,
- Studying and analyzing current scientific nutritional studies and conducting research to improve the nutritional value, taste, appearance and preparation of food, and
- Practicing on an individual basis or as a member of an interdisciplinary team to determine nutritional needs of patients and to plan normal and therapeutic menus.

#### **Education, Training and Certification Required**

The minimum requirement to practice as a registered dietitian is a 4 year baccalaureate from an accredited university program, which is followed by a 1-year internship at an accredited program site. Following this education, prospective dietitians must then pass a National Exam that assesses competence to practice in Canada. To practice in Ontario, dietitians must be registered with the College of Dietitians of Ontario. Dietitians may also call themselves nutritionists, but a nutritionist is not necessarily a dietitian and may not practice according to the same professional standards.

#### **Potential Earnings**

Hourly wage rates in the public sector range from \$26.00 to \$37.46. Dietitians working in private practice earn according to the billing rates they establish.

#### **Typical Workplaces and Working Conditions**

Dietitians work in very clean environments in food service centres, and are responsible for ensuring the cleanliness of the areas in accordance with industry and government standards. They may also work in laboratories if they are involved in research, private offices if they are counselling individuals, or community settings if they are educating groups. Work is usually based on a regular work week, although it may involve very early morning hours to ensure the day's food preparation is underway. It may also involve on-call work if problems or immediate food service needs arise. Kitchens are typically well ventilated and air-conditioned, however dietitians are prepared to work with heat, food smells, and to manage cleaning agents in food preparation and service areas.

#### **Durham Region Employers**

In the health sector, employers of dietitians in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Region of Durham, Long Term Care and Services for Seniors Division: [www.region.durham.on.ca](http://www.region.durham.on.ca)
- 18 Long Term Care Facilities
- Various private contracted food service companies.

### **Employment Outlook**

Professional associations state that dietitians are expected to be one of the fastest growing job sectors in Canada in the next five years. With an increased recognition of the relationship between good eating habits and disease prevention, and the increase in the prevalence of diabetes, obesity and food intolerances/allergies in our society the need for expertise in the nutrition field will be increasingly necessary. Most dietitians work full time, however those in private practice may have greater control over their hours of work.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	Medium	Medium	Medium

### **Where can I go from here?**

Dietitians can further their education the masters and doctoral levels in food and nutrition sciences. They can become managers and administrators within the health care sector. Some dietitians chose to do development work overseas in countries where under nutrition and malnutrition remain significant problems.

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### **To Become a Dietitian...**

#### **Personal Qualities and Applied Skills You Will Need**

- An in-depth scientific knowledge of food and human nutrition and the ability to integrate this knowledge with that from other disciplines such as the health and social sciences, education, communication and management,
- Ability to work effectively with populations and individuals to create strategies to enable individuals to achieve their food and nutrition related goals,
- Excellent communication, and problem-solving skills; and the ability to work independently and manage a case load while working as a member of a health care team,
- Good business, management and entrepreneurial skills, and
- A sense of professionalism that includes a self-directed approach to continuing education and ensuring a current knowledge base to support dietetic practice.

#### **Entry Requirements for Education Programs**

OSSD equivalent and an emphasis on English and the natural sciences. Entry requirements vary between universities, and competition for entry to programs may affect the marks required for admission to programs.

#### **Educational Institutions**

3 Universities in Ontario offer accredited undergraduate programs in Food and/or Nutrition Science. These are:  
Ryerson University: [www.ryerson.ca](http://www.ryerson.ca)      University of Guelph: [www.uoguelph.ca](http://www.uoguelph.ca)  
University of Western Ontario: [www.uwo.ca](http://www.uwo.ca)

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#### **Professional Associations and Related Websites...**

College of Dietitians of Ontario: [www.cdo.on.ca](http://www.cdo.on.ca)  
Dietitians of Canada: [www.dietitians.ca](http://www.dietitians.ca)

## MIDWIFE

### What Is A Midwife?

Midwifery is a self-regulated health profession. A midwife provides primary care to women during pregnancy, labour and birth, and provides care to mothers and babies during the first six weeks postpartum. Midwifery care is founded on respect for pregnancy and birth as normal, healthy processes, and a profound social, emotional and cultural event in a woman's life. Midwives provide safe, personalized, research-based care. They attend births in hospitals or home according to the woman's choice and professional protocols.

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### About the Work...

#### Responsibilities

In general, the responsibilities of midwives include:

- Providing primary care, including assessing, monitoring and supporting women during pregnancy, labour and birth,
- Conducting normal vaginal deliveries in a hospital or home setting,
- Monitoring and providing care and education to the new mother and her baby during the first six weeks after the baby is born,
- Counselling mothers about how to breastfeed their infants,
- Communicating effectively with clients about what to expect during the pregnancy and childbirth process, to determine the families birthing preferences, and to ensure families are informed about decisions they may have to make,
- Working with a multi-disciplinary health care team to provide comprehensive services to mothers and babies, and making timely referrals to physicians if the need arises, and
- Documenting services and interventions, and ensuring all required protocols are followed to ensure safe and effective care.

#### Education, Training and Certification Required

Graduation from a 4 year program, called the Midwifery Education Programme is required. Graduates of this program must then register with the College of Midwives of Ontario. Alternatively, the College offers a Prior Learning and Experience Assessment process to manage applications from midwives who have been trained outside of Canada.

#### Potential Earnings

Hourly wage rates range from \$19.06 to \$32.71.

#### Typical Workplaces and Working Conditions

Midwives work together in group practices. Before birth, the midwife sees her client in her office. Midwives attend births either in hospitals or in the client's home. Midwives, like physicians, have hospital privileges in many hospitals in Ontario. Two midwives must be in attendance at a birth. Because Midwives must be available to be with their clients when they are in labour and for the birth of their babies, the work of a midwife requires availability on an around the clock basis, and sometimes for extended periods of time. Travel to clients' homes is required. Midwives carry with them the supplies and equipment that may be needed to assist with an out-of-hospital birth.

#### Durham Region Employers

Durham Region has two Midwifery practices:

- Midwifery Services of Durham (Whitby and Ajax)
- Community Care Midwives (Oshawa)
- Sages-Femme Rouge Valley Midwives [www.yourmidwives.com](http://www.yourmidwives.com)

#### Employment Outlook

A shortage of family physicians and an increasing acceptance of midwifery in Ontario as a birthing professional may increase the demand for midwives.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	Medium	Medium	Medium

Where can I go from here? Midwives may become involved in teaching at a university program, or work in government to assist in policy development and program administration.

### **To Become A Midwife...**

#### **Personal Qualities and Applied Skills You Will Need**

- Able to effectively apply a large body of knowledge to practical situations,
- Sound judgement and critical thinking skills combined with exceptional interpersonal and communication skills,
- Able to adapt to a variety of settings and work effectively and calmly under pressure and in emergencies,
- Problem solving and teaching skills.

#### **Entry Requirements for Education Programs**

Education requirements vary between schools. An Ontario Secondary School Diploma is required with an emphasis on the natural sciences and English.

#### **Educational Institutions**

3 Universities in Ontario provide the Midwifery Education Programme. They are:

- Laurentian University (full-time, English and French) [www.laurentian.ca](http://www.laurentian.ca)
- McMaster University (full-time, English) [www.mcmaster.ca](http://www.mcmaster.ca)
- Ryerson University (part-time, English) [www.ryerson.ca](http://www.ryerson.ca)

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#### **Professional Associations and Related Websites...**

Association of Ontario Midwives: [www.aom.on.ca](http://www.aom.on.ca)

College of Midwives of Ontario: [www.cmo.on.ca](http://www.cmo.on.ca)

Canadian Association of Midwives: [www.canadianmidwives.org](http://www.canadianmidwives.org)

Association for Safe Alternatives in Childbirth: [www.asac.ab.ca](http://www.asac.ab.ca)

American College of Nurse-Midwives: [www.midwife.org](http://www.midwife.org)

## PSYCHOLOGIST

### What is a Psychologist?

Psychologists are self-regulated health professionals who have extensively studied the behaviour, feelings, motives, cognitions, and sometimes the biological and physiological bases of human behaviour. Psychologists apply this knowledge to help people solve personal problems, or enable a group – family, school, or corporation – to function better. They are trained to assess and treat psychological problems and to help people make healthy changes in their coping styles and emotional and behavioural patterns. Specialty practice areas within psychology include Clinical, Educational, Child, Gerontological, Forensic/Correctional, Industrial/Organizational, Rehabilitation, Engineering, and Clinical Neuropsychology.

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### About the Work...

#### **Responsibilities**

In general, the responsibilities of a psychologist include:

- Examining and assessing behaviour, diagnosing behavioural, cognitive and emotional disorders, counselling clients and providing therapy in a variety of settings,
- Using standard psychological tests for assessments,
- Counselling individuals and groups to achieve more effective personal, social and vocational development and adjustment, including mediation services,
- Designing, implementing and evaluating clinical programs, and
- Working collaboratively with a multi-disciplinary team, often in a leadership role, and providing consultation services to other health care providers and professionals.

#### **Education, Training and Certification Required**

To be a psychologist you must graduate from an accredited university-based graduate program with a PhD in Psychology, and then work for one year of authorized supervised practice in Ontario. Psychologists must be registered with the College of Psychologists of Ontario. The College requires applicants successfully complete three admission examinations, one of which is an oral exam before being registered.

#### **Potential Earnings**

Hourly wage rates range from \$45.00 to \$54.00. The income of psychologists who work in private practice, or as consultants, is dependent on their billing practices and rates.

#### **Typical Workplaces and Working Conditions**

Psychologists work in a variety of settings that include hospitals, school boards, mental health agencies, correctional services, community based health and social service agencies, industrial sites, or in private practice on a fee-for-service basis. Violence may pose a threat to personal safety. Flexible or extended work hours may be required. Work-related stress may be high. Many psychologists work in university settings conducting research under controlled conditions.

#### **Durham Region Employers**

Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)

Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)

#### **Employment Outlook**

There is expected to be an increasing demand for Psychologists as older members of the profession retire. There is a shortage of psychiatrists in Ontario that is expected to contribute to the need for other professionals who can help people with mental illnesses. The high stress levels that appear to exist in our society will contribute to the need for professional assistance to manage related problems.

<b>Durham Region Employment Outlook:</b>	2009 Medium	2013 Medium	2017 Medium
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#### **Where can I go from here?**

Psychologists work in research and teaching at universities. Increasingly, they are reaching people through the media in

a variety of self-help initiatives. Often Psychologists are sought on a contract basis to design, implement and evaluate research projects that are intended to study various human phenomena.

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### **To Become a Psychologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Strong analytical and memory skills combined with effective and disciplined study habits,
- Ability to apply abstract theories to the practical nature of the human condition,
- Self awareness and the ability to empathize with those encountering distress, illness, disability, pain, suffering, death and involvement with various institutional systems,
- Strong communication skills.
- Ability to work as an interdisciplinary team member,
- Personal flexibility, adaptability, and a high level of initiative and self-direction, and
- Ability to be calm and effective in stressful or crisis circumstances.

#### **Entry Requirements for Education Programs**

Admission to a doctoral program in psychology usually requires an honours undergraduate degree in Psychology (4 years), or a related discipline, and completion of a Masters Level thesis in Psychology (2 years). Academic scores must meet a minimal standard for acceptance into doctoral programs, and applicants will usually have been required to successfully write the GRE (Graduate Record Exam) prior to admission to a masters program. Most universities in Ontario offer undergraduate degrees in Psychology.

#### **Educational Institutions**

Different areas of specialization are available at different universities. These universities in Ontario offer doctoral programs in Psychology:

Brock University	Carleton University	Lakehead University
McMaster University	Queen's University	University of Guelph
Universite d'Ottawa	University of Toronto	Wilfred Laurier University
York University	University of Waterloo	University of Western Ontario

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#### **Professional Associations and Related Websites...**

Canadian Psychological Association: [www.cpa.ca](http://www.cpa.ca)

College of Psychologists of Ontario: [www.cpo.on.ca](http://www.cpo.on.ca)

Ontario Psychological Association: [www.psych.on.ca](http://www.psych.on.ca)

Canadian Register of Health Service Providers in Psychology: [www.crhspp.ca](http://www.crhspp.ca)

## SOCIAL WORKER

### What is a Social Worker?

Social Work is a self-regulated profession, the purpose of which is to help and empower individuals, families, groups and communities to resolve problems that affect their day-to-day lives. Social workers work with individuals, families to address personal problems and also with groups and communities to address broader social issues such as poverty, unemployment, racism and domestic violence. Social workers use relationships as the basis of all interventions, and base their interventions on respect for the client's choice and involvement.

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### About the Work...

#### Responsibilities

In general, the responsibilities of a social worker include:

- Assessing clients individually, in families or in groups to determine their situation and problems and the types of services or protective action required,
- Planning programs of assistance for clients that may include counselling or therapy, or referral to the appropriate service for financial assistance, legal aid, housing assistance, or health care services.
- Providing counselling, therapy, mediation services or psychological assessments,
- Advocating on behalf of clients and developing prevention and intervention programs,
- Assisting clients to access existing community resources, or developing new community resources,
- Evaluating the effectiveness of counselling, social programs and other interventions, and
- Supervising other social service workers or human service counsellors.

#### Education, Training and Certification Required

To be a social worker you must graduate from an accredited university-based, social work program. A 4-year baccalaureate degree (BSW), or a masters degree (MSW), which is an additional one or two years of study, is required to be registered with the Ontario College of Social Workers and Social Service Workers. Successful completion of an entry to practice exam is required.

#### Potential Earnings

Hourly wage rates range from \$29.00 to \$39.00.

#### Typical Workplaces and Working Conditions

Social workers work in a variety of settings that include child welfare agencies, school boards, general and psychiatric hospitals, correctional services, community based health centres, community development projects or, increasingly in private practice on a fee-for-service basis. Work sites may be office based or in institutions, client's homes, or on the street. Violence may pose a threat to personal safety. Flexible or extended work hours may be required. Social workers often need to be prepared to respond to emergency situations and to travel to meet with clients. Work-related stress may be high.

#### Durham Region Employers

Durham Mental Health Services: [www.dmhs.ca](http://www.dmhs.ca)

Lakeridge Health Corporation - Pinewood Centre: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)

Canadian Mental Health Association: [www.cmha.ca](http://www.cmha.ca)

Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)

Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)

Grandview Children's Centre: [www.grtc.ca](http://www.grtc.ca)

Kinark Child and Family Services: [www.kinark.on.ca](http://www.kinark.on.ca)

Durham Children's Aid Society: [www.durhamcas.ca](http://www.durhamcas.ca)

Frontenac Youth Services: [www.frontenacyouthservices.org](http://www.frontenacyouthservices.org)

Region of Durham, Social Services Department: [www.region.durham.on.ca](http://www.region.durham.on.ca)

#### Employment Outlook

There will be a growing need for social services, and therefore social workers in the future, but this is expected to be tempered by diverse opinions about how to address social needs and how to best spend public dollars. High growth of the elderly population, of the Aboriginal population which is attempting to develop appropriate service delivery models for First Nations people, and in some areas of immigrant and/or visible minority populations will contribute to the demand for services. It is expected that social workers with specialties in a range of counselling services will be in particular demand.

<b>Durham Region Employment Outlook:</b>	2009 Medium	2013 Medium	2017 Medium
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#### **Where can I go from here?**

Experienced social workers can work in policy analysis and development for government or become involved in social research. Researchers are found both in government and in universities and colleges. Many social workers specialize in a specific field of practice that may include specialized counselling areas, mental health, parole and probation, or child welfare services.

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#### **To Become a Social Worker...**

##### **Personal Qualities and Applied Skills You Will Need**

- Ability to establish rapport and communicate effectively with people and groups of varying social, economic and cultural backgrounds,
- Self awareness and the ability to empathize with those encountering illness, disability, pain, suffering, death and involvement with various institutional systems,
- Ability to work as an interdisciplinary team member while effectively managing an assigned case load, with maturity and minimal supervision,
- Personal flexibility, adaptability, and a high level of initiative and self-direction, and
- Ability to be calm and effective in stressful or crisis circumstances.

##### **Entry Requirements for Education Programs**

Education requirements vary between programs. Generally, an Ontario Secondary School Diploma is required with specific course requirements that vary between universities. Usually volunteer experience that involves working with people is considered an asset.

##### **Educational Institutions**

BSW only: University of Waterloo.

BSW and MSW: Carleton University; McMaster University; Lakehead University; University of Windsor; York University; University of Western Ontario; Ryerson University; Laurentian University (English, French and Native Programs); Université d'Ottawa (MSW only, French Program)

MSW and PhD: University of Toronto; Wilfred Laurier University

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##### **Professional Associations and Related Websites...**

Ontario Association of Social Workers: [www.oasw.org](http://www.oasw.org)

Canadian Association of Social Workers: [www.casw-acts.ca](http://www.casw-acts.ca)

Ontario College of Social Workers and Social Service Workers: [www.ocswssw.org](http://www.ocswssw.org)

Family Services Ontario: [www.familyserviceontario.org](http://www.familyserviceontario.org)

Children's Mental Health Ontario: [www.cmho.org](http://www.cmho.org)

## HUMAN SERVICES COUNSELLOR

**What is a Human Services Counsellor?**

Human service counsellors provide front-line counselling to individuals and groups. Areas of specialization include Addiction, Mental Health and Criminal Justice. The Council of the Ontario College of Social Workers and Social Service Workers has approved the Human Service Counsellor program at Durham College as equivalent to a Social Service Worker Program offered at other Colleges of Applied Arts and Technology in Ontario. Graduates of these programs are eligible for registration with the College.

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**About the Work...**

**Responsibilities**

In general, the responsibilities of a human services counsellor include:

- Completing functional assessments with new clients and reassessment of client's progress in relation to their goals, and develop individual plans with clients where appropriate,
- Providing direct interventions with clients that may include teaching life skills, counselling, transportation, crisis intervention services,
- Advocating on behalf of clients,
- Co-ordinating existing community services for clients and assisting clients to access relevant community resources,
- Assisting clients with medication support as appropriate,
- Compiling data necessary for evaluations and completing documentation as required.

**Education, Training and Certification Required**

To be a human services counsellor you must graduate from a 2-year program with a diploma from a recognized Community College Program. The Human Services Counsellor program at Durham College is the equivalent of programs at other colleges for Social Service Workers. Training is generally through a 2-year program, although a 1-year 'Fast-Track' program and part-time studies are available at George Brown College. Training involves extensive supervised field work. To work as a social service worker in Ontario, graduates must be registered by the Ontario College of Social Workers and Social Service Workers.

**Potential Earnings**

Hourly wage rates range from \$18.00 to \$22.50.

**Typical Workplaces and Working Conditions**

Human services counsellors may work in addiction treatment centres, halfway houses, detoxification centres, community centres, group homes, senior's facilities, youth assistance programs, community living associations, or for mental health service agencies. Work sites may include institutions, client's homes, work sites with clients as they learn life skills, jails and the street. Violence may pose a threat to personal safety if clients are experiencing altered states of consciousness (chemically induced, or because of a severe mental illness) or if clients feel threatened. Usually shift work is required which may consist of being 'on-site' or 'on-call'. Work-related stress may be high depending on caseloads. Typically in the mental health sector, demand for services exceeds the availability of trained people.

**Durham Region Employers**

- Durham Mental Health Services: [www.dmhs.ca](http://www.dmhs.ca)  
 Lakeridge Health Corporation - Pinewood Centre: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)  
 Canadian Mental Health Association: [www.cmha.ca](http://www.cmha.ca)  
 Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)  
 Durham Region, Long Term Care and Services for Seniors Division: [www.region.durham.on.ca](http://www.region.durham.on.ca)

**Employment Outlook**

Mental health services are currently being restructured by the Ministry of Health and Long-Term Care. This will likely mean an increased need for human service counsellors who can work in community-based settings. There is a growing awareness that many people who are remanded in the Criminal Justice System have mental health, addictions or other social problems, which might contribute to increasing demand in this area. Any public sector employment will depend on the funding that is available from government. This may temper the amount of work that is available.

<b>Durham Region Employment Outlook:</b>	2009	2013	2017
	Medium	Medium	Medium

### **Where can I go from here?**

Graduates of George Brown College may be able to 'Fast Track' in Social Work programs at Ryerson University.

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### **To Become a Human Services Counsellor...**

#### **Personal Qualities and Applied Skills You Will Need**

- Exceptional interpersonal and communication skills and flexibility to adapt to a variety of settings,
- Ability to recognize and diffuse escalating or potentially violent clients,
- Group and individual counselling skills in which counselling theories are used comfortably in practice
- Knowledge of community resources and ability to work effectively with them, and
- Ability to be calm and effective in stressful or crisis circumstances.

#### **Entry Requirements for Education Programs**

Education requirements vary between programs. Generally, an Ontario Secondary School Diploma is required with specific course requirements that vary between colleges. Mature Status Students are assessed on an individual basis, in recognition of the value of life experiences to the field of human services counselling. A clean criminal reference check, that includes a vulnerable sector check, is required.

#### **Educational Institutions**

In Ontario, most Colleges offer 2-year full time programs in Human Services Counselling, called Social Service Workers. They are:

**Durham College:** [www.durhamc.on.ca](http://www.durhamc.on.ca)

George Brown College: [www.gbrownc.on.ca](http://www.gbrownc.on.ca)

Cambrian College: [www.cambrianc.on.ca](http://www.cambrianc.on.ca)

Centennial College: [www.centennial.on.ca](http://www.centennial.on.ca)

Fanshawe College: [www.fanshawec.on.ca](http://www.fanshawec.on.ca)

Lambton College: [www.lambtonc.on.ca](http://www.lambtonc.on.ca)

Mohawk College: [www.mohawkc.on.ca](http://www.mohawkc.on.ca)

Northern College: [www.northernc.on.ca](http://www.northernc.on.ca)

Sault College: [www.saultc.on.ca](http://www.saultc.on.ca)

Sheridan College: [www.sheridanc.on.ca](http://www.sheridanc.on.ca)

Algonquin College: [www.algonquinc.on.ca](http://www.algonquinc.on.ca)

Canadore College: [www.canadorec.on.ca](http://www.canadorec.on.ca)

Conestoga College: [www.conestogac.on.ca](http://www.conestogac.on.ca)

Humber College: [www.humberc.on.ca](http://www.humberc.on.ca)

Loyalist College: [www.loyalistc.on.ca](http://www.loyalistc.on.ca)

Niagara College: [www.niagara.on.ca](http://www.niagara.on.ca)

St. Lawrence College: [www.stlawrencec.on.ca](http://www.stlawrencec.on.ca)

Seneca College: [www.senecac.on.ca](http://www.senecac.on.ca)

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#### **Professional Associations and Related Websites...**

Ontario Association of Social Workers: [www.oasw.org](http://www.oasw.org)

Ontario College of Social Workers and Social Service Workers: [www.ocswssw.org](http://www.ocswssw.org)

Canadian Association of Social Workers: [www.casw-acts.ca](http://www.casw-acts.ca)

## PRIMARY CARE PARAMEDIC

### What is a Primary Care Paramedic?

Paramedics provide care to patients in an out-of-hospital or inter-hospital setting. Paramedics are usually employed by an ambulance service and authorized to perform one or more controlled medical acts under the authority of a base hospital medical director. There are 3 levels of prehospital care in Ontario that are officially recognized in Canada and by the Government of Ontario as paramedic levels, namely Primary Care, Advanced Care, and Critical Care Paramedics.

### About the Work...

#### Responsibilities

In general, the responsibilities of primary care paramedics include:

- Working in an ambulance with another paramedic, and responding to both emergency and non-emergency calls, or in a rapid response vehicle as a single paramedic for emergency calls only,
- Performing patient assessments then implementing specified physical interventions that may include airway management, CPR and semi-automated external defibrillators, and basic trauma care,
- Administering specified medications as part of a 'Symptom Relief Package'.
- Effectively communicate with other members of the health care team both orally and in documentation of patient status and treatment,
- Assisting hospital personnel with the provision of medical treatment if required, and
- Maintaining ambulances and emergency care equipment and supplies.

#### Education, Training and Certification Required

To be a primary care paramedic you must graduate with a diploma from a 2-year training program at a Community College. Graduates must then successfully complete a provincial exam. A Primary Care Paramedic is only allowed to practice when he/she has secured employment with an ambulance service and has received approval/certification from the local Medical Director. Accreditation with the Canadian Medical Association may allow employability on a national basis. 11 Colleges in Ontario offer programs for training as a primary care paramedic. People with previous designations as Advanced Emergency Medical Care Assistants may be assessed according to the Paramedic Equivalency Competencies established by the Emergency Health Services Branch of the Ontario Ministry of Health and Long-Term Care. Two joint programs are now available in Ontario that offer university degrees in paramedicine.

#### Potential Earnings

April 1, 2007 hourly wage rates range from \$31.77 to \$35.30.

#### Typical Workplaces and Working Conditions

Paramedics work both indoors and outdoors in a variety of weather and other challenging physical conditions. Physical activity can be intense when dealing with very sick or injured individuals. Violence from people who have an altered state of consciousness (drug overdose or severe mental illness) is a threat to safety. Exposure to diseases is possible and mental fatigue is possible because of stresses related to the job. Hours of work are compressed shifts of 8, 10 or 12 hours/day spread over rotations that involve 24 hours a day, 7 day a week coverage.

#### Durham Region Employers

Durham Region EMS, which is a division of the Regional Municipality of Durham, operates all 9 ambulance stations in the region. They are located in Oshawa (2), Ajax, Pickering, Whitby, Bowmanville, Port Perry, Uxbridge and Beaverton.  
[www.region.durham.on.ca](http://www.region.durham.on.ca)

#### Employment Outlook

Many ambulance attendants are upgrading their qualifications to paramedic status. Ambulance services typically do not advertise for workers but select from unsolicited applications. Primary Care Paramedics may work as Emergency Responder Team members, with Fire Departments, as technical assistants in hospital, in industrial first aid settings or in recreation and sports facilities.

Durham Region Employment Outlook:	2009	2013	2017
	High	High	High

### **Where Can I go from here?**

Primary care paramedics can obtain further training to become Advanced Care or Critical Care Paramedics.

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### **To Become a Primary Care Paramedic...**

#### **Personal Qualities and Applied Skills You Will Need**

- Good physical condition is required to manage heavy lifting and difficult physical conditions,
- Ability to apply your understanding of human anatomy, physiology and pathology as it relates to medical or traumatic emergencies,
- Ability to work calmly, as a member of the health care team, under physically and emotionally stressful conditions and to manage emergency situations effectively.

#### **Entry Requirements for Education Programs**

Colleges require an Ontario Secondary School Diploma with varying course requirements between Colleges, or Mature Student Status. By law, people with specified problems with their driving record or who have been convicted (and not pardoned) of certain crimes cannot practice as a paramedic in Ontario. Specified immunization, driving, health and first aid requirements must be met.

#### **Educational Institutions**

Colleges in Ontario that offer educational programs as a Primary Care Paramedic are:

Durham: [www.durhamc.on.ca](http://www.durhamc.on.ca)

Algonquin: [www.algonquinc.on.ca](http://www.algonquinc.on.ca)

Niagara: [www.niagarac.on.ca](http://www.niagarac.on.ca)

Cambrian: [www.cambrianc.on.ca](http://www.cambrianc.on.ca)

St. Clair: [www.stclairc.on.ca](http://www.stclairc.on.ca)

Conestoga: [www.conestogac.on.ca](http://www.conestogac.on.ca)

Confederation: [www.confederationc.on.ca](http://www.confederationc.on.ca)

Fanshawe: [www.fanshawec.on.ca](http://www.fanshawec.on.ca)

Lambton: [www.lambtonc.on.ca](http://www.lambtonc.on.ca)

Humber: [www.humberc.on.ca](http://www.humberc.on.ca)

St. Lawrence: [www.sl.on.ca](http://www.sl.on.ca)

Northern: [www.northernc.on.ca](http://www.northernc.on.ca)

Centennial: [www.centennialcollege.ca](http://www.centennialcollege.ca)

Fleming: [www.flemingc.on.ca](http://www.flemingc.on.ca)

Georgian: [www.georgianc.on.ca](http://www.georgianc.on.ca)

St. Clair: [www.stclairc.on.ca](http://www.stclairc.on.ca)

Loyalist (part-time program in Bancroft): [www.loyalistc.on.ca](http://www.loyalistc.on.ca)

en française:

La Cite: [www.lacitec.on.ca](http://www.lacitec.on.ca)

Boreal: [www.boreal.on.ca](http://www.boreal.on.ca)

University programs are available at:

University of Toronto in Scarborough (in collaboration with Centennial College): [www.utoronto.ca](http://www.utoronto.ca)

Michener Institute (in collaboration with Charles Stuart University, Australia): [www.michener.ca](http://www.michener.ca)

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### **Professional Associations and Related Websites...**

Association of Municipal Emergency Medical Services of Ontario: [www.emsontario.ca/](http://www.emsontario.ca/)

Ontario Paramedic Association: [www.ontarioparamedic.ca](http://www.ontarioparamedic.ca)

Paramedic Association of Canada: [www.paramedic.ca](http://www.paramedic.ca)

Ontario College of Paramedics Steering Committee: [www.ontariocollegeofparamedics.ca](http://www.ontariocollegeofparamedics.ca)

Ontario Ministry of Health Emergency Health Services Branch: [www.gov.on.ca/health/](http://www.gov.on.ca/health/)

Land Ambulance Transition Website: [www.ambulance-transition.com/](http://www.ambulance-transition.com/)

## ADVANCED CARE PARAMEDIC

### What is an Advanced Care Paramedic?

Paramedics provide care to patients in an out-of-hospital or inter-hospital setting. Paramedics are usually employed by an ambulance service and authorized to perform one or more controlled medical acts under the authority of a base hospital medical director. There are 3 levels of prehospital care in Ontario that are officially recognized in Canada and by the Government of Ontario as paramedic levels, namely Primary Care, Advanced Care, and Critical Care Paramedics. Advanced care paramedics are authorized to perform more controlled acts and procedures than a primary care paramedic.

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### About the Work...

#### Responsibilities

In general, the responsibilities of advanced care paramedics include:

- Working in an ambulance with another paramedic, and responding to both emergency and non-emergency calls, or in a rapid response vehicle as a single paramedic for emergency calls only,
- In addition to the functions that are also performed by a primary care paramedic (See Occupational Fact Sheet – Primary Care Paramedic), applying an advanced skill set that includes administration of a wider range of medications; starting intravenous infusions; using advanced airway skills such as oral and nasal intubation; performing external pacing, cardioversion, and needle chest decompression; providing specified lead ECG interpretation; and providing direct laryngoscopy and foreign object removal,
- Effectively communicate with other members of the health care and emergency services teams, and particularly the base hospital, both orally and in documentation of patient status, responses and treatment,
- Assisting hospital personnel with the provision of medical treatment if required,
- Maintaining ambulances and service vehicles, and emergency care equipment and supplies, including the safe storage and monitoring of medications, and
- Driving the emergency vehicles and safely transporting patients to hospital when appropriate.

#### Education, Training and Certification Required

To be an advanced care paramedic you must be a primary care paramedic who then graduates from an additional 1 year program with a post-graduate certificate from a Community College, or undertake a combination of classroom, clinical rotation and field instruction. Advanced care paramedics must also be certified by their Base Hospital and local Medical Director, and pass a provincial Advanced Care examination. Paramedics are only allowed to practice when they have secured employment with an ambulance service and have received approval/certification from the local Medical Director. 7 Colleges in Ontario offer post-graduate programs for training as advanced care paramedics.

#### Potential Earnings

April 1, 2007 hourly wage rates range from \$34.09 to \$37.88.

#### Typical Workplaces and Working Conditions

Paramedics work both indoors and outdoors in a variety of weather and other challenging physical conditions. Physical activity can be intense when dealing with very sick or injured individuals. Violence from people who have an altered state of consciousness (drug overdose or severe mental illness) is a threat to safety. Exposure to diseases is possible and mental fatigue is possible because of stresses related to the job. Hours of work are compressed shifts of 8, 10 or 12 hours/day spread over rotations that involve 24 hours a day, 7 day a week coverage.

#### Durham Region Employers

Durham Region EMS, which is a division of the Regional Municipality of Durham, operates all 9 ambulance stations in the region. They are located in Oshawa (2), Ajax, Pickering, Whitby, Bowmanville, Port Perry, Uxbridge and Beaverton.

[www.region.durham.on.ca](http://www.region.durham.on.ca)

#### Employment Outlook

Ambulance services typically do not advertise for workers but select from unsolicited applications. All emergency medical services require paramedic training for their ambulance staff, and there is an increasing awareness of the importance of skilled interventions prior to arrival at the hospital emergency department in achieving better patient outcomes.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

#### **Where Can I go from here?**

Advanced care paramedics may obtain further training to become a more specialized critical care paramedics, assume more responsibility for training other paramedics and managing emergency medical services, or teach as part of a community college program.

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#### **To Become an Advanced Care Paramedic...**

##### **Personal Qualities and Applied Skills You Will Need**

- Integrity, maturity, reliability, poise and other attributes of leadership,
- Good physical condition is required to manage heavy lifting and difficult physical conditions,
- Ability to apply your understanding of human anatomy, physiology and pathology as it relates to medical or traumatic emergencies,
- Ability to work calmly, as a member of the health care team, under physically and emotionally stressful conditions and to manage emergency situations effectively.

##### **Entry Requirements for Education Programs**

Only people who are already primary care paramedics that have passed the Advanced Emergency Medical Care Assistant Exam are eligible for admission to advanced care paramedic education programs. A minimum number of hours of practice is also required. By law, people with specified problems with their driving record or who have been convicted (and not pardoned) of certain crimes cannot practice as a paramedic in Ontario.

##### **Educational Institutions**

Colleges in Ontario that offer educational programs as an advanced care paramedic are:

Durham: [www.durhamc.on.ca](http://www.durhamc.on.ca)

Algonquin: [www.algonquinc.on.ca](http://www.algonquinc.on.ca)

Centennial: [www.centennialc.on.ca](http://www.centennialc.on.ca)

Fanshawe: [www.fanshawec.on.ca](http://www.fanshawec.on.ca)

Georgian: [www.georgianc.on.ca](http://www.georgianc.on.ca)

Niagara : [www.nigarac.on.ca](http://www.nigarac.on.ca)

St. Clair: [www.stclairc.on.ca](http://www.stclairc.on.ca)

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##### **Professional Associations and Related Websites...**

Association of Municipal Emergency Medical Services of Ontario: [www.emsontario.ca/](http://www.emsontario.ca/)

Ontario Paramedic Association: [www.ontarioparamedic.ca](http://www.ontarioparamedic.ca)

Paramedic Association of Canada: [www.paramedic.ca](http://www.paramedic.ca)

Ontario College of Paramedics Steering Committee: [www.ontariocollegeofparamedics.ca](http://www.ontariocollegeofparamedics.ca)

Land Ambulance Transition Website: [www.ambulance-transition.com/](http://www.ambulance-transition.com/)

Ontario Ministry of Health Emergency Health Services Branch: [www.gov.on.ca/health/](http://www.gov.on.ca/health/)

Region of Durham Emergency Medical Services: [www.region.durham.on.ca](http://www.region.durham.on.ca)

## MEDICAL LABORATORY TECHNOLOGIST

### What is a Medical Laboratory Technologist?

Medical laboratory technologists are self-regulated health care professionals who conduct medical laboratory tests, experiments and analyses to assist in the diagnosis, treatment and prevention of disease. They may specialize in a number of areas which include clinical chemistry, microbiology or biochemistry, haematology and transfusion science, genetics and histotechnology.

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### About the Work...

#### **Responsibilities**

In general, the responsibilities of medical laboratory technologists include:

- Conducting chemical analyses of blood, urine, cerebro-spinal and other body fluids,
- Studying blood cells and other tissue to determine their relation to various physiological and pathological conditions,
- Preparing tissue sections for microscopic examinations using techniques to demonstrate special cellular tissue elements or other characteristics,
- Establishing procedures for the analysis of specimens and for medical laboratory experiments,
- Performing blood group, type and compatibility tests for transfusion purposes,
- Reporting findings in a timely and appropriate manner, and
- Maintaining appropriate laboratory conditions of cleanliness and temperature control.

#### **Education, Training and Certification Required**

To be a medical laboratory technologist you must graduate from an accredited training program and successfully pass the national certification exams. Upon completion of these requirements you must apply for and be registered with the College of Medical Laboratory Technologists of Ontario. Training programs are 3 years of full-time study of which a significant amount of time is spent in clinical practice. Programs may grant diplomas with links to degree programs, or grant degrees.

#### **Potential Earnings**

Hourly wage rates range from \$25.00 to \$34.00.

#### **Typical Workplaces and Working Conditions**

Medical laboratory technologists work in clean, well-ventilated and well lighted laboratories that contain the specialized and expensive equipment they need. Specific techniques must be used in the management of harmful chemicals, to ensure sterility, and to prevent the spread of infections through the biological samples they are analyzing. Contagious diseases may be present in any sample of blood or other body fluids. In hospitals, technologists are usually required to work shift work in order to provide 24 hour 7 day/week coverage. In smaller hospitals they may work regular day shifts during the week and work on a rotating on-call basis to provide coverage for off-hours, weekends and holidays. 20% of medical laboratory technologists work part-time. 90% work in the health and social service sector. Other typical employment sites may include universities, governments and clinics.

#### **Durham Region Employers**

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private company contracted services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- Private laboratories

#### **Employment Outlook**

Demand is expected to continue for medical laboratory technologists. While new diagnostic techniques such as DNA testing will increase the demand for technologists, increasing automation may have an offsetting effect. A nation-wide shortage of medical laboratory technologists currently exists and is expected to worsen as it is estimated that almost half of the current workforce will be eligible to retire by 2015.

Durham Region Employment Outlook:	2009	2013	2017
	Medium	High	High

### **Where can I go from here?**

In addition to working in hospitals and private laboratories, opportunities exist in industrial, government, forensic and pharmaceutical laboratories. With experience, opportunities are also available in management, teaching, consulting, information systems development, and marketing.

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### **To Become a Medical Laboratory Technologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Ability to safely and responsibly use sophisticated instruments, techniques and computers to perform laboratory testing on biological specimens,
- Combine superior problem-solving skills and deductive reasoning with attention to detail.
- Good motor skills, hand-eye co-ordination and dexterity, visual acuity.
- Ability to work effectively and efficiently without supervision and sometimes under pressure.

#### **Entry Requirements for Education Programs**

Admission requirements for specific courses vary between programs. All candidates for admission require an Ontario Secondary School Diploma with a strong emphasis on sciences. Some mandatory immunizations are also required.

#### **Educational Institutions**

In Ontario there are five accredited Medical Laboratory Programs that are recognized by the College of Medical Laboratory Technologists of Ontario. They are:

- St. Lawrence College: [www.sl.on.ca](http://www.sl.on.ca)
- Cambrian College: [www.cambrian.ca](http://www.cambrian.ca)
- St. Clair College (in conjunction with University of Windsor): [www.stclaircollege.ca](http://www.stclaircollege.ca)
- The Michener Institute for Applied Health Sciences: [www.michener.ca](http://www.michener.ca)
- University of Ontario Institute of Technology (BSc Medical Laboratory Science): [www.uoit.ca](http://www.uoit.ca)

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#### **Professional Associations and Related Websites...**

Canadian Society for Medical Laboratory Science: [www.csmls.org](http://www.csmls.org)

Ontario Society of Medical Technologists: [www.osmt.org](http://www.osmt.org)

College of Medical Laboratory Technologists of Ontario: [www.cmlto.com](http://www.cmlto.com)

Ontario Association of Medical Laboratories: [www.oaml.com](http://www.oaml.com)

Canadian Blood Services: [www.bloodservices.ca](http://www.bloodservices.ca)

## MEDICAL LABORATORY TECHNICIAN (ASSISTANT)

### **What Is A Medical Laboratory Technician (Assistant)?**

Medical Laboratory Technicians work under the direct supervision of and assist medical laboratory technologists by performing laboratory preparations, tests, and maintenance that require limited, but defined and technical manual skills. Medical laboratory technologists are self-regulated health care professionals who conduct medical laboratory tests, experiments and analyses to assist in the diagnosis, treatment and prevention of disease.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of medical laboratory technicians include:

- Collecting blood, tissue or other samples from patients,
- Transporting samples to the laboratory for testing,
- Logging patient samples and preparing them for testing,
- Setting up medical laboratory equipment,
- Conducting routine laboratory tests and sample analyses,
- Cleaning and maintaining the medical laboratory and medical laboratory equipment

#### **Education, Training and Certification Required**

To be a medical laboratory technician, employers in the public health care system usually require completion of a 6–12 month training program that has been approved by the Ontario Society of Medical Technologists. Some employers train medical laboratory technicians on-the-job.

#### **Potential Earnings**

Hourly wage rates range from \$21.00 to \$24.00.

#### **Typical Workplaces and Working Conditions**

Medical laboratory technicians typically work in hospitals and for private and government laboratory companies. Depending on the hours that the laboratory service operates, medical laboratory technicians may work regular week day hours, or be required to work shift-work to provide 24 hour patient coverage, particularly in a larger hospital. Medical laboratory technicians work in clean, well-ventilated and well lighted laboratories that contain specialized and expensive equipment. Walking to collect patient samples and some direct patient contact may be required. Specific techniques must be used in the management of harmful chemicals, to ensure sterility, and to prevent the spread of infections through the biological samples they are analyzing. Contagious diseases may be present in any sample of blood or other body fluids.

#### **Durham Region Employers**

Employers of medical laboratory technicians in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private laboratories

#### **Employment Outlook**

Demand for medical laboratory technicians is expected to continue in the future. It will be affected by changes in diagnostic techniques and restructuring in the health care system with the goal of cost reduction. The increased use of portable laboratory instruments and testing kits, combined with the growth of shared laboratory services among health care providers may affect the number of jobs that are available. It is expected that more jobs will be available in the future with private laboratory companies than in hospitals. Approximately 25% of medical laboratory technicians work part time.

Durham Region Employment Outlook:	2009	2013	2017
	Low	Low	Low

#### **Where can I go from here?**

Jobs are available in a number of settings where a person who is familiar with the health care system and is responsible

would be an asset.

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### **To Become a Medical Laboratory Technician...**

#### **Personal Qualities and Applied Skills You Will Need**

- Good organizational, communication and interpersonal skills and attention to detail
- Good manual dexterity
- Professional image

#### **Entry Requirements for Education Programs**

Academic requirements vary between programs, particularly for mature students. Some mandatory immunizations will be required.

#### **Educational Institutions**

The following institutions in Ontario offer training programs that have been approved by the Ontario Society of Medical Technologists:

- Trillium College (Oshawa):
- CDI College of Business: [www.cdicollege.com](http://www.cdicollege.com)
- Canadian Business College: [www.cbcollege.com](http://www.cbcollege.com)
- C&J Healthcare Support College (Scarborough and Rexdale): [www.cjcollege.com](http://www.cjcollege.com)
- Robetech Institute: [www.robetech.com](http://www.robetech.com)
- Medix School: [www.medixschool.ca](http://www.medixschool.ca)
- Algonquin Careers Academy: [www.algonquinacademy.com](http://www.algonquinacademy.com)
- National Academy of Health and Business: [www.nahb.ca](http://www.nahb.ca)
- The Michener Institute for Applied Health Science/Mohawk College: [www.mohawkc.on.ca](http://www.mohawkc.on.ca)  
(Toronto/Hamilton)
- St. Clair College: [www.stclairec.on.ca](http://www.stclairec.on.ca)
- Centennial College: [www.centennialcollege.ca](http://www.centennialcollege.ca)
- St. Lawrence College (Kingston): [www.sl.on.ca](http://www.sl.on.ca)
- Mohawk College: [www.mohawkc.ca](http://www.mohawkc.ca)

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#### **Professional Associations and Related Websites...**

Ontario Society of Medical Technologists: [www.osmt.org](http://www.osmt.org)

Canadian Society for Medical Laboratory Science: [www.csmls.org](http://www.csmls.org)

College of Medical Laboratory Technologists of Ontario: [www.cmlto.com](http://www.cmlto.com)

## MEDICAL RADIATION TECHNOLOGIST: RADIOLOGICAL TECHNOLOGIST

### What is A Medical Radiation Technologist?

A medical radiation technologist is a self-regulated health professional who, on the order of a physician, uses radiation to produce diagnostic images of a patient's body or to treat patients for certain medical conditions. There are four specialty disciplines within the field of radiation technology. Radiography is the use of x-rays to produce images of body parts on film or computer screens. Radiation Therapy is the treatment of disease with radiation to destroy diseased cells in the body. Nuclear Medicine is the use of low-level radioactive substances that are injected, inhaled or swallowed to produce images of how the body is functioning. Magnetic Resonance Imaging is a relatively new diagnostic technique that uses magnetism, radio waves and computers, instead of radiation, to acquire medical images.

### Education, Training and Certification Required

To work as a medical radiation technologist in Ontario you must successfully complete a training program that has been approved by the College of Medical Radiation Technologists of Ontario (CMRTO); pass a national exam that is set by the Canadian Association of Medical Radiation Technologists (CAMRT); and then be registered with the CMRTO. A minimum of 2.5 years of training is required. Educational programs specialize in one of four specialty disciplines. Specialty certificates in Breast Imaging and Computerized Tomography are available from the CAMRT following the completion of a set course of study that can be undertaken on a distance education basis. The professional is moving toward the achievement of a baccalaureate degree as an entry to practice requirement, although some existing programs do not offer this option.

### What is A Radiological Technologist?

A radiographer may apply any of the following techniques to provide diagnostic images:

- Plain film radiography is used to detect bone fractures and pathological processes, locate foreign objects in the body, and demonstrate the relationship between bone and soft tissue,
- Mammography produces radiographic images of the breast to detect cancer in its earliest stages.
- Angiography uses contrast agents to examine the heart and blood vessels,
- Fluoroscopy produces real-time images that show movement of material (contrast agents) through blood vessels or ducts; fluoroscopy is also used in orthopedic procedures, such as hip and knee surgery, to enable the surgeon to visualize the bony anatomy of interest in relation to surgical devices/hardware, and
- Computerized Tomography produces cross-sectional, 3-dimensional images of the body.

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### About the Work...

#### Responsibilities

In general, the responsibilities of radiographers include:

- Operating x-ray, radiographic and fluoroscopic equipment, specialized C.T. scanners and mammography units to produce high quality radiographs or images of body structures for the diagnosis of disease or injury by radiologists
- Positioning, preparing, supporting and educating patients, monitoring them during procedures, and minimizing discomfort.
- Processing and recording results and procedures, and
- Maintaining specialized equipment and managing the safe use of radiation.

#### Potential Earnings

Hourly wage rates range from \$25.00 to \$34.00.

#### Typical Workplaces and Working Conditions

Most employment is in hospitals and private diagnostic clinics. Diagnostic and treatment areas are controlled admission units because of the radiation used. Radiographers must know how to protect themselves against radiation contamination and wear meters to measure their exposure. They must also be able to lift and support ill patients. Work involves both the technical aspect of equipment handling and direct patient contact. In large hospitals Radiographers are usually required to work shift work in order to provide 24 hour 7 day/week coverage. In smaller hospitals they may work shifts during the week and work on a rotating on-call basis to provide coverage for off-hours, weekends and holidays. The Canadian Association of Radiologists (CAR) accredits mammography centres, and requires that radiographers who are working as mammographers at them complete a set number of continuing education hours annually.

#### Durham Region Employers

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca) (CAR Accredited for Mammography)

- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca) (CAR Accredited for Mammography)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private diagnostic clinics (may not be CAR accredited)

#### **Employment Outlook**

The development of new imaging techniques, such as CAT (computerized axial tomography) Scans, and their affordability will affect the demand for radiation based diagnostic procedures in the future. An aging population of 'Baby-Boomers' will place increased demands on all parts of the health care system, and the emphasis of the Ontario Breast Screening Program on the use of mammograms to detect breast cancer early will mean the demand for mammographers will remain high.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

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#### **To Become A Radiological Technologist...**

##### **Personal Qualities and Applied Skills You Will Need**

- A versatile skill set that combines an aptitude for the management of sophisticated technology with excellent communication and interpersonal skills. Applied skills will include the ability to safely perform authorized procedures such as drawing blood, tattooing, administering contrast media, and administering substances by injection or inhalation;
- An interest in science, and the ability to practically apply principles of physics and chemistry to successful and safe patient interventions and diagnostic techniques; and
- Ability to lift and support ill patients, and move equipment and protective devices.

##### **Entry Requirements for Educational Programs**

Entrance requirements vary between institutions. An Ontario Secondary School Diploma is required or Mature Student Status. Some schools require documentation of good health and/or the completion of a questionnaire.

##### **Educational Institutions**

The following institutions in Ontario provide training programs that are approved by the CMRTO:

- The Michener Institute for Applied Health Sciences (linked with U.of Toronto): [www.michener.on.ca](http://www.michener.on.ca)
- Cambrian College (linked with Laurentian University): [www.cambrianc.on.ca](http://www.cambrianc.on.ca)
- College Boreal D'arts Appliques et de Technologie (French instruction): [www.borealc.on.ca](http://www.borealc.on.ca)
- Confederation College (2 ½ year diploma program) : [www.confederationc.on.ca](http://www.confederationc.on.ca)
- Mohawk College (linked with McMaster University): [www.mohawkc.on.ca](http://www.mohawkc.on.ca)
- Fanshawe College (3 year diploma program): [www.fanshawec.on.ca](http://www.fanshawec.on.ca)
- Eastern Ontario School of X-Ray Technology (linked with Queens University): [www.meds.queensu.ca](http://www.meds.queensu.ca)

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##### **Professional Associations and Related Websites...**

Canadian Association of Medical Radiation Technologists: [www.camrt.ca](http://www.camrt.ca)  
College of Medical Radiation Technologists of Ontario: [www.cmrt.org](http://www.cmrt.org)  
Ontario Association of Medical Radiation Technologists: [www.oamrt.on.ca](http://www.oamrt.on.ca)  
Cancer Care Ontario: [www.cancercare.on.ca](http://www.cancercare.on.ca)  
Canadian Association of Radiologists: [www.car.ca](http://www.car.ca)

## MEDICAL RADIATION TECHNOLOGIST: NUCLEAR MEDICINE TECHNOLOGIST

### What is A Medical Radiation Technologist?

A medical radiation technologist is a self-regulated health professional who, on the order of a physician, uses radiation to produce diagnostic images of a patient's body or to treat patients for certain medical conditions. There are four specialty disciplines within the field of radiation technology. Radiography is the use of x-rays to produce images of body parts on film or computer screens. Radiation Therapy is the treatment of disease with radiation to destroy diseased cells in the body. Nuclear Medicine is the use of low-level radioactive substances that are injected, inhaled or swallowed to produce images of how the body is functioning. Magnetic Resonance Imaging is a relatively new diagnostic technique that uses magnetism, radio waves and computers, instead of radiation, to acquire medical images.

### Education, Training and Certification Required

To work as a medical radiation technologist in Ontario you must successfully complete a training program that has been approved by the College of Medical Radiation Technologists of Ontario (CMRTO); pass a national exam that is set by the Canadian Association of Medical Radiation Technologists (CAMRT); and then be registered with the CMRTO. A minimum of 2 ½ years of training is required. Educational programs specialize in one of the four specialty disciplines. Specialty certificates in Breast Imaging and Computerized Tomography are available from the CAMRT following the completion of a set course of study that can be undertaken on a distance education basis. The professional is moving toward the achievement of a baccalaureate degree as an entry to practice requirement, although some existing programs do not offer this option.

### What Is A Nuclear Medicine Technologist?

Nuclear medicine uses substances called radiopharmaceuticals which emit gamma rays that are detected by special types of cameras. The radiopharmaceuticals are attracted to specific organs, bones, or tissues. When the images of these sites are converted into computer images abnormalities can be identified early in the progression of a disease. In larger quantities, radiopharmaceuticals can also be used to destroy certain tumours.

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### About the Work...

#### Responsibilities

In general, the responsibilities of nuclear medicine technologists include:

- Positioning, preparing, supporting and educating patients, and monitoring them during procedures,
- Preparing and administering radiopharmaceuticals,
- Imaging different organs and body structures, and using sophisticated computers to process data and enhance images,
- Analyzing biological specimens in a laboratory,
- Conduct Positron Emission Tomography (P.E.T.) scanning to produce three dimensional diagnostic information about the entire body.
- Ensuring that proper radiation handling and protection techniques are followed, and
- Work closely with physicians and other members of the health care team.

#### Potential Earnings

Hourly wage rates range from \$25.00 to \$34.00.

#### Typical Workplaces and Working Conditions

Nuclear medicine technologists work in cancer treatment centres that may be part of a hospital setting, clinics and radiological laboratories. Treatment areas are controlled admission units because of the radiation used. Nuclear medicine technologists must know how to protect themselves against radiation contamination and wear meters to measure their exposure. They must also be able to lift and support ill patients. Work involves both the technical aspects of sensitive pharmaceutical and equipment handling, and direct patient contact. Typically, nuclear medicine technologists work regular week day shifts, however to meet the increasing demand for timely diagnostic services shift and weekend work may be required.

#### Durham Region Employers

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca).
- Rouge Valley Health System: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private clinics

### **Employment Outlook**

As the availability of cancer treatment services in Durham Region increases, there will be an increased demand for nuclear medicine technologists.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

### **Where can I go from here?**

Nuclear medicine technologists can obtain Advanced Certification or a Fellowship through the CAMRT. In addition to achieving excellence in clinical practice, nuclear medicine technologists can become health care administrators, instructors, or researchers. They may also chose to work in the manufacturing, sales and technical support of medical radiation technology.

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### **To Become a Nuclear Medicine Technologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- A versatile skill set that combines an aptitude for the management of sophisticated technology with excellent communication and interpersonal skills,
- Good judgement, organizational and analytical skills, and the ability to adapt quickly to changes in workload demand and emergency situations, and .
- Physical ability to lift and support heavy patients and equipment.

#### **Entry Requirements for Education Programs**

At least one year of university is required that includes full courses in Physics, Mathematics and Biology.

#### **Educational Institutions**

One institution in Ontario provides a Nuclear Medicine Technologist Training Program that is approved by the CMRTO:

- The Michener Institute for Applied Health Sciences (in collaboration with the University of Toronto):  
[www.michener.on.ca](http://www.michener.on.ca)

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#### **Professional Associations and Related Websites...**

Canadian Association of Medical Radiation Technologists: [www.camrt.ca](http://www.camrt.ca)

College of Medical Radiation Technologists of Ontario: [www.cmrtto.org](http://www.cmrtto.org)

Ontario Association of Medical Radiation Technologists: [www.oamrt.on.ca](http://www.oamrt.on.ca)

Society of Nuclear Medicine: [www.snm.org](http://www.snm.org)

## MEDICAL RADIATION TECHNOLOGIST: MAGNETIC RESONANCE IMAGING TECHNOLOGIST

### What is A Medical Radiation Technologist?

A medical radiation technologist is a self-regulated health professional who, on the order of a physician, uses radiation to produce diagnostic images of a patient's body or to treat patients for certain medical conditions. There are four specialty disciplines within the field of radiation technology. Radiography is the use of x-rays to produce images of body parts on film or computer screens. Radiation Therapy is the treatment of disease with radiation to destroy diseased cells in the body. Nuclear Medicine is the use of low-level radioactive substances that are injected, inhaled or swallowed to produce images of how the body is functioning. Magnetic Resonance Imaging is a relatively new diagnostic technique that uses magnetism, radio waves and computers, instead of radiation, to acquire medical images.

### Education, Training and Certification Required

To work as a medical radiation technologist in Ontario you must successfully complete a training program that has been approved by the College of Medical Radiation Technologists of Ontario (CMRTO); pass a national exam that is set by the Canadian Association of Medical Radiation Technologists (CAMRT); and then be registered with the CMRTO. A minimum of 2.5 years of training is required. Educational programs specialize in one of four specialty disciplines. Specialty certificates in Breast Imaging and Computerized Tomography are available from the CAMRT following the completion of a set course of study that can be undertaken on a distance education basis. The professional is moving toward the achievement of a baccalaureate degree as an entry to practice requirement, although some existing programs do not offer this option.

### What Is A Magnetic Resonance Imaging (MRI) Technologist?

Magnetic resonance imaging is a non-invasive diagnostic technique that relies on extremely powerful magnets. It is a relatively new diagnostic field that is used in particular for studying the cardiovascular system, detecting tumours, studying body chemistry and functions, and imaging soft tissues such as muscles, tendons and arteries. MRI technologists conduct examinations that are ordered by a physician.

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### About the Work...

#### Responsibilities

In general, the responsibilities of MRI technologists include:

- Positioning, preparing, and educating patients, and monitoring them during procedures,
- Screening patients to make sure that they do not have or have implanted any metal devices that could damage the diagnostic equipment,
- Supporting and assisting patients who may experience claustrophobia during the diagnostic procedure,
- Imaging different organs and body structures, and using sophisticated computers to process data and enhance images,
- Conducting scans that are of high image quality,
- Work closely with physicians and other members of the health care team.

#### Education, Training and Certification Required

One accredited nineteen month MRI certificate program is offered in Ontario. It is a competency based post-graduate program that is available on a part time or distance education basis. To work as an MRI technologist in Ontario you must successfully complete a training program that has been approved by the College of Medical Radiation Technologists of Ontario (CMRTO); pass a national exam that is set by CAMRT; and be registered with the College of Medical Radiation Technologists of Ontario.

#### Potential Earnings

Hourly wage rates range from \$25.00 to \$35.00.

#### Typical Workplaces and Working Conditions

MRI technologists work in large hospitals or private MRI laboratories. Work involves both the technical aspects of this evolving new diagnostic science and equipment management; and direct patient contact. Typically, MRI technologists work regular week day shifts, however to meet the increasing demand for timely diagnostic services shift and weekend work may be required.

#### Durham Region Employers

Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)

Rouge Valley Health System: [www.rougevalley.ca](http://www.rougevalley.ca)

### **Employment Outlook**

There will be increasing opportunities for MRI technologists as the technology becomes more common in Canadian hospitals.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

### **Where can I go from here?**

MRI technologists can obtain Advanced Certification or a Fellowship through the CAMRT. In addition to achieving excellence in specialized areas of clinical practice, MRI technologists can become health care administrators, instructors, or researchers. They may also choose to work in the manufacturing, sales and technical support of MRI technology.

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### **To Become a Magnetic Resonance Imaging (MRI) Technologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- A versatile skill set that combines an aptitude for the management of sophisticated technology with excellent communication and interpersonal skills,
- Good judgement, organizational and analytical skills, and the ability to adapt quickly to changes in workload demand and emergency situations, and .
- Physical ability to lift and support heavy patients and equipment.

#### **Entry Requirements for Education Programs**

Candidates for admission to the training program must be registered medical radiation technologists in any of its disciplines, and must have access to a computer that meets the minimum system requirements.

#### **Educational Institutions**

One institution in Ontario provides an MRI Technologist Training Program that is approved by the CMRTO:

- The Michener Institute for Applied Health Sciences in collaboration with the University of Toronto:  
[www.michener.on.ca](http://www.michener.on.ca)

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#### **Professional Associations and Related Websites...**

Canadian Association of Medical Radiation Technologists: [www.camrt.ca](http://www.camrt.ca)

College of Medical Radiation Technologists of Ontario: [www.cmrt.org](http://www.cmrt.org)

Ontario Association of Medical Radiation Technologists: [www.oamrt.on.ca](http://www.oamrt.on.ca)

International Society for Magnetic Resonance in Medicine: [www.ismrm.org](http://www.ismrm.org)

## MEDICAL RADIATION TECHNOLOGIST: RADIATION THERAPIST

### What is A Medical Radiation Technologist?

A medical radiation technologist is a self-regulated health professional who, on the order of a physician, uses radiation to produce diagnostic images of a patient's body or to treat patients for certain medical conditions. There are four specialty disciplines within the field of radiation technology. Radiography is the use of x-rays to produce images of body parts on film or computer screens. Radiation Therapy is the treatment of disease with radiation to destroy diseased cells in the body. Nuclear Medicine is the use of low-level radioactive substances that are injected, inhaled or swallowed to produce images of how the body is functioning. Magnetic Resonance Imaging is a relatively new diagnostic technique that uses magnetism, radio waves and computers, instead of radiation, to acquire medical images.

### Education, Training and Certification Required

To work as a medical radiation technologist in Ontario you must successfully complete a training program that has been approved by the College of Medical Radiation Technologists of Ontario (CMRTO); pass a national exam that is set by the Canadian Association of Medical Radiation Technologists (CAMRT); and then be registered with the CMRTO. A minimum of 2.5 years of training is required. Educational programs specialize in one of four specialty disciplines. Specialty certificates in Breast Imaging and Computerized Tomography are available from the CAMRT following the completion of a set course of study that can be undertaken on a distance education basis. The professional is moving toward the achievement of a baccalaureate degree as an entry to practice requirement, although some existing programs do not offer this option.

### What Is A Radiation Therapist?

Radiation therapists use focused beams of radiation to destroy tumours or place radioactive sources directly into the patient's body. Radiation therapy involves higher doses of radiation than required for diagnostic imaging.

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### About the Work...

#### Responsibilities

In general, the responsibilities of radiation therapists include:

- Assisting the radiation oncologist (physicians who are cancer specialists) and clinical physicists with the preparation of a radiation treatment plan,
- Positioning, preparing, supporting and educating patients, and monitoring them during procedures,
- Operating linear accelerators, cobalt 60, x-ray and other radiation therapy equipment to administer prescribed radiation treatments,
- Assisting in the preparation of sealed radioactive materials such as cobalt, radium, cesium and isotopes, and the construction of devices such as plaster casts and acrylic moulds,
- Ensuring that proper radiation handling and protection techniques are followed, and
- Performing treatment simulations, taking measurements and performing calculations to determine accurate radiation doses and positions.

#### Potential Earnings

Hourly wage rates range from \$26.50 to \$36.40.

#### Typical Workplaces and Working Conditions

Radiation therapists work in cancer treatment centres that may be part of a hospital setting. Treatment areas are controlled admission units because of the radiation used. Radiation therapists must know how to protect themselves against radiation contamination and wear meters to measure their exposure. They must also be able to lift and support ill patients. Work involves both the technical aspect of equipment handling and direct patient contact. Because the course of radiation treatment often takes several weeks a supportive relationships usually forms between the therapist, the patient and the family members, which may be emotionally stressful when patients do not recover. Typically radiation therapists work regular week day shifts, however to meet the demands for cancer treatment in Ontario they have begun to work extended hours and weekends.

#### Durham Region Employers

- A new Cancer Centre is being developed to service Durham Region. It is in Oshawa and operates in conjunction with Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca).
- Private clinics

### **Employment Outlook**

There is an extreme shortage of radiation therapists now in Ontario. There will be a high demand for radiation therapists in Durham Region to operationalize the Cancer Treatment Centre.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

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### **To Become a Radiation Therapist...**

#### **Personal Qualities and Applied Skills You Will Need**

- A versatile skill set that combines scientific precision with excellent communication and interpersonal skills,
- Emotional ability to work closely with very ill patients and their families,
- Physical ability to lift and support heavy patients and equipment.

#### **Entry Requirements for Education Programs**

At least one year of university is required that includes full courses in Physics, Mathematics and Biology for the University of Toronto Collaborative program. The Laurentian program requires an OSSD with a strong science focus, including calculus.

#### **Educational Institutions**

One institution in Ontario provides two collaborative Radiation Therapist Training Programs that are approved by the CMRTO:

- The Michener Institute for Applied Health Sciences, in collaboration with the University of Toronto offers a combined degree and diploma program. [www.michener.on.ca](http://www.michener.on.ca)
- The Michener Institute for Applied Health Sciences, in collaboration with Laurentian University in Sudbury offers a 4-year degree program that is based in Sudbury with a distance link to the Michener Institute. [www.michener.on.ca](http://www.michener.on.ca)

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#### **Professional Associations and Related Websites...**

Canadian Association of Medical Radiation Technologists: [www.camrt.ca](http://www.camrt.ca)

College of Medical Radiation Technologists of Ontario: [www.cmrto.org](http://www.cmrto.org)

Ontario Association of Medical Radiation Technologists: [www.oamrt.on.ca](http://www.oamrt.on.ca)

Cancer Care Ontario: [www.cancercare.on.ca](http://www.cancercare.on.ca)

National Cancer Institute: [www.cancer.gov](http://www.cancer.gov)

## ULTRASONOGRAPHER

### What Is An Ultrasonographer?

An ultrasonographer provides vital information about pathology through images that are formed by the use of high frequency sound waves. A transducer transmits the sound waves and then records the echoes as they bounce off human tissues. A computer translates the echoes into dynamic visual images of organs, tissues or blood flow. Ultrasound is commonly used in obstetrics and gynecology. It is also used to image superficial structures as well as other internal structures in the abdomen, the heart and the vascular system. Specialty areas within the ultrasound field are general sonographer, cardiac sonographer, or vascular sonographer. Ultrasonographers conduct examinations that are ordered by a physician. They may be medical radiation technologists (see Separate Occupational Fact Sheet) who have specialized in ultrasonography, but they may also have other professional backgrounds.

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### About the Work...

#### Responsibilities

In general, the responsibilities of ultrasonographers include:

- Positioning, preparing, supporting and educating patients, and monitoring them during procedures,
- Providing assistance with some clinical procedures,
- Using ultrasound equipment to produce high quality images that are required to complete the examinations required. Techniques used include real time 2-D scanning, M-mode, and pulsed wave Doppler,
- Integrating results from other diagnostic data, providing technical analysis of sonographic data, and producing diagnostic data to document the sonographic findings, and
- Working closely with physicians and other members of the health care team.

#### Education, Training and Certification Required

Two available training programs in Ontario vary in length from a 16 month (part-time) post-diploma option to a 4 year degree option. Post-graduate distance training is also available. Graduates are eligible to write the certification exams conducted by the American Registry of Medical Sonographers (ARDMS). Most employers require this certification in Canada. The Canadian Association of Registered Diagnostic Ultrasound Professionals is currently working toward the establishment of a Canadian Certification Process.

#### Potential Earnings

Hourly wage rates range from \$25.00 to \$35.00.

#### Typical Workplaces and Working Conditions

Ultrasonographers work in hospitals and private clinics. They must also be able to lift and support ill patients. Work involves both the technical aspects of imaging and equipment handling, and direct patient contact. Typically, ultrasonographers work regular week day shifts, however to meet the increasing demand for timely diagnostic services shift and weekend work may be required. Ultrasonographers in smaller hospitals may work on on-call to cover off-hour requirements.

#### Durham Region Employers

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca).
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private diagnostic clinics

#### Employment Outlook

The demand for ultrasonographers is expected to remain high in Durham Region Region because of its high rate of population growth.

Durham Region	2009	2013	2017
Employment Outlook:	High	High	High

#### Where can I go from here?

In addition to achieving excellence in clinical practice, ultrasonographers can become health care administrators, instructors, or researchers. They may also chose to work in the manufacturing, sales and technical support of imaging technology.

### **To Become an Ultrasonographer...**

#### **Personal Qualities and Applied Skills You Will Need**

- A versatile skill set that combines an aptitude for the management of sophisticated technology with excellent communication and interpersonal skills,
- Good hand-eye coordination,
- Good judgement, organizational and analytical skills, and the ability to adapt quickly to changes in workload demand and emergency situations, .
- Physical ability to lift and support heavy patients and equipment,
- Interest in applying the principles of physics and instrumentation to a diagnostic and problem-solving setting.

#### **Entry Requirements for Education Programs**

Entry requirements vary between programs. Some are available only to people who already have experience as a health professional, while some are available to people who have completed high school with the appropriate pre-requisites.

#### **Educational Institutions**

Two institutions in Ontario provide training in Ultrasonography:

- The Michener Institute for Applied Health Sciences in collaboration with the University of Toronto (general sonography; post diploma or degree only): [www.michener.on.ca](http://www.michener.on.ca)
- Mohawk Institute for Applied Health Science in collaboration with McMaster University. This is a four year degree program that is accredited by the Canadian Medical Association: [www.mohawkc.on.ca](http://www.mohawkc.on.ca)

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#### **Professional Associations and Related Websites...**

Ontario Society of Diagnostic Medical Sonographers: [www.osdms.org](http://www.osdms.org)

American Registry of Diagnostic Medical Sonographers: [www.ardms.org](http://www.ardms.org)

Canadian Society of Diagnostic Medical Sonographers: [www.csdms.com](http://www.csdms.com)

Canadian Association of Registered Diagnostic Ultrasound Professionals: [www.cardup.org](http://www.cardup.org)

Society of Diagnostic Medical Sonography: [www.sdms.org](http://www.sdms.org)

## MEDICAL PHYSICIST

### What Is A Medical Physicist?

A Medical Physicist is a health care professional with specialized training in medical application of physics. Ultrasound, magnetic resonance, computed tomography, nuclear medicine, x-rays, and radiation therapy are all branches of medical physics. Medical physicists conduct continuing research in these areas. They work predominantly in the provision of clinical services, radiation safety, research and development and teaching. They are important professionals in the planning, supervision and coordination of services in cancer care centres. Their work often involves the use of x-rays, ultrasound, magnetic and electric fields, infra-red and ultraviolet light, heat and lasers in diagnosis and therapy.

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### About the Work...

#### Responsibilities

In general, the responsibilities of Medical Physicists working in clinical services include:

- Treatment planning,
- Radiotherapy machine design, testing, calibration, and troubleshooting, and
- Diagnostic imaging machine purchasing and installation, testing, quality control and operation.

Those working in research and development:

- Design and construct radiotherapy treatment equipment,
- Research the use of different techniques in cancer treatment,
- Developing and improving methods to image body structures and functions.

#### Education, Training and Certification Required

A postgraduate degree in physics is required from a recognized university. Most employers require membership in the Canadian College of Physicists in Medicine or the equivalent of a Peer Review A by Cancer Care Ontario. Certification with the College usually requires a graduate degree in medical physics or physics and at least 2 years of experience following graduation in a medical application setting.

#### Potential Earnings

Hourly wage rates range from \$51.00 to \$65.00.

#### Typical Workplaces and Working Conditions

There are approximately 250 medical physicists working in Canada. 75% work in hospitals and hospital-based research; 7% work for government; 8% for industry; and an additional 10% are university faculty who are not hospital based.

#### Durham Region Employers

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca).

#### Employment Outlook

The number of medical physicist positions generally increases by 5-10% per year.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	Medium	High	High

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### To Become A Medical Physicist...

#### Personal Qualities and Applied Skills You Will Need

- Sound judgement and critical thinking skills,
- Ability to develop and apply concepts to practice,
- Sound research skills and work habits,
- Good teamwork and leadership skills combined with the ability to work independently.

#### Entry Requirements for Education Programs

An honours degree in physics is required to continue specialized graduate studies in medical physics. Courses in computing, electronics and mathematics are recommended.

### **Educational Institutions**

17 Universities in Canada offer graduate programs in medical physics. Those in Ontario are:

- Carleton University: [www.physics.carleton.ca](http://www.physics.carleton.ca)
- Laurentian University: [www.laurentian.ca/physics](http://www.laurentian.ca/physics)
- McMaster University: [www.science.mcmaster.ca](http://www.science.mcmaster.ca)
- Ryerson University: [www.physics.ryerson.ca](http://www.physics.ryerson.ca)
- University of Toronto: [www.medbio.utoronto.ca](http://www.medbio.utoronto.ca)
- University of Western Ontario: [www.uwo.ca/biophysics/](http://www.uwo.ca/biophysics/)
- Queens University: [www.physics.queensu.ca](http://www.physics.queensu.ca)

The University of Ontario Institute of Technology (UOIT) in Oshawa offers a unique baccalaureate degree in Radiation Sciences that may be accepted as a prerequisite undergraduate degree.

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### **Professional Associations and Related Websites...**

- Canadian College of Physicists in Medicine: [www.medphys.ca](http://www.medphys.ca)  
Canadian Organization of Medical Physicists: [www.medphys.ca](http://www.medphys.ca)

Source: [www.medphys.ca](http://www.medphys.ca)

## RESPIRATORY THERAPIST

### **What Is A Respiratory Therapist?**

Respiratory Therapists, also known as Respiratory Care Practitioners, are self-regulated health professionals who specialize in caring for people of all ages with breathing difficulties such as chronic obstructive lung diseases, accident victims, premature infants with underdeveloped lungs, and heart failure. They work under the direction of a physician to monitor, evaluate and treat individuals with respiratory and cardio-respiratory disorders. Most Respiratory Therapists provide direct patient care that may include critical care, anesthesia support, diagnostic testing services, controlling and supplying medical gases, and supporting and educating patients and their families. They are also responsible for the purchase, operation and general maintenance of complex respiratory support equipment.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of Respiratory Therapists include:

- Assessing patients' lung capacity and performing diagnostic tests, such as arterial blood gas analysis and cardiopulmonary functions tests,
- Operating and monitoring respiratory equipment to administer treatments such as oxygen, oxygen-air mixtures, humidified air to manage respiratory related illnesses,
- Performing or assisting with interventions such as airway maintenance, line insertions, inductions and intubations,
- Providing life support for people who cannot breathe on their own,
- Assisting in high risk births,
- Stabilizing and transporting patients with breathing difficulties who need to be moved by ambulance,
- Assisting anaesthetists in the operating room,
- Assisting in cardiopulmonary resuscitation and support, and
- Participating in home care programs for chronic respiratory patients, and providing patient and family education on topic such as asthma, smoking or stroke.

#### **Education, Training and Certification Required**

Graduation from a two or three year training program, offered by a Community College and includes practical experience in a hospital setting, with a Diploma in Respiratory Therapy. Graduates must pass the national registration exam of the Canadian Board for Respiratory Care, and then be registered with the College of Respiratory Therapists of Ontario. Some universities in Canada offer a four year degree in Respiratory Therapy.

#### **Potential Earnings**

Hourly wage rates range from \$25.00 to \$35.00.

#### **Typical Workplaces and Working Conditions**

Most respiratory therapists work in hospitals with at least 50 beds. Some respiratory therapists see people in their homes or work with medical gas supply services. Respiratory therapists in hospitals may be assigned to specific units such as operating rooms, neonatal or other critical care units, or they may work throughout the hospital to carry out routine therapy. Since respiratory therapists often work with critically ill patients there is often a high level of stress associated with the work. Most respiratory therapists are physically active and on their feet for most of the day. They work shift work to provide 24 hour coverage. Most respiratory therapists work full time, although part-time work may be available.

#### **Durham Region Employers**

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca).
- Rouge Valley Health System: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private medical gas companies.

#### **Employment Outlook**

As the population ages and develops more respiratory related conditions there may be an increasing need for respiratory therapists both in hospitals and to provide services to people in their homes. Technological advances in life support services ensures a need for respiratory therapists in large acute care hospitals, particularly those which support specialized operating procedures, trauma units and neonatal intensive care units.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

**Where can I go from here?**

Respiratory Therapists may specialize to become cardiovascular perfusionists, cardiopulmonary technologists, or sleep medicine technologists, or they may pursue a masters level qualification in a related health discipline. They may also become involved in teaching, or hospital administration.

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**To Become A Respiratory Therapist...**

**Personal Qualities and Applied Skills You Will Need**

- Good physical and mental health,
- Sound judgement and critical thinking skills combined with good interpersonal and communication skills,
- Able to adapt to a variety of settings and work effectively and calmly under pressure and in emergencies,
- Good teamwork and leadership skills combined with the ability to work independently to manage a caseload.

**Entry Requirements for Education Programs**

Education requirements vary between schools. An Ontario Secondary School Diploma is required with an emphasis on the natural sciences and English. Specific immunizations may be required.

**Educational Institutions**

5 Colleges in Ontario offer programs that are approved by the College of Respiratory Therapists of Ontario. They are:

- Algonquin College: [www.algonquinc.on.ca](http://www.algonquinc.on.ca)
- Canadore College: [www.canadorec.on.ca](http://www.canadorec.on.ca)
- Fanshawe College: [www.fanshawec.on.ca](http://www.fanshawec.on.ca)
- Conestoga College: [www.conestogac.on.ca](http://www.conestogac.on.ca) (new program)
- La Cite collegiale: [www.lacitec.on.ca](http://www.lacitec.on.ca)
- The Michener Institute of Applied Health Sciences: [www.michener.on.ca](http://www.michener.on.ca) (offers a 3year diploma or a 4-year collaborative degree with the University of Waterloo or Queen's University)

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**Professional Associations and Related Websites...**

College of Respiratory Therapists of Ontario: [www.crto.on.ca](http://www.crto.on.ca)

Canadian Society of Respiratory Therapists: [www.csrt.com](http://www.csrt.com)

Respiratory Therapy Society of Ontario: [www.rtso.org](http://www.rtso.org)

Canadian Society of Clinical Perfusion: [www.cscp.ca](http://www.cscp.ca)

Canadian Association of Cardio-Pulmonary Technologists: [www.cacpt.ca](http://www.cacpt.ca)

## REGISTERED NURSE

### What Is A Registered Nurse?

Nursing is a self-regulated health profession, the goal of which is to restore, maintain and advance the health of individuals, families and communities. Nurses work independently to assess clients' needs, plan and provide appropriate interventions to optimize the clients' biological, psychological and/or social health. Interventions may be through supportive, preventative, palliative or rehabilitative means. Nurses work closely with other health care professionals to implement medically prescribed interventions and monitoring procedures, prepare clients for diagnostic procedures, and co-ordinate care in the best interest of the patient. In Ontario, the nursing profession is comprised of two groups, Registered Nurses and Registered Practical Nurses. Registered Nurses work in more complex situations where the outcome for the client is less predictable, in a greater variety of nursing roles, and without the supervision of another health professional. Post-graduate certification is available in 17 nursing specialities.

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### About the Work...

#### Responsibilities

In general, the client care centred responsibilities of Registered Nurses include:

- Applying the nursing process (collecting and assessing data, planning care, conducting interventions, and evaluating outcomes) to any client, family, or community to determine the type of nursing intervention that is required, or when a referral is required to another health care professional.
- Independently implementing nursing interventions that include monitoring of health status, providing comfort and safety measures, managing and adapting the physical environment, educating, providing emotional support and counselling, and assisting people with the activities of daily living that they are unable to do for themselves (eg/eating, walking, dressing, bathing.),
- Implementing medically prescribed interventions and protocols such as administering medications and treatments,
- Assisting and working with other health professionals as part of a multi-disciplinary team,
- Documenting clients' health status and interventions, and continually using the health record as a tool in the nursing process, and
- Supervising nursing and other staff.

Registered Nurses may specialize in cardiovascular; community health; critical care (adult and pediatrics); emergency; gastroenterology; gerontology; hospice palliative care; nephrology; neuroscience; occupational health; oncology; orthopaedics; perinatal; perioperative; psychiatric/mental health; or rehabilitation.

#### Education, Training and Certification Required

A baccalaureate degree is required by anyone wishing to enter practice as a Registered Nurse in Ontario. Upon completion of their education program, graduate nurses must pass a national exam that is set by the Canadian Nurses Association, be registered with the College of Nurses of Ontario. Registered nurses who remain active in their fields are then required to obtain an annual Certificate of Competence from the College. To be eligible to apply for specialty certification, nurses must have worked the equivalent of 3,900 hours in their area of nursing specialty in the past 5 years, or have worked a combination of 1,950 hours and completed a post-basic nursing course of at least 300 hours in their area of specialty in the past 3 years.

#### Potential Earnings

Hourly wage rates range from \$23.80 to \$38.44.

#### Typical Workplaces and Working Conditions

Registered nurses work in hospitals, clients' homes, long-term care facilities, industries, public health units, government offices, clinics and streets. Registered nurses who provide direct patient care work shift work or share on-call scheduling to provide 24/7 coverage. 12-hour shifts are common. Registered nurses often stand or walk for prolonged periods of time, risk exposure to contaminated and potentially contagious blood and other body fluids, lift and turn ill clients, and work with potentially hazardous chemicals, anaesthetics and radiation. They may work in highly stressful and technologically dependent areas such as intensive care units, emergency departments or surgical suites. Registered Nurses who do not provide direct patient care are likely to work regular week day hours in clean office environments.

#### Durham Region Employers

Durham Region employers of Registered nurses include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)

- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private providers who may contract services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- 18 Long-Term Care Facilities
- Durham Region Health Department, LTC and Services for Seniors Division, Social Services Dept.: [www.region.durham.on.ca](http://www.region.durham.on.ca)
- Durham Region Community Care: [www.communitycaredurham.on.ca](http://www.communitycaredurham.on.ca)

### **Employment Outlook**

There is a current shortage of clinical nurses which is expected to increase as nurses retire. Increasingly, more nurses are required to provide in-home care as there is a shift in where care is being provided and people are discharged from hospitals sooner. This means that in-hospital patients are sicker and require more intensive and technologically adept nursing care.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

### **Where can I go from here?**

Registered nurses may choose to become Nurse Practitioners, clinical nurse specialists, researchers, educators, administrators or consultants. Post-graduate degrees in nursing are available to support these activities. Nurses may also become involved in health services administration and policy development.

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### **To Become A Registered Nurse...**

#### **Personal Qualities and Applied Skills You Will Need**

- Able to effectively apply a large body of knowledge to practical situations and in managing complex equipment,
- Sound judgement and critical thinking skills combined with exceptional interpersonal and communication skills,
- Able to adapt to a variety of situations and work effectively and calmly under pressure and in emergencies,
- Physical strength and agility to lift, support and transfer patients.
- Problem solving and teaching skills.

#### **Entry Requirements for Education Programs**

Education requirements vary between schools. An Ontario Secondary School Diploma is required with an emphasis on the natural sciences and English.

#### **Educational Institutions**

**University of Ontario Institute of Technology in collaboration with Durham College:** [www.uoit.ca](http://www.uoit.ca)

Lakehead University	Laurentian University	McMaster University	Trent University
Queen's University	Ryerson University	University of Ottawa	
University of Toronto	University of Western Ontario	University of Windsor	
York University	Brock University	Nipissing University	

Other Colleges that provide collaborative degree programs with universities: Algonquin; Cambrian; Canadore; Centennial; Conestoga; Fanshawe; George Brown; Georgian; Humber; Lambton; Loyalist; Mohawk; Northern, St. Clair; Sault; Seneca; Sir Sanford Fleming, St. Lawrence, and French programs at Boreal and La Cite.

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#### **Professional Associations and Related Websites...**

- Canadian Nurses Association: [www.cna-nurses.ca](http://www.cna-nurses.ca)  
 College of Nurses of Ontario: [www.cno.org](http://www.cno.org)  
 Registered Nurses Association of Ontario: [www.rnao.org](http://www.rnao.org)

## REGISTERED PRACTICAL NURSE

### **What Is A Registered Practical Nurse?**

Nursing is a self-regulated health profession, the goal of which is to restore, maintain and advance the health of individuals, families and communities. Nurses work independently to assess clients' needs, plan and provide appropriate interventions to optimize the clients' biological, psychological and/or social health. Interventions may be through supportive, preventative, palliative or rehabilitative means. Nurses work closely with other health care professionals to implement medically prescribed interventions and monitoring procedures, prepare clients for diagnostic procedures, and co-ordinate care in the best interest of the patient. In Ontario, the nursing profession is comprised of two groups, registered nurses and Registered Practical Nurses. Registered practical nurses work in more stable situations where the outcome for the client is predictable, where care plans include a limited range of interventions that are within the registered practical nurse's Scope of Practice, and under the direct or indirect supervision of a registered nurse.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of a registered practical nurse include:

- Monitoring client's condition, evaluating the effectiveness of nursing interventions and assisting in the development and maintenance of an effective client care plan,
- Providing nursing interventions such as taking vital signs, using aseptic (sterile) techniques, monitoring nutritional and fluid intake and output, collecting specimens,
- Administering medications and treatments,
- Providing comfort, safety, and hygiene care for clients,
- Providing safety and health education to individuals and their families,
- Documenting client status and interventions.

#### **Education, Training and Certification Required**

Registered practical nurses must be registered by the College of Nurses of Ontario. To be eligible for registration candidates must successfully complete an approved two-year diploma program that is offered by Colleges of Applied Arts and Technology in Ontario, and then pass a national certification exam. A current Certificate of Competence from the College of Nurses of Ontario must be maintained.

#### **Potential Earnings**

Hourly wage rates range from \$21.00 to \$25.66.

#### **Typical Workplaces and Working Conditions**

Registered practical nurses work in hospitals, long-term care facilities and in-patient rehabilitation centres, clinics and physician's offices, community health centres, businesses and clients' homes. Weekend and shift work of 8-12 hours duration is normal to provide 24/7 client coverage. Working in clients' homes is becoming more common as the focus of health care delivery is shifting from hospitals and institutions to in-home care. Registered practical nurses often stand or walk for prolonged periods of time, risk exposure to contaminated and potentially contagious blood and other body fluids, lift and turn ill clients, and work with potentially hazardous chemicals, anaesthetics and radiation.

#### **Durham Region Employers**

Durham Region employers of registered practical nurses include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private providers who may contract services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- 18 Long-Term Care Facilities
- Region of Durham.: [www.region.durham.on.ca](http://www.region.durham.on.ca)

#### **Employment Outlook**

Demand for registered practical nurses is expected to increase as an aging population will require more nursing care both at home and in institutions. The growing complexity of nursing care, the limiting of hospitalization to very ill patients, and the shortage of registered nurses will place additional educational demands on registered practical nurses.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	Medium	Medium	Medium

**Where can I go from here?**

There is a demand for registered practical nurses in a wide-variety of health care settings. Opportunities as operating room technicians may also be available with some further training which may be on-the-job.

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**To Become A Registered Practical Nurse...**

**Personal Qualities and Applied Skills You Will Need**

- Excellent interpersonal, communication and workload management skills,
- Physical ability to stand and walk for long distances and lift and support patients,
- Ability to maintain confidentiality,
- Problem solving and teaching skills.

**Entry Requirements for Education Programs**

An Ontario Secondary School Diploma is required with varying specific course requirements between programs. English and natural sciences are usually required.

**Educational Institutions**

Ontario Colleges that provide approved diploma programs (English): **Durham College**; Algonquin; Cambrian; Canadore; Centennial; Conestoga; Confederation; Fanshawe; George Brown; Georgian; Humber; Lambton; Loyalist; Mohawk; Niagara, Northern, St. Clair; Sault; Seneca, and Sir Sanford Fleming.

Ontario Colleges that provide approved diploma programs in French: College Boreal (Sudbury); and La Cite Collegiale (Ottawa).

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**Professional Associations and Related Websites...**

College of Nurses of Ontario: [www.cno.org](http://www.cno.org)

Registered Practical Nurses Association of Ontario: [www.rpnao.org](http://www.rpnao.org)

Canadian Practical Nurses Association: [www.yourwebperson.com/cpna](http://www.yourwebperson.com/cpna)

## NURSE PRACTITIONER

### What Is A Nurse Practitioner?

Nurse Practitioners are registered nurses who have additional training in acute care or primary care. Acute care nurse practitioners provide advanced and specialized nursing care for patients of varying ages who are acutely or critically ill, and who may be in hospital or at home. Primary health care nurse practitioners work with individuals and groups as a point of first contact with the health care system. Their practice has a strong emphasis on health promotion and disease prevention, and in addition to their nursing practice skills they are also enabled to perform additional diagnostic and treatment functions for common and uncomplicated medical conditions. Primary health care nurse practitioners are the only nurse practitioners that are currently eligible for Extended Class (EC) registration which expands their scope of practice beyond that of a nurse registered in the General Class. This includes independent authority for communicating a diagnosis; ordering a form of energy (ie. Ultrasounds); prescribing a drug; ordering prescribed x-rays; and ordering prescribed lab tests.

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### About the Work...

#### Responsibilities

In addition to the general responsibilities of all registered nurses, the responsibilities of nurse practitioners also include:

Acute Care Nurse Practitioners (AC NPs):

- Applying an advanced knowledge base about a particular population and group of disease/illness conditions to complex care situations,
- Consulting with other nurses and other health care professionals to develop effective care plans, and teaching and supporting colleagues when particular nursing expertise is required, and
- Bridging the gap between nursing and medical functions by assuming responsibility for some medical procedures (transfer of function), particularly when adequate numbers of medical house staff are not available to direct and support patient care.

Primary Health Care Nurse Practitioners (PHC NPs):

- Determining the need for, and ordering of, and interpreting the results from an approved list of screening and diagnostic laboratory tests and/or chest and limb x-rays and diagnostic ultrasounds,
- Initiating and managing the care of clients with minor illnesses or injuries within the PHC NP scope of practice,
- Prescribing drugs from an approved list, to treat minor illness or injuries within the PHC NP scope of practice, and
- Completing death certificates in certain circumstances.

#### Education, Training and Certification Required

Registered nurses who have completed a clinical masters degree can take a one year post-diploma course, or they may take a joint Masters-Acute Care NP course (usually 2 years) in the specialty area of their choice. No further certification is required by the College of Nurses of Ontario for Acute Care NPs. Training for registered nurses to become Primary Health Care NPs consists of one year of additional education for nurses who already have a baccalaureate degree and 24 months for nurses with a diploma through the Collaborative Ontario Nurse Primary Health Care Nurse Practitioner Programme. In order to practice as a Primary Health Care NP, NPs must be certified by the College of Nurses of Ontario in its Extended Class after successful completion of an Extended Class examination.

#### Potential Earnings

Hourly wage rates for acute care NPs range from \$45.00 to \$50.00. Earnings also vary between private practices depending on the population being served and the practices billing practices.

#### Typical Workplaces and Working Conditions

Acute Care NPs are most likely to work in intensive care settings of hospitals. Primary health care NPs work wherever there is a need for front-line health care services. This can include Community Health Centres, Long term care facilities, aboriginal centres and communities, community-based facilities (such as public health units, occupational health centres or correctional services), ambulatory care centres (such as emergency departments) or in collaborative practice with physicians. NPs who provide direct patient care are likely to work shift work or share on-call scheduling to provide 24/7 coverage. 12-hour shifts are common. NPs often stand or walk for prolonged periods of time, risk exposure to contaminated and potentially contagious blood and other body fluids, lift and turn ill clients, and work with potentially hazardous chemicals, anaesthetics and radiation. They may work in highly stressful and technologically dependent areas such as intensive care units, emergency departments or surgical suites. NPs often work in small remote

communities. They may work for long periods without relief if the need arises, and may need to adapt to unexpected circumstances with little local support.

**Durham Region Employers**

Durham Region employers of Nurse Practitioners include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Oshawa Community Health Centre: [www.ochc.ca](http://www.ochc.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- The Youth Centre: [www.theyouthcentre.ca](http://www.theyouthcentre.ca)
- Canadian Mental Health Association: [www.cmhadurham.org](http://www.cmhadurham.org)

**Employment Outlook**

There is a current shortage of family physicians and an ongoing initiative by the Ministry of Health and Long-Term Care to restructure the system of primary care delivery in Ontario. These two factors are expected to increase the demand for primary health care NPs, although currently compensation mechanisms are not in place to support the number of positions required. Acute care NPs are not currently eligible for Extended Class Registration, and therefore their ability to assume advanced clinical roles is limited.

<b>Durham Region Employment Outlook:</b>	Type of NP	2009	2013	2017
	Acute Care	High	High	High
	Primary Health Care	Medium	High	High

**Where can I go from here?**

Nurse practitioners can further their education by obtaining a post-graduate degree in nursing. They can teach or become involved in health services administration and policy development.

**To Become a Nurse Practitioner ...**

**Personal Qualities and Applied Skills You Will Need**

Nurse practitioners require the same qualities and skills as other registered nurses. They need to be able to work without a readily available support system, welcome complex nursing challenges, and be clear about when consultation and direction from physicians is required. (See Registered Nurse-Occupational Fact Sheet)

**Entry Requirements for Education Programs**

Nurses must be currently registered to be admitted to any nurse practitioner education programs. Different Acute Care programs require different levels of university level nursing preparation. To be eligible for admission to the Ontario Primary Health Care Nurse Practitioner program, nurses must have at least 2 years of working experience within the last 5 years.

**Educational Institutions**

Lakehead University	Laurentian University (en française)	McMaster University
Queen's University	University of Ottawa (en française)	University of Windsor
University of Toronto	University of Western Ontario	Ryerson University
York University		

**Professional Associations and Related Websites...**

Nurse Practitioners Association of Ontario: [www.npao.org](http://www.npao.org) College of Nurses of Ontario: [www.cno.org](http://www.cno.org)  
 Registered Nurses Association of Ontario: [www.rnao.org](http://www.rnao.org)  
 Nurse Practitioners' Association of Ontario: [www.npao.org](http://www.npao.org)  
 Ontario Primary Health Care Nurse Practitioner Programme: [www.np-education.ca](http://www.np-education.ca)

## CASE MANAGERS AND PLACEMENT CO-ORDINATORS

### **What Is A Case Manager?**

Case managers are members of various regulated health professions in Ontario. They work with clients who have multiple and complex needs. The primary role of a case manager is to coordinate and facilitate care and services to meet changing or chronic client needs. Most case managers who work for Community Care Access Centres in Ontario must be Registered Nurses (See Registered Nurse- Occupational Fact Sheet). Case managers who work for Durham Access to Care must be registered nurses.

### **What Is A Placement Co-ordinator?**

Community Care Access Centres in Ontario are the local agencies that coordinate the provision of hands on client care at home for people. They are also responsible for coordinating admissions to long-term care facilities (nursing homes and Homes for the Aged). Admissions to all long-term care facilities are prioritized according to the needs of people on waiting lists according to provincial criteria. Placement co-ordinators can be registered nurses (see Registered Nurses – Occupational Fact Sheet) or social workers. They manage the waiting lists for long-term care facilities.

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### **About the Work...**

#### **Responsibilities of Case Managers**

The roles of case managers may vary depending on the mandate of the organization for which he/she works. In general, a case manager's responsibilities may include:

- Assessing clients for eligibility for services and working toward the cost-effective use of public resources,
- Helping clients and their families to identify their overall needs, developing service plans with client, and ensuring clients and their families understand and agree with the goals of treatment/services,
- Monitoring and reassessing the client's progress and the appropriateness of services and making adjustments to the care plan accordingly,
- Ensuring continuity of care by acting as a liaison between various professionals and services to coordinate care and services based on individual needs, and
- Acting as a patient advocate.

#### **Responsibilities of Placement Co-ordinators**

Placement co-ordinators are responsible for:

- Providing information and assistance with referrals to community services and supports,
- Coordinating centralized access to long-term care facilities in the catchment area,
- Assisting individuals who are in hospital to apply to a long-term care facility by working with hospital staff who are responsible for discharge,
- Arranging a short stay in a long-term care facility of a continuing care unit in order to provide support or relief to caregivers,
- Assisting individuals to access a continuing care bed in a hospital when they require more care than can be provided by a long-term care facility.

#### **Education, Training and Certification Required**

Case managers must be members in good standing of a self-regulated health profession such as nursing, physiotherapy or social work. Placement coordinators must be registered nurses or social workers. Specific education may be an asset, but is not generally an employment requirement.

#### **Potential Earnings**

Salary rates range from \$25.23 to \$35.71.

#### **Typical Workplaces and Working Conditions**

Case managers and placement coordinators typically work in well-equipped office sites, client's homes, and hospitals. Driving is required to reach various sites, including client homes. Case Managers typically work extended day-time hours and share on-call rotations to provide 24-hour coverage for client services. Case managers work with other care providers to ensure that the appropriate care is provided according to best meet client needs. Placement coordinators work regular week-day hours with on-call rotations in the event that a facility bed becomes available on weekends or holidays.

### **Durham Region Employers**

The Community Care Access Centre in Durham Region is:

- Durham Access To Care: [www.datc.org](http://www.datc.org)

### **Employment Outlook**

There is an ongoing demand for Case Managers and Placement Coordinators in Durham Region.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	Medium	High	High

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### **To Become A Case Manager or a Placement Coordinator...**

#### **Personal Qualities and Applied Skills You Will Need**

- Excellent communication and assessment skills, and understanding of the roles of various health professionals,
- Familiarity with community resources,
- Above average decision-making skills.

#### **Entry Requirements**

- A member of a self-regulated health profession with an interest in case management.

#### **Educational Institutions**

- McMaster University Certificate Program (distance learning): [www.mcmaster.ca](http://www.mcmaster.ca)
- Humber College (Certificate Program): [www.humberc.on.ca](http://www.humberc.on.ca)

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#### **Professional Associations and Related Websites...**

National Case Management Network of Canada: [www.ncmn.ca](http://www.ncmn.ca)

Mental Health Case Management Association of Ontario: [www.mhcmao.ca](http://www.mhcmao.ca)

Case Management Society of America: [www.cmsa.org](http://www.cmsa.org)

## PERSONAL SUPPORT WORKER

### **What is a Personal Support Worker?**

Personal Support Workers (PSW) are essential members of the health care team. As an entry level health care team member, the PSW provides care and support to all age groups, infants through to the elderly. The PSW may choose to work in Long Term Care facilities (nursing homes), work for a community agency visiting clients in their own homes, or work in a group home caring for children. The PSW learns how to deliver care and support to individuals and families in a variety of areas such as personal care, activities of daily living, nutrition, restorative and palliative care, and social and recreational activities. The challenge for the PSW today is to be the “eyes and ears” for the regulated health care professional, while promoting and supporting the client’s independence.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of personal support workers (health care aides) include:

- Assisting clients (residents) in activities of daily living, while promoting his or her independence,
- Providing personal care and support to clients (residents) according to his or her care plan,
- Communicating effectively and respectfully to support clients (residents),
- Participating in care planning and documents both client status and interventions,
- Reporting any changes in client (resident) or environmental conditions to the appropriate members of the health care team in a timely manner, including issues related to client (resident) safety,
- Escorting clients for activities or appointments,
- Assisting in the implementation of client (resident) safety and security measures, and
- Assisting clinical staff in the general operation of client (resident) care units.

#### **Education, Training and Certification Required**

To be a personal support worker (health care aide) you must complete a Personal Support Worker Certificate Training Program that follows the provincially approved curriculum. A total of 265 hours of clinical training in a combination of facility and community based settings is a requirement of the training program. Program lengths vary between schools and range from 16 – 26 weeks. Bridging programs are available for people who may already have completed some of the requirements as part of another training program. The Personal Support Worker Program is a single program that consolidates and replaces specific training programs for Health Care Aids, Home Support Workers, Attendant Care and Respite Workers. Training is provided by a large number of Community Colleges in Ontario and some school boards. It is usually a full-time program of study. Basic level certification in CPR and First Aid is required prior to graduation. A Criminal Records check may be required prior to beginning field placements.

#### **Potential Earnings**

Hourly wage rates range from \$12.96 to \$ 21.05

#### **Typical Workplaces and Working Conditions**

Personal support workers (health care aides) typically work in hospitals, long-term care facilities, and in client’s homes in the community. For people who provide in-home services it is necessary to provide your own transportation between client’s homes and the agency office, usually by driving your own vehicle. Home conditions may vary depending on the client’s lifestyle and culture. Work generally involves long periods of standing and heavy lifting. Shift work to provide 24 hour a day, 7 day a week coverage is usually required in institutional settings, and often in the community to meet client’s specific needs.

#### **Durham Region Employers**

- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private companies who contract services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- Long-term care facilities in Durham Region [www.datc.org/facilities.htm](http://www.datc.org/facilities.htm)
- Personal Attendant Care: [www.drac.on.ca](http://www.drac.on.ca)
- Community Care Durham: [www.communitycaredurham.on.ca](http://www.communitycaredurham.on.ca)
- School Boards

#### **Employment Outlook**

As the population, and particularly the large group of ‘Baby-Boomers’, ages demand for personal support workers is

expected to rise both for institutional and home support positions. Work in institutions will be limited by the number of beds on-site. The largest demand is expected in the in-home sector as more people will require support to stay out of hospitals and institutions and to remain independent for as long as possible.

<b>Durham Region Employment Outlook:</b>	2009	2013	2017
	High	High	High

#### **Where can I go from here?**

People who are trained as personal support workers have skills that are portable throughout the health care system in Ontario. Often, for experienced personal support workers working in community settings, work is available for scheduling and supervision of personal support workers.

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#### **To Become a Personal Support Worker...**

##### **Personal Qualities and Applied Skills You Will Need**

- Physical strength and the ability to lift and support people safely,
- Ability to work both independently and as a member of a multi-disciplinary team.
- Genuine interest in people, and the ability to demonstrate empathy, concern and interest while working with them.

##### **Entry Requirements for Education Programs**

An Ontario Secondary School Diploma at the General Level or its equivalent or Mature Student Status; fluency in English; and fitness to complete field placements are required.

##### **Educational Institutions**

Durham College [www.durhamc.on.ca](http://www.durhamc.on.ca)  
 Durham District School Board ( [www.durham.edu.on.ca](http://www.durham.edu.on.ca))  
 Durham Catholic District School Board([www.durhamrc.edu.on.ca](http://www.durhamrc.edu.on.ca))  
 Trillium College (Oshawa)

In addition to the Durham Region programs, these Colleges currently offer the Personal Support Worker Training Program:

Centennial (Scarborough) <a href="http://www.centennialcollege.ca">www.centennialcollege.ca</a>	Algonquin (Nepean) <a href="http://www.algonquinc.on.ca">www.algonquinc.on.ca</a>
Cambrian (Sudbury) <a href="http://www.cambrianc.on.ca">www.cambrianc.on.ca</a>	Confederation (Thunder Bay) <a href="http://www.confederationc.on.ca">www.confederationc.on.ca</a>
Fanshawe (London) <a href="http://www.fanshawec.on.ca">www.fanshawec.on.ca</a>	George Brown (Toronto) <a href="http://www.gbrownc.on.ca">www.gbrownc.on.ca</a>
Humber (Toronto) <a href="http://www.humberc.on.ca">www.humberc.on.ca</a>	Lambton (Sarnia) <a href="http://www.lambton.on.ca">www.lambton.on.ca</a>
Loyalist (Belleville) <a href="http://www.loyalstc.on.ca">www.loyalstc.on.ca</a>	Mohawk (Hamilton) <a href="http://www.mohawkc.on.ca">www.mohawkc.on.ca</a>
Northern (Timmins) <a href="http://www.northernc.on.ca">www.northernc.on.ca</a>	Sault (Sault Ste. Marie) <a href="http://www.saultc.on.ca">www.saultc.on.ca</a>
Sheridan (Oakville) <a href="http://www.sheridanc.on.ca">www.sheridanc.on.ca</a>	St. Lawrence(Kingston) <a href="http://www.sl.on.ca">www.sl.on.ca</a>
Fleming (Peterborough) <a href="http://www.flemingc.on.ca">www.flemingc.on.ca</a>	Niagara (Welland) <a href="http://www.niagarac.on.ca">www.niagarac.on.ca</a>
St. Clair (Windsor) <a href="http://www.stclairc.on.ca">www.stclairc.on.ca</a>	Boreal (Sudbury) <a href="http://www.borealc.on.ca">www.borealc.on.ca</a>
Georgian (Barrie) <a href="http://www.georgian.on.ca">www.georgian.on.ca</a>	La Cite (Ottawa) <a href="http://www.lacitecollegiale.com">www.lacitecollegiale.com</a>

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#### **Professional Associations and Related Websites...**

College of Nurses of Ontario: [www.cno.org](http://www.cno.org)  
 Ontario Nurses Association: [www.ona.org](http://www.ona.org)  
 Ontario Association of Non-Profit Homes and Services for Seniors: [www.oanhss](http://www.oanhss)  
 Community Care Access Centres in Ontario: [www.gov.on.ca/health](http://www.gov.on.ca/health)

## OCCUPATIONAL THERAPIST

### **What is An Occupational Therapist?**

Occupational Therapy is a self-regulated health care profession that assists people in developing or maintaining their life roles and activities, both at home and in the community, when one's ability to function independently has been challenged by injuries, handicaps, emotional problems, developmental difficulties or disease. An occupational therapist uses a variety of assessment and treatment techniques that may include training in activities of daily living and community life skills, prescription and development of specialized equipment, evaluation and modification of home, work or school environments, and education or counselling related to the problem.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of occupational therapists include:

- Independently assessing the individual's functional needs and the appropriateness of physical environments to enhance individual function, establishing an intervention plan, providing direct or indirect client services, and continually evaluating the client or the project's progress,
- Working as a member of a multi-disciplinary professional team and communicating effectively with them in a variety of ways, including the maintenance of clinical records,
- Assisting clients to learn new ways of doing things,
- Adapting materials or equipment to assist individuals in their daily lives, and
- Making or recommending environmental changes in homes, workplaces, schools and communities.

#### **Education, Training and Certification Required**

To be an occupational therapist in Ontario you must graduate with a Masters Degree in Occupational Therapy from a certified university. 12 Universities in Canada offer programs in Occupational Therapy. To practice as an occupational therapist in Ontario you must then complete the CAOT Certification Exam (a national exam) and be registered with the College of Occupational Therapists of Ontario.

#### **Potential Earnings**

Hourly wage rates range from \$26.00 to \$40.00.

#### **Typical Workplaces and Working Conditions**

Occupational therapists work in a variety of settings that include hospitals, schools, long-term care facilities, private homes, mental health centres, rehabilitation centres, government and businesses such as insurance companies and architectural firms. Approximately 25% of occupational therapists work in a private practice. Most occupational therapists work regular week day hours, although extended hours are sometimes used to better meet the clients' needs. Approximately 25% of occupational therapists work part time.

#### **Durham Region Employers**

In the health care sector, employers of occupational therapists in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Grandview Children's Centre: [www.grtc.ca](http://www.grtc.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private companies who contract services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- The Regional Municipality of Durham: [www.region.durham.on.ca](http://www.region.durham.on.ca)
- Private practices

#### **Employment Outlook**

Demand for occupational therapists is expected to continue because of an aging population, advances in medicine that mean higher survival rates from injuries, a trend toward rehabilitation instead of long-term institutionalization, an increasing awareness of the needs of people with disabilities, and an increasing demand for community based mental health services. As the occupation continues to grow and evolve occupational therapists are working in more diverse settings including business, government and private practice.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

**Where can I go from here?**

With the change in education programs for occupational therapists, opportunities are expected to grow in management, research, and consulting areas. Clinically, there is expected to be a growing demand for occupational therapists in mental health services.

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**To Become an Occupational Therapist...**

**Personal Qualities and Applied Skills You Will Need**

- Analytical, patient, and a good motivator.
- Innovative, adaptable to different settings and types of clients, and able to improvise and problem solve.
- Good interpersonal and communication skills.

**Entry Requirements for Education Programs**

The Masters programs require a 4-year (honours) undergraduate degree with varying course requirements, and at least a B average for admission to 2-year, full-time, Masters program. It is recommended that students consult with a prospective graduate program to determine the best suited undergraduate course choices.

**Educational Institutions**

12 universities in Canada offer programs in Occupational Therapy. Those in Ontario are:

- McMaster in collaboration with Lakehead University: [www.mcmaster.ca](http://www.mcmaster.ca)
- University of Ottawa (French language instruction): [www.uottawa.ca](http://www.uottawa.ca)
- Queen's University: [www.queensu.ca](http://www.queensu.ca)
- University of Toronto: [www.utoronto.ca](http://www.utoronto.ca)
- University of Western Ontario: [www.uwo.ca](http://www.uwo.ca)

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**Professional Associations and Related Websites...**

Canadian Association of Occupational Therapists: [www.caot.ca](http://www.caot.ca)

College of Occupational Therapists of Ontario: [www.coto.org](http://www.coto.org)

Ontario Society of Occupational Therapists: [www.osot.on.ca](http://www.osot.on.ca)

# PHYSIOTHERAPIST

**What Is A Physiotherapist?**

Physiotherapy is a regulated health care profession for the prevention or treatment of injury or disease through physical means. The three main fields of practice within the discipline of physiotherapy are musculoskeletal (muscles and bones), neurological (brain and nerves), and cardiorespirological (heart and lungs). A physiotherapist assesses the client for physical dysfunctions and evaluates overall functional ability. Based on his or her assessment, a physiotherapist then either plans an appropriate treatment program and carries out that program, or, refers the patient to another professional. Physiotherapy treatment can include exercise, manual therapy, electrical and physical modalities, work hardening, as well as education and home exercise.

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**About the Work...**

**Responsibilities**

In general, the responsibilities of physiotherapists include:

- Independently assessing the patient’s physical functioning needs, establishing a treatment plan, providing direct and indirect client care, and continually evaluating the client’s progress,
- Working as a member of multi-disciplinary professional team and communicating effectively with the other members of the team,
- Assessing the need for equipment, physical aids and environmental modifications, obtaining or making the required aids and equipment, and fitting the client with the right assistive devices,
- Teaching clients how to properly exercise, move safely and effectively, and use their equipment and aids.

**Education, Training and Certification Required**

To be a physiotherapist in Ontario you must graduate with a Degree in Physiotherapy from a recognized university program. 13 Universities in Canada offer programs in Physiotherapy. To practice as a physiotherapist in Ontario you must then successfully complete the Physiotherapy National Exam and be registered with the College of Physiotherapists of Ontario.

**Potential Earnings**

Hourly wage rates range from \$26.00 to \$40.00.

**Typical Workplaces and Working Conditions**

Physiotherapists most often work in hospitals, rehabilitation centres, long-term care facilities, client’s workplaces, schools and homes, and in private practice centres. Most physiotherapists work regular week day hours. Extended hours are sometimes used, particularly in private practices, to see people when they are finished work. Most facilities provide physiotherapists with specially equipped gyms or treatment rooms and provide office space for client progress documentation. Increasingly, physiotherapists are using computers for both research and client record keeping. In addition to full time work, approximately 25% of physiotherapists work part-time.

**Durham Region Employers**

In the health care sector, employers of physiotherapists in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Grandview Children’s Centre: [www.grtc.ca](http://www.grtc.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Private companies that work under contract with Durham Access to Care: [www.datc.org](http://www.datc.org)
- Private practices

**Employment Outlook**

Recently physiotherapy has been one of the fastest growing health care professions in Canada. The demand for physiotherapists is expected to continue because of the aging baby-boomers, longer life-spans, better survival of children with birth problems, and less active lifestyles of Canadians.

<b>Durham Region Employment Outlook:</b>	2009	2013	2017
	High	High	High

### **Where can I go from here?**

Management, advanced education, teaching and research are all possibilities on a physiotherapist's career path.

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### **To Become a Physiotherapist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Be a good listener, a good observer, a problem solver and a teacher,
- Be flexible and self-directed with good organizational skills.
- Able to organize your time and set priorities,
- Able to lift and support patients and equipment safely, and demonstrate physical expectations of clients, and
- Good interpersonal and communication skills.

#### **Entry Requirements for Education Programs**

Entry to Masters level university programs in Ontario require a 4-year undergraduate (honours) degree that includes specified numbers and types of courses that vary between universities. At least a B average (75%) in undergraduate studies is required for consideration for admission. Some schools also require the completion of specified volunteer work. The Masters programs are 2-year, full-time programs.

#### **Educational Institutions**

The Universities in Ontario that offer programs in Physiotherapy are:

- McMaster in collaboration with Lakehead University: [www.mcmaster.ca](http://www.mcmaster.ca)
- University of Ottawa (French language instruction): [www.uottawa.ca](http://www.uottawa.ca)
- Queen's University: [www.queensu.ca](http://www.queensu.ca)
- University of Toronto: [www.utoronto.ca](http://www.utoronto.ca)
- University of Western Ontario: [www.uwo.ca](http://www.uwo.ca)

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#### **Professional Associations and Related Websites...**

Canadian Physiotherapy Association: [www.physiotherapy.ca](http://www.physiotherapy.ca)

Ontario Physiotherapy Association: [www.opa.on.ca](http://www.opa.on.ca)

College of Physiotherapists of Ontario: [www.collegept.org](http://www.collegept.org)

## SPEECH LANGUAGE PATHOLOGIST

### **What is a Speech Language Pathologist?**

A speech language pathologist is a self-regulated health care professional who assesses, evaluates, plans interventions and implements treatment plans for people of all ages who have problems with speech, language, voice, fluency or swallowing. These difficulties may involve producing sounds, words and sentences, understanding or listening to the speech of others, and the use of reading and writing skills. Speech language pathologists assess clients using a range of specially designed tests and equipment, and design a tailored program of treatment. Areas of specialization include accent reduction and treatment of voice disorders for people who use their voices professionally (broadcasters, singers, actors etc.)

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of speech language pathologists include:

- Independently administering tests and observing people to assess and evaluate a variety of disorders, and planning and implementing remedial programs to correct or adapt to the disorder. These include disorders in language, cognitive communication, speech, voice, and swallowing.
- Consulting with and working with other members of the health care team to plan and implement treatment plans.
- Counselling families and other professionals about the nature of disorders and about ways to provide appropriate assistance to the client.

#### **Education, Training and Certification Required**

To be a speech language pathologist you must have a Masters degree in Speech Language Pathology. To practice in Ontario you must then complete a national exam to be certified with the Canadian Association of Speech Language Pathologists and be registered with the College of Audiologists and Speech Language Pathologists of Ontario.

#### **Potential Earnings**

Hourly wage rates range from \$30.00 to \$40.00.

#### **Typical Workplaces and Working Conditions**

Speech language pathologists work in a variety of settings that include hospitals, rehabilitation centres, community based health and social service agencies, schools and private practices. They often work closely with Audiologists to treat problems of people with hearing impairments. Work environments are generally well lighted and well ventilated with space for working with clients and for private documentation. Increasingly, computers are used for record keeping and communication. Physical demands are usually light, unless lifting is required for clients who are children. Most speech-language pathologists work regular week day hours, although extended hours are sometimes used to better meet clients' needs. Materials used range from simple books and pictures to complex sound analyzers and electronic communication devices. Treatment is provided in individual or group sessions.

#### **Durham Region Employers**

In the health care sector, employers of Speech Language Pathologists in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Grandview Children's Centre: [www.grtc.ca](http://www.grtc.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Private companies who contract services to Durham Access to Care: [www.datc.org](http://www.datc.org)
- Private practices

#### **Employment Outlook**

The need for speech language pathologists is expected to increase because of population growth, increased lifespans, technological advances that have increased survival rates from injuries and serious illnesses, and increasing public awareness about the seriousness of communication and swallowing impairments. There is a severe current shortage of speech language pathologists in Ontario, largely because of the increased number of positions that have been created to address the need for pre-school speech language interventions.

<b>Durham Region Employment Outlook:</b>	2009 High	2013 High	2017 High
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### **Where can I go from here?**

Experienced speech-language pathologists have the opportunity to manage and develop programming, teach and do research.

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### **To Become a Speech Language Pathologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Above average communication skills and problem-solving skills,
- Aptitude for working with people who have special needs,
- Ability to comprehend both therapeutic and emotional needs of clients and their families, and
- Good organizational skills, interpretive and teaching skills, and sound judgement.

#### **Entry Requirements for Education Programs**

All Speech Language Pathologist programs require completion of a 2-year graduate program. They require a 4-year undergraduate (Baccalaureate) degree with varying course requirements and at least a B average for admission. Generally courses in linguistics, psychology, physiology are required. Volunteer work with people with special needs may be considered an asset in a final selection process.

#### **Educational Institutions**

8 Universities in Canada offer programs in Speech Language Pathology. Those in Ontario are:

- University of Ottawa (French language instruction): [www.uottawa.ca](http://www.uottawa.ca)
- University of Toronto: [www.utoronto.ca](http://www.utoronto.ca)
- University of Western Ontario (Communicative Disorders): [www.uwo.ca](http://www.uwo.ca)

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#### **Professional Associations and Related Websites...**

Canadian Association of Speech-Language Pathologists and Audiologists: [www.caslpa.ca](http://www.caslpa.ca)

Ontario Association of Speech-Language Pathologists and Audiologists: [www.osla.on.ca](http://www.osla.on.ca)

Regroupement des Audiologistes et Orthophonistes Francophones (Ont): [www.rifssso.ca/raofo](http://www.rifssso.ca/raofo)

College of Audiologists and Speech-Language Pathologists of Ontario: [www.caslpo.com](http://www.caslpo.com)

## COMMUNICATIVE DISORDERS ASSISTANT

### What is a Communicative Disorders Assistant?

A communicative disorders assistant works in a supportive role with a qualified Speech-Language Pathologist or Audiologist. The communicative disorders assistant implements the interventions that have been designated by the therapist. Interventions may consist of working on augmentative or alternate means of communication, pronunciation, language, fluency or aural (hearing) rehabilitation.

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### About the Work...

#### **Responsibilities**

In general, the responsibilities of communicative disorders assistants include:

- Implementing remedial speech/language/hearing programs under the supervision of a Speech-Language Pathologist or Audiologist,
- Collecting, computing and displaying therapy data,
- Performing routinely required maintenance procedures on therapy materials and equipment,
- Preparing written and oral progress reports and participate as a team member,
- Being aware of and sensitive to underlying behaviour that may contribute to client dysfunction.

#### **Education, Training and Certification Required**

While some employers may train people on the job according to guidelines from the College of Audiologists and Speech-Language Pathologists of Ontario, most prefer to hire someone with a Community College Communicative Disorder Assistant Diploma. The Communication Disorders Assistant Association of Canada (CDAAC) will only confer membership to students and graduates from a recognized Community College training program. Programs consist of 1 year (post-diploma) of full time study which may include time spent in internships.

#### **Potential Earnings**

Hourly wage rates range from \$20.00 to \$25.00.

#### **Typical Workplaces and Working Conditions**

Communicative disorders assistants work under the supervision of speech language pathologists or audiologists in a variety of settings that include hospitals, rehabilitation centres, community-based health and social service agencies, day-care centres, residential institutions, long-term care facilities, audiology clinics, schools and private practices. Work environments are generally well lighted and well ventilated with space for working with clients and for private documentation. Increasingly, computers are used for record keeping and communication. Physical demands are usually light, unless lifting is required for clients who are children. Most communicative disorders assistants work regular week day hours, although extended hours are sometimes used to better meet clients' needs. Materials used range from simple books and pictures to complex sound analyzers and electronic communication devices. Treatment is provided in individual or group sessions.

#### **Durham Region Employers**

In the health care sector, employers of communicative disorders assistants in Durham Region include:

- Grandview Children's Centre: [www.grtc.ca](http://www.grtc.ca)
- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)

#### **Employment Outlook**

Formal training for work as a communicative disorders assistant is relatively new. If difficulties persist in filling speech-language pathologist positions, more work will be available for assistants as pathologists delegate tasks to free more of their time for diagnosis and intervention development. The expanding training programs in Ontario indicates a growing demand in the field for communicative disorders assistants with the appropriate training and skills.

Durham Region Employment Outlook:	2009	2013	2017
	Medium	Medium	Medium

#### **Where can I go from here?**

People with a diploma will be needed in a variety of settings and so the potential for job mobility is high.

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### To Become a Communicative Disorders Assistant...

#### **Personal Qualities and Applied Skills You Will Need**

- Knowledge of generally accepted principles and practices in Speech-Language interventions and Audiology practice,
- Well developed verbal, non-verbal and written communication skills,
- Ability to collaborate with other team members, and to follow direction to work in an independent manner,
- Ability to manage time effectively and set priorities,
- Ability to use audio/video recorders and augmentative communication devices,
- Creativity in preparation of materials and planning activities.

#### **Entry Requirements for Education Programs**

For admission, the College programs require a 2-year College diploma or university degree with an emphasis in the social sciences and/or human services curricula. The University program requires a related degree for admission to its post-degree certificate program.

#### **Educational Institutions**

2 Community Colleges and one University in Ontario offer training programs for Communicative Disorders Assistants. They are:

- Durham College: [www.durhamc.on.ca/fulltime](http://www.durhamc.on.ca/fulltime)
- Georgian College: [www.georgianc.on.ca](http://www.georgianc.on.ca)
- St. Lawrence College: [www.stlawrencec.on.ca](http://www.stlawrencec.on.ca)
- Brock University: [www.brocku.ca](http://www.brocku.ca)

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#### **Professional Associations and Related Websites...**

Communicative Disorders Assistant Association of Canada: [www.cdaac.ca](http://www.cdaac.ca)

Canadian Association of Speech-Language Pathologists and Audiologists: [www.caslpa.ca](http://www.caslpa.ca)

Ontario Association of Speech-Language Pathologists and Audiologists: [www.osla.on.ca](http://www.osla.on.ca)

Regroupement des Audiologistes et Orthophonistes Francophones (Ont): [www.rifssso.ca/raofo](http://www.rifssso.ca/raofo)

College of Audiologists and Speech-Language Pathologists of Ontario: [www.caslpo.com](http://www.caslpo.com)

## HEALTH INFORMATION MANAGEMENT (HIM) PROFESSIONAL

### **What is a Health Information Management Professional?**

A health record is a compilation of pertinent facts about an individual's health history with particular emphasis on the specific events affecting the patient during the current episode of care. As members of the health care team, Health Information Management (HIM) professionals possess a unique blend of knowledge that encompasses biomedical sciences, information sciences and technology, legal aspects of health information, coding classification systems, the science of clinical and financial data integration and management. Certified HIM Professionals have three domains of practice: privacy, data quality, and electronic health information management.

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### **About the Work...**

#### **Responsibilities**

In general, the responsibilities of HIM professionals include:

- Working with and maintaining the confidentiality of health records,
- Capturing and managing data to contribute directly to patient care;
- Accurately applying disease and intervention classification systems;
- Creating and presenting information to initiate and support clinical, financial and management decisions;
- Developing, implementing and maintaining health information systems;
- Controlling the release of medical information for legal purposes;
- Evaluating standards of documentation according to established criteria;
- Aggregating and integrating data to support planning and resource utilization; and
- Conducting research to expand health knowledge at individual, institutional and global level.

#### **Education, Training and Certification Required**

Certified HIM professionals graduate from a recognized education program (by the Canadian Health Information Management Association) with a degree or diploma, and be certified members of the Canadian College of Health Record Administrators. Members must be certified by writing a National Certification Exam. Practitioners in this field have been historically known as Health Records Technicians, Assistants, or Practitioners. The new College designation for this occupation is Health Information Management Professional. Educational requirements are changing to encourage HIM professionals to attain a baccalaureate degree.

#### **Potential Earnings**

Hourly wage rates range from \$22.00 to \$28.00.

#### **Typical Workplaces and Working Conditions**

HIM professionals often work in hospitals, long-term care and mental health facilities, rehabilitation centres and for community-based agencies. HIM professionals usually work regular weekday hours in a large, clean, well lighted and well ventilated office area. Increasing operational demands mean that some work on weekend and afternoon shifts may be required. Work may involve sitting, reading and concentrating for long periods. Excellent computer skills are required both to retrieve and manage information from client records.

#### **Durham Region Employers**

Employers of HIM professionals in Durham Region include:

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)
- Durham Access to Care: [www.datc.org](http://www.datc.org)
- Grandview Children's Centre: [www.grtc.ca](http://www.grtc.ca)

#### **Employment Outlook**

Professional associations predict a high demand both now and in the foreseeable future for HIM professionals because of the increasing importance of effective information management in the overall management of health care services, and because of the research value in comparisons of health status, treatments, and outcomes between agencies. HIM professionals have portable skills that can be used in government, insurance and pharmaceutical industries, research, veterinary services, and law offices, and a variety of other settings across the health industry.

<b>Durham Region</b>	2009	2013	2017
<b>Employment Outlook:</b>	High	High	High

#### **Where can I go from here?**

Because of the importance of effective health information management HIM professionals can work as information analysts, data quality managers, documentation coordinators, patient advocates, Chief Information Officers, Utilization Managers, Research Associates and on projects that involve risk analysis, clinical trials, and clinical-financial resource integration.

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#### **To Become A Health Information Management Professional...**

##### **Personal Qualities and Applied Skills You Will Need**

- Pays attention to details with excellent organizational and accuracy skills,
- Computer and keyboarding skills,
- Competence in ICD-10-CA (diagnostic coding tool) and CCI (disease and intervention classification systems), and relevant coding methodologies,
- Experienced in data analysis techniques and database administration.

##### **Entry Requirements for Education Programs**

An Ontario Secondary School Diploma is required for admission to the diploma and degree programs in Ontario. The Ryerson University program is intended to enable HIM professionals who already have diplomas to acquire a degree. Other admission requirements vary between programs. Programs should be contacted directly to ensure the accuracy of entry requirements and processes.

##### **Educational Institutions**

Schools and organizations in Ontario that offer programs in Health Information Management are:

- George Brown (2 year full-time diploma and part-time study options): [www.gbrownc.on.ca](http://www.gbrownc.on.ca)
- St. Lawrence College (2 year diploma): [www.sl.on.ca](http://www.sl.on.ca)
- Fleming College (2 year diploma): [www.flemingc.on.ca](http://www.flemingc.on.ca)
- Canadian Healthcare Association (2 year certificate available by distance): [www.cha.ca](http://www.cha.ca)
- University of Western Ontario (4 year degree): [www.uwo.ca](http://www.uwo.ca)
- Ryerson University (2 year post-diploma): [www.ryerson.ca](http://www.ryerson.ca)

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##### **Professional Associations and Related Websites...**

Ontario Health Information Management Association: [www.ohima.ca](http://www.ohima.ca)

Canadian Health Information Management Association: [www.echima.ca](http://www.echima.ca)

Canadian Institute for Health Information: [www.cihi.ca](http://www.cihi.ca)

## BIOMEDICAL ENGINEERING TECHNOLOGIST

### What is a Biomedical Engineering Technologist?

Biomedical Engineering Technologists are members of the health care team who are dedicated to providing safe, efficient and effective use of clinical technology to ensure that the proper and safe delivery of patient care is not compromised. Biomedical engineering technologists combine an understanding of the health care environment with the engineering skills required to initiate, manage and maintain the operation of complex medical equipment that is required in such areas as diagnostic imaging, surgery, cardiology, respiratory therapy, laboratories, special care and emergency units

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### About the Work...

#### Responsibilities

In general, the responsibilities of biomedical engineering technologists include:

- Working effectively and safely within a health care environment to provide timely and reliable support for equipment, and for the health care professionals who operate and maintain it,
- Knowing the appropriate practice standards for a variety of biological equipment,
- Conducting scheduled and corrective maintenance, safety inspections and calibrations of medical equipment according to quality assurance and risk management program requirements,
- Establishing purchase specifications, evaluating, testing and commissioning and providing operator training for new equipment, and responding effectively when emergency repairs are required, and
- Being knowledgeable about an extensive range of biomedical equipment and devices.

#### Education, Training and Certification Required

To be a biomedical engineering technologist you must graduate with a diploma from a 3-year under-graduate training program, or from a post-graduate certificate program at a Community College. Graduates are eligible for certification as an Applied Science Technologist (A.Sc.T.) by the Ontario Association of Certified Engineering Technicians and Technologists after 2 years of work experience in their chosen discipline and the successful completion of a professional practice exam.

#### Potential Earnings

Hourly wage rates range from \$25.00 to \$34.00.

#### Typical Workplaces and Working Conditions

Biomedical engineering technologists usually work in hospitals or specialized clinics. Opportunities are also available in research laboratories and in medical equipment manufacturing and sales. Work often involves walking or standing for long periods and the need to adapt to the physical conditions that are required to service equipment on-site. Biomedical engineering technologists need to be able to maintain an effective and clean workshop area as well as be able to travel to equipment. This may involve driving or operating heavy equipment. Most work is inside. Exposure to infectious diseases, critically ill patients, and radiation hazards is possible. Most work is carried out during regular work hours. Some maintenance may be required when equipment is not in use and emergency servicing and support must be available, which means that some shift work may be required and on-call scheduling is often required.

#### Durham Region Employers

- Lakeridge Health Corporation: [www.lakeridgehealth.on.ca](http://www.lakeridgehealth.on.ca)
- Rouge Valley Health System: Ajax and Pickering Health Centre: [www.rougevalley.ca](http://www.rougevalley.ca)
- Whitby Mental Health Centre: [www.wmhc2.com](http://www.wmhc2.com)

#### Employment Outlook

Hospital, diagnostic and specialized clinics, and other health care environments are increasingly dependent on sophisticated medical equipment. Increasingly, more health care and diagnostic facilities are hiring in-house biomedical support staff. This also means that more opportunities are likely to be available in the manufacturing and sales sector.

Durham Region Employment Outlook:	2009	2013	2017
	Medium	Medium	Medium

#### Where Can I go from here?

Biomedical engineering technologists with an A.Sc.T. designation may obtain advanced certification or they may be able to apply their existing education and experience toward a degree in biomedical or clinical engineering. With experience, they can also work in supervisory roles and hospital management. Opportunities are available in the research and development industry and in manufacturing and sales.

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### **To Become a Biomedical Engineering Technologist...**

#### **Personal Qualities and Applied Skills You Will Need**

- Strong interpersonal, organizational and communication skills and ability to work effectively and efficiently in stressful situations,
- Interest in health care, understanding of the risks and special needs associated with various diagnostic, medical and surgical situations, and good judgement about how to provide support in a safe and timely manner,
- Good manual dexterity, high standards for the quality of work you do, attention to detail, and ability to improvise safely and effectively when necessary, and
- Affinity for electronics and proficiency with computer skills, particularly when coupled with electronic and medical equipment, and ability to work with a wide variety of different equipment.

#### **Entry Requirements for Education Programs**

Colleges that offer diplomas require an Ontario Secondary School Diploma with varying course requirements that usually include an emphasis on mathematics and science. Post-graduate programs have varying entrance requirements. Specific health requirements, such as immunizations, may be required.

#### **Educational Institutions**

Colleges in Ontario that offer 3 year diploma programs as a biomedical engineering technologist are:

Durham College: [www.durhamc.on.ca](http://www.durhamc.on.ca)

La Cite Collegiale : [www.lacitecollegiale.on.ca](http://www.lacitecollegiale.on.ca)

Fanshawe: [www.fanshawec.on.ca](http://www.fanshawec.on.ca) (1 year post-graduate certificate)

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#### **Professional Associations and Related Websites...**

Ontario Association of Certified Engineering Technicians and Technologists: [www.oacett.org](http://www.oacett.org)

Canadian Medical and Biological Engineering Society: [www.cmbes.ca](http://www.cmbes.ca)

Institute of Biomedical Engineering Technology: [www.ibet.asttbc.org](http://www.ibet.asttbc.org)

Clinical Engineering Society of Ontario: [www.ceso.on.ca](http://www.ceso.on.ca)

International Federation for Medical and Biological Engineering: [www.ifmbe.org](http://www.ifmbe.org)

**ONTARIO COLLEGES OF APPLIED ARTS AND TECHNOLOGY  
CONTACT INFORMATION**  
(Source: Ontario Ministry of Training, Colleges and Universities)

**Durham College**

**P.O. Box 385, 2000 Simcoe St. North, Oshawa, Ontario L1H 7L7**

**Telephone: (905) 721-2000**

Algonquin College

1385 Woodroffe Ave, Nepean, Ontario K2G 1V8

Telephone: (613) 727-4723

Cambrian College

1400 Barrydowne Road, Sudbury, Ontario P3A 3V8

Telephone: (705) 566-8101

Canadore College

100 College Drive, P.O. Box 5001, North Bay, Ontario P1B 8K9

Telephone: (705) 474-7600

Centennial College

P.O. Box 631, Station A, Toronto (Scarborough), Ontario M1K5E9

Telephone: (416) 289-5000

College Boreal

21, boulevard LaSalle, Sudbury, Ontario P3A 6B1

Telephone: (705) 560-6673

Conestoga College Institute of Technology and Advanced Learning

299 Doon Valley Drive, Kitchener, Ontario N2G 4M4.

Telephone: (519) 748-5220

Confederation College

1450 Nakina Drive, PO Box 398, Station F, Thunder Bay, Ontario P7C 4W1

Telephone: (807) 475-6110

Fanshawe College

1460 Oxford Street East, P.O. Box 7005, London, Ontario N5Y 5R6

Telephone: (519) 452-4277

Fleming College

599 Brealey Drive, Peterborough, Ontario K9J 7B1

Telephone: (705) 749-5530

George Brown College

P.O. Box 1015, Station B, Toronto, Ontario M5T 2T9

Telephone: (416) 415-2000

Georgian College

One Georgian Drive, Barrie, Ontario L4M 3X9

Telephone: (705) 728-1951

Humber College Institute of Technology and Advanced Learning

205 Humber College Boulevard, Toronto, Ontario M9W 5L7

Telephone: (416) 675-6622

La Cite collegiale

801, promenade de l'Aviation, Ottawa, Ontario K1K 4R3

Telephone: (613) 742-2483

Lambton College

1457 London Road, Sarnia, Ontario N7S 6K4

Telephone: (519) 542-7751

Loyalist College

P.O. Box 4200, Wallbridge/Loyalist Road, Belleville, Ontario K8N 5B9

Telephone: (613) 969-1913

Mohawk College

P.O. Box 2034, Fennel Avenue and West 5<sup>th</sup>, Hamilton, Ontario L8N 3T2

Telephone: (905) 575-1212

Niagara College

300 Woodlawn Road, Welland, Ontario L3C 7L3

Telephone: (905) 735-2211

Northern College

P.O. Box 3211, Timmins, Ontario P4N 8R6

Telephone: (705) 235-3211

St. Clair College

2000 Talbot Road West, Windsor, Ontario N9A 6S4

Telephone: (519) 966-1656

St. Lawrence College

100 Portsmouth Avenue, Kingston, Ontario K7L 5A6

Telephone: (613) 544-5400

Sault College

P.O. Box 60, 443 Northern Avenue, Sault Ste. Marie, Ontario P6A 5L3

Telephone: (705) 759-6774

Seneca College

1750 Finch Avenue East, Toronto (North York), Ontario M2J 2X5

Telephone: (416) 491-5050

Sheridan College Institute of Technology and Advanced Learning

1430 Trafalgar Road, Oakville, Ontario L6H 2L1

Telephone: (905) 845-9430