



Medical Radiation Technologist Database, 2009 Data Release—Data Highlights



Who We Are

Established in 1994, CIHI is an independent, not-for-profit corporation that provides essential information on Canada's health system and the health of Canadians. Funded by federal, provincial and territorial governments, we are guided by a Board of Directors made up of health leaders across the country.

Our Vision

To help improve Canada's health system and the well-being of Canadians by being a leading source of unbiased, credible and comparable information that will enable health leaders to make better-informed decisions.

Table of Contents

Medical Radiation Technologist Database, 2009 Data Release— Data Highlights	1
Notes to the Reader	1
Regulation Status	1
Certification	1
Workforce Definition	2
MRTDB 2009 Data Highlights	2
Workforce Supply and Demographics	2
Education and Certification	3
Primary Employment	3
MRTDB 2009 Data: Focus on the Provinces and Territories	5
Provinces Requiring Mandatory Registration in 2009	5
Newfoundland and Labrador	5
Prince Edward Island	6
Nova Scotia	7
New Brunswick	7
Quebec	8
Ontario	9
Manitoba	10
Saskatchewan	11
Alberta	11
Unregulated Provinces and Territories With Voluntary Registration	12
B.C	12
The Territories (Yukon, Northwest Territories and Nunavut)	12

Medical Radiation Technologist Database, 2009 Data Release— Data Highlights

Notes to the Reader

Regulation Status

The profession of medical radiation technology is not regulated in all Canadian provinces and territories. New Brunswick was the first province to institute regulation for the profession in 1958, and in later years, the profession became regulated in five other provinces: Nova Scotia, Quebec, Ontario, Saskatchewan and Alberta. All of the regulated provinces require mandatory registration with their respective provincial regulatory bodies and the Canadian Association of Medical Radiation Technologists (CAMRT). The profession is not regulated in the provinces of Newfoundland and Labrador, Prince Edward Island and Manitoba; however, medical radiation technologists (MRTs) are required to register with both the provincial professional association and the CAMRT in order to practise in these provinces. Consequently, the 2008 and 2009 statistics in this data release for both of the aforementioned provincial groups—regulated, and unregulated but requiring mandatory registration—represent the registered MRT population as of August 1 of each year. Statistics for the workforce represent the entire workforce population in both groups in these provinces.

As of 2009, the medical radiation technology profession was not regulated in the following jurisdictions: British Columbia, the Yukon, Northwest Territories and Nunavut. Statistics for the MRT workforce in the unregulated province and territories may not represent the entire population of the workforce but, instead, the majority of those who voluntarily registered with the CAMRT. It is the CAMRT that provided data to the Medical Radiation Technologist Database (MRTDB) on behalf of these jurisdictions. For this reason, it is important to note that statistics presented in this data release for all provinces and territories may not represent the entire population of MRTs or the MRT workforce in Canada.

Certification

After graduating from a medical radiation technology educational program, accredited by the Canadian Medical Association, Conjoint Accreditation Services graduates must write the entry-to-practice certification exam in their discipline in order to practise in their discipline. This requirement applies in all jurisdictions with the exception of B.C. and the three territories. While B.C. and the territories do not legally require MRTs to be certified, most employers require it as a condition of employment.

There are two certifying bodies in Canada: the Canadian Association of Medical Radiation Technologists (CAMRT) and the Ordre des technologues en imagerie médicale et en radio-oncologie du Québec (OTIMRO). Reciprocity exits between these two organizations. Once candidates are successful in one or the other, they have national mobility to practise in the discipline in which they were certified. However, additional requirements may apply in certain jurisdictions, such as the requirement to be able to practise the profession in the French language in the province of Quebec. This requirement is requested when a candidate moves from another province or a territory to Quebec. Typically, most candidates working in Quebec have written the OTIMRO exam, while candidates working in other jurisdictions have written the CAMRT exam.

Workforce Definition

One of the purposes of the MRTDB is to provide national standardized data suitable for comparisons among the provinces and territories and to provide information for trending purposes when such data is available. The MRT workforce for a jurisdiction includes the registered MRTs who work in the profession for a given year as of August 1. In order to avoid double-counting of the workforce at the national level, secondary registrations with a jurisdiction are removed. Consequently, data presented in this publication may differ from that presented by other organizations. We therefore caution readers to be mindful of these differences when comparing data from the MRTDB with other data holdings and publications. Please refer to the *Methodological Notes* for this *Data Release* for further details regarding the workforce definition and other methodologies.

MRTDB 2009 Data Highlights

Workforce Supply and Demographics

- In 2009, among all registered MRTs (17,949 registrations in total), 17,253 were employed (and not on leave) in medical radiation technology in Canada. These totals represent MRTs who registered with the provincial regulatory bodies or provincial/national professional associations. The workforce total is composed of
 - 14,242 registered MRTs from six regulated provinces that require mandatory registrations with both the provincial regulatory bodies and the CAMRT (Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan and Alberta);
 - 1,014 registered MRTs from three provinces that are unregulated but require mandatory registration with both the provincial associations and the CAMRT (Newfoundland and Labrador, P.E.I. and Manitoba); and,

i. In the data that was submitted for a province or territory, if an MRT is identified to be registered with more than one province/territory and mainly worked outside the submitting province/territory, this membership is then considered secondary registration and removed to avoid inter-provincial/territorial duplicate.

- 1,983 MRTs from B.C. and 14 from the Yukon, Northwest Territories and Nunavut, all registered with the CAMRT; these four unregulated jurisdictions do not require mandatory registration.
- MRTs working in 2009 were predominantly female; female registered MRTs across 10 provinces accounted for 81.2% of the workforce.
- In 2009, the average age of registered MRTs working in all provinces and territories (except Saskatchewan)ⁱⁱ was 42.0 years, ranging from 38.8 in Newfoundland and Labrador, 40.0 in New Brunswick and Quebec, 40.8 in the territories (the Yukon, Northwest Territories and Nunavut), 42.3 in P.E.I., 42.4 in B.C., 42.7 in Alberta, 43.1 in Ontario, 43.8 in Manitoba and 45.2 in Nova Scotia.
- More than half (52.9%) of the 2009 registered MRT workforce in all provinces (except Saskatchewan)ⁱⁱⁱ were in the age group 35 to 54. Those younger than age 35 represented less than one-third (30.7%) of the registered workforce; the registered workforce who were 55 years or older accounted for 16.3%.

Education and Certification

- For Newfoundland and Labrador, P.E.I., New Brunswick, Quebec, Manitoba, Alberta and the territories, most (94.8%) of the registered practising MRTs held a diploma in medical radiation technology as entry-level education, as of 2009. A small number of practising MRTs, the majority of whom worked in three Atlantic provinces (Newfoundland and Labrador, P.E.I., New Brunswick), entered the workforce with a baccalaureate degree due to the introduction of degree programs a decade ago. None of the practising MRTs in these jurisdictions held a degree higher than a baccalaureate.
- For Newfoundland and Labrador, P.E.I., Quebec, Manitoba, Saskatchewan, Alberta, B.C. and the territories combined, more than three-quarters (77.9%) of the registered MRT workforce were certified in radiological technology as their initial MRT certification discipline, and approximately one-tenth were initially certified in the discipline of either radiation therapy or nuclear medicine.

Primary Employment

 The majority (82.5%) of the combined MRT workforce in Newfoundland and Labrador, P.E.I., New Brunswick, Quebec, Ontario and Manitoba, all of which required mandatory registration, were permanent employees in their primary employment.

Average age for the Saskatchewan MRT workforce is not included due to a high volume of not stated values for age.

iii. Age for the Saskatchewan MRT workforce is not included due to a high volume of not stated values for age.

- The 2009 data for five provinces (Newfoundland and Labrador, P.E.I., New Brunswick, Quebec and Manitoba) and the territories revealed that approximately three-quarters (72.6%) of the overall registered workforce were employed in full-time jobs.
- Approximately three-quarters (72.7%) of the combined registered MRT workforce in Newfoundland and Labrador, P.E.I., New Brunswick, Quebec, Manitoba, Alberta and the territories worked in general hospitals and 12.5% were employed in free-standing imaging facilities or clinics. The distribution among different work settings varied significantly from one jurisdiction to another. This reflects the unique way in which health services are governed, organized and delivered in each jurisdiction; it also reflects the different ways that medical imaging services are organizationally structured across the jurisdictions.
- In 2009, more than one-third (36.6%) of the combined MRT workforce in Newfoundland and Labrador, P.E.I., Quebec, Ontario, Manitoba and Alberta provided clinical education/preceptor activities in the workplace. The proportion varied among the provinces, ranging from approximately onequarter of the workforce in each of Quebec and Alberta to approximately one-half of the workforce in Ontario.
- MRTs may work in more than one area of practice. Of all areas of practice in P.E.I., New Brunswick, Ontario, Manitoba, Alberta and the territories, the top two were radiological technology and computed tomography (CT).

MRTDB 2009 Data: Focus on the Provinces and Territories

Provinces Requiring Mandatory Registration in 2009

Newfoundland and Labrador

Workforce Supply and Demographics

- Newfoundland and Labrador had 247 MRTs registered in the MRT workforce in 2009.
- Three-quarters of the MRT workforce in Newfoundland and Labrador was female (74.9%), the lowest proportion among all provinces that required mandatory registration.
- The average age of MRT workforce in Newfoundland and Labrador was 38.8 years, the lowest among all provinces that required mandatory registration (except Saskatchewan).
- In Newfoundland and Labrador, practising MRTs younger than age 35 accounted for 42.9% of the workforce. Only 10.9% of the workforce was age 55 or older.

Education, Certification and Specialty Certificate

- Most MRTs employed in Newfoundland and Labrador received their initial certification in the discipline of radiological technology (83.4%).
- Due to data limitations, for details regarding Education, Certification and Specialty Certificate in Newfoundland and Labrador, please refer to the Cross-Jurisdictional Data Tables, the Jurisdictional Profiles and the Methodological Notes for this data release.

Primary Employment

 Due to data limitations, for details regarding Primary Employment in Newfoundland and Labrador, please refer to the Cross-Jurisdictional Data Tables, the Jurisdictional Profiles and the Methodological Notes for this data release.

iv. Average age for the Saskatchewan MRT workforce is not included due to a high volume of *not stated* values for age.

Prince Edward Island

Workforce Supply and Demographics

- P.E.I. had 83 MRTs registered in the MRT workforce in 2009.
- The majority of the MRT workforce in P.E.I. was female (86.7%), the highest proportion among all of the provinces that required mandatory registration.
- The average age of the P.E.I. MRT workforce was 42.3 years.
- Half of the P.E.I. MRT workforce was in the age group 35 to 54 (50.6%).

Education, Certification and Specialty Certificate

- In 2009, 80.7% of the MRT workforce in P.E.I. held a diploma in medical radiation technology for basic education; the remaining 19.3% held a baccalaureate degree.
- Six percent of the P.E.I. MRT workforce graduated from an MRT training program for basic education within the past two years.
- After taking into account levels of post-basic education, one-quarter (25.3%)
 of the P.E.I. MRT workforce held a baccalaureate degree as their highest
 level of education in medical radiation technology.
- The majority of the P.E.I. MRT workforce (81.9%) received their initial MRT certification in the discipline of radiological technology.
- One-fifth (20.5%) of the P.E.I. MRT workforce had more than one MRT certification.
- A small number of practising MRTs in P.E.I. held one specialty certificate (8.4%).

Primary Employment

- Most (84.3%) of the P.E.I. MRT workforce were permanent employees in their primary employment.
- More than 70% of the MRT workforce in P.E.I. were full-time employees.
- The majority (79.5%) of the MRT workforce were employed in P.E.I. general hospitals and another 13.3% in cancer care centres, the second-largest employer for MRTs in P.E.I.
- Approximately three-quarters (75.9%) of the MRT workforce in P.E.I. worked as staff technologists, providing hands-on medical imaging services on a daily basis.
- Most practising MRTs in P.E.I. (89.2%) reported that their major function at work was providing diagnostic and therapeutic services.
- The primary areas in which the P.E.I. MRT workforce practised were radiological technology (general), 37.0%; radiation therapy (general), 9.2%; breast imaging, 8.4%; and computed tomography (CT), 8.4%.

Total Usual Weekly Hours of Work

• In 2009, 67.5% of the MRT workforce in P.E.I. worked 37.5 hours or more per week. One-fifth (21.7%) of the workforce worked fewer than 22.5 hours and one-tenth (10.8%) worked between 22.5 and 37.4 hours.

Nova Scotia

Workforce Supply and Demographics

- Nova Scotia had 514 MRTs registered in the MRT workforce in 2009.
- The majority of the MRT workforce in Nova Scotia was female (84.4%).
- Of all the provinces that require mandatory registration (except Saskatchewan),

 Nova Scotia had the highest average age (45.2 years) for the MRT workforce
 in 2009.
- Members of this workforce who were younger than age 35 accounted for only 17.1% of the total workforce, approximately half the level of other Atlantic provinces (Newfoundland and Labrador, 42.9%; P.E.I., 30.1%; and New Brunswick, 36.6%). Close to two-thirds of the workforce were between ages 35 and 54 (64.0%), the highest percentage among all the provinces requiring mandatory registration (except Saskatchewan).^{vi}

New Brunswick

Workforce Supply and Demographics

- New Brunswick had 508 MRTs registered in the MRT workforce in 2009.
- The majority of the MRT workforce in New Brunswick was female (86.0%), almost five percentage points higher than the average of all provinces.
- The average age for the New Brunswick MRT workforce was 40.
- Members of this MRT workforce who were younger than age 35 accounted for 36.6% of the total workforce.

Education, Certification and Specialty Certificate

- In 2009, 87.8% of the MRT workforce in New Brunswick held a diploma in medical radiation technology as their basic education; the remaining 12.2% held a baccalaureate degree.
- Almost 5% of the New Brunswick MRT workforce graduated from an MRT training program for basic education within the past two years.

v. Average age for the Saskatchewan MRT workforce is not included due to a high volume of *not stated* values for age.

vi. Age for the Saskatchewan MRT workforce is not included due to a high volume of not stated values for age.

 After taking into account levels of post-basic education, the percentage of the New Brunswick MRT workforce with a baccalaureate degree as their highest level of education was 13.4%.

Primary Employment

- In 2009, 91.7% of the New Brunswick MRT workforce were permanent employees in their primary employment.
- Slightly more than three-quarters (75.4%) of the MRT workforce in New Brunswick were full-time employees.
- The majority (96.3%) of the MRT workforce was employed in general hospitals in New Brunswick.
- More than one-tenth (11.4%) of the MRT workforce in New Brunswick worked at a management position (manager or supervisor).
- The primary areas in which the New Brunswick MRT workforce practised were radiological technology (general), 55.8%; radiation therapy (general), 8.7%; and nuclear medicine (general), 8.0%.

Total Usual Weekly Hours of Work

- In 2009, over three-quarters (78.7%) of the MRT workforce in New Brunswick worked 37.5 hours or more per week.
- More than one-tenth (11.8%) of the workforce worked between 22.5 hours and 37.4 hours per week. Approximately another one-tenth (9.4%) of the workforce worked fewer than 22.5 hours per week.

Quebec

Workforce Supply and Demographics

- In 2009, Quebec had 4,762 MRTs registered in the MRT workforce.
- The majority (84.4%) of the MRT workforce in Quebec was female.
- The average age of the Quebec MRT workforce was 40.
- MRTs younger than age 35 accounted for 38.1% of the workforce, the second highest among all the provinces requiring mandatory registration (except Saskatchewan).^{vii}

Education, Certification and Specialty Certificate

 In 2009, most members of the MRT workforce (93.6%) held a diploma in medical radiation technology for their basic education.

vii. Average age for the Saskatchewan MRT workforce is not included due to a high volume of *not stated* values for age.

- More than one-tenth (12.2%) of the Quebec MRT workforce graduated from basic education programs in medical radiation technology within the past two years.
- A small percentage (1.4%) of the Quebec MRT workforce were foreign-trained.
- The majority of the Quebec MRT workforce (78.7%) chose radiological technology for their initial MRT certification, while one-tenth of the workforce chose either radiation therapy (10.9%) or nuclear medicine (10.1%).

Primary Employment

- In 2009, most members of the Quebec MRT workforce (83.0%) were permanent employees in their primary employment.
- The majority of the Quebec MRT workforce worked in either general hospitals (78.9%) or free-standing imaging facilities or clinics (10.6%).
- Approximately 80% of the MRT workforce in Quebec were staff MRTs.
- More than one-third (35.5%) of the MRT workforce worked in the Région sociosanitaire de Montréal.

Ontario

Workforce Supply and Demographics

- Ontario had 6,154 MRTs registered in the MRT workforce in 2009.
- More than three-quarters (78.9%) of this workforce were female.
- The average age of the Ontario MRT workforce was 43.1 years.
- MRTs younger than age 35 made up 26.3% of the Ontario MRT workforce.

Primary Employment

- Most Ontario MRTs (80.5%) were permanent employees in their primary employment.
- Half of the Ontario MRT workforce (49.3%) provided clinical education/ preceptor (CEP) activities.
- The top three areas of practice for the Ontario MRT workforce were radiological technology (general), 24.4%; computed tomography (CT), 10.0%; and bone mineral densitometry, 8.6%.

Total Usual Weekly Hours of Work

• In 2009, close to two-thirds of the Ontario MRT workforce (63.7%) worked 37.5 hours or more per week.

Manitoba

Workforce Supply and Demographics

- Manitoba had 684 MRTs registered in the MRT workforce in 2009.
- Female MRTs in Manitoba accounted for 80.4% of the total MRT workforce.
- The average age of the Manitoba MRT workforce was 43.8 years.
- One-fifth (19.9%) of the MRT workforce in Manitoba were age 55 or older.

Education, Certification and Specialty Certificate

- In 2009, most (98.2%) of the Manitoba MRT workforce was Canadian-trained (for basic education in the profession).
- A small percentage (6.3%) of this workforce graduated from an MRT training program for basic education within the past two years.
- In 2009, 16.4% of the Manitoba MRT workforce held more than one MRT certification.
- The majority (81.7%) of the Manitoba MRT workforce had their initial MRT certification in radiological technology; a further 11.3% held a certification in radiation therapy and another 7.0% in nuclear medicine.
- In 2009, 4.4% of the Manitoba MRT workforce held magnetic resonance imaging certification.
- A total of 5.3% of the workforce had one specialty certificate.

Primary Employment

- In 2009, most (88.6%) registered MRTs in Manitoba were permanent employees in their primary employment.
- Approximately two-thirds (65.6%) of the Manitoba MRT workforce were employed on a full-time basis.
- For place of primary employment, Manitoba MRTs were employed in general hospitals (64.8%), cancer care centres (12.0%) and other facilities such as free-standing imaging facilities or clinics (11.1%) and community health centres (8.6%).
- The majority (78.1%) of the Manitoba MRT workforce were staff technologists; 13.0% were charge technologists or team leaders and 3.8% were in a management position (managers or supervisors).
- The majority (94.3%) of MRTs indicated that they provide diagnostic and therapeutic services in their place of primary employment.
- More than one-third (36.1%) of the Manitoba MRT workforce provided clinical education/preceptor (CEP) activities.

• The top three areas of practice for the majority of the Manitoba MRT workforce were radiological technology (general), 49.1%; computed tomography (CT), 11.1%; and radiation therapy (general), 6.9%.

Saskatchewan

Workforce Supply and Demographics

- Saskatchewan had 557 MRTs registered in the MRT workforce in 2009.
- Female MRTs in Saskatchewan accounted for 79.4% of the workforce.

Education, Certification and Specialty Certificate

 The majority (78.5%) of the Saskatchewan MRT workforce had their initial MRT certification in radiological technology, a further 13.6% in radiation therapy and another 7.7% in nuclear medicine.

Alberta

Workforce Supply and Demographics

- Alberta had 1,747 MRTs registered in the MRT workforce in 2009.
- A total of 82.8% of the Alberta MRT workforce was female.
- The average age of this workforce was 42.7 years.
- Just over half of the Alberta MRT workforce was in the 35-to-54 age group (52.7%).
- Almost 30% of the workforce was younger than age 35 and the remainder of the workforce was age 55 or older (17.8%).

Education, Certification and Specialty Certificate

- In 2009, almost all members of the Alberta MRT workforce (99.7%) held a diploma in medical radiation technology for basic education.
- Most (96.7%) of the Alberta MRT workforce was Canadian-trained (for basic education).
- A small proportion (6.8%) of the Alberta MRT workforce graduated from an MRT training program for basic education within the past two years.
- Three-quarters (75.2%) of the Alberta MRT workforce held their initial MRT certification in radiological technology. Other disciplines of initial MRT certification that the Alberta MRT workforce held included nuclear medicine (11.9%), radiation therapy (9.3%) and magnetic resonance imaging (3.6%).
- A total of 8.9% of the Alberta MRT workforce had an MRI certification.
- Most (89.3%) of this workforce had one MRT certification only, but one-tenth (10.7%) of the workforce had more than one.

Primary Employment

- In 2009, most of the Alberta MRT workforce was employed in general hospitals (51.2%), free-standing imaging facilities or clinics (23.6%) and cancer care centres (11.3%).
- In 2009, 23.6% of the Alberta MRT workforce provided clinical education and preceptor activities at work.
- The top four areas of practice for the Alberta MRT workforce were radiological technology (general), 36.5%; computed tomography (CT), 10.8%; breast imaging, 9.8%; and nuclear medicine (general), 7.3%.
- Close to three-quarters of the MRT workforce worked in two health regions: the Health Region of Capital Health (37.7%) and Calgary Health Region (36.0%).

Unregulated Provinces and Territories With Voluntary Registration

B.C.

Workforce Supply and Demographics

- In 2009, there were 1,983 MRTs who registered with the CAMRT and worked in B.C.
- More than three-quarters (78.1%) of this workforce were female.
- The average age of the registered MRT workforce for B.C. was 42.4 years.
- More than half of this workforce (54.5%) was in the 35-to-54 age group.

Education, Certification and Specialty Certificate

 Three-quarters of the registered MRT workforce in B.C. (75.9%) held an MRT certification in radiological technology.

The Territories (Yukon, Northwest Territories and Nunavut)

Workforce Supply and Demographics

- In 2009, 14 MRTs were registered with the CAMRT and worked in the Yukon, Northwest Territories or Nunavut.
- The average age of the registered MRT workforce for the territories was 40.8 years.

Education, Certification and Specialty Certificate

 In 2009, most of the registered MRT workforce in the territories held a diploma in medical radiation technology for their basic education.

- All members of the registered MRT workforce in the territories were trained in Canada and had graduated more than two years ago from an MRT basic education program.
- All members of the registered MRT workforce in the territories held an initial certification in radiological technology.

Primary Employment

- In 2009, most registered MRT workforce in the territories were permanent employees in their primary employment.
- The entire registered MRT workforce in the territories worked in a general hospital setting.
- Radiological technology (general) was the main area in which half of the registered MRT workforce in the territories practised.

Production of this report is made possible by financial contributions from Health Canada and provincial and territorial governments. The views expressed herein do not necessarily represent the views of Health Canada or any provincial or territorial government.

The contents of this publication may be reproduced in whole or in part, provided the intended use is for non-commercial purposes and full acknowledgement is given to the Canadian Institute for Health Information.

Canadian Institute for Health Information 495 Richmond Road, Suite 600 Ottawa, Ontario K2A 4H6

Phone: 613-241-7860 Fax: 613-241-8120 www.cihi.ca

copyright@cihi.ca

© 2011 Canadian Institute for Health Information

Cette publication est aussi disponible en français sous le titre Base de données sur les technologistes de laboratoire médical, publication des données de 2009 — points saillants sur les données.

Talk to Us

CIHI Ottawa 495 Richmond Road, Suite 600 Ottawa, Ontario K2A 4H6 Phone: 613-241-7860

CIHI Toronto 4110 Yonge Street, Suite 300 Toronto, Ontario M2P 2B7 Phone: 416-481-2002

CIHI Victoria 880 Douglas Street, Suite 600 Victoria, British Columbia V8W 2B7 Phone: 250-220-4100 CIHI Montréal 1010 Sherbrooke Street West, Suite 300 Montréal, Quebec H3A 2R7 Phone: 514-842-2226

CIHI St. John's 140 Water Street, Suite 701 St. John's, Newfoundland and Labrador A1C 6H6 Phone: 709-576-7006

