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General information

Microbiology and infectious diseases focuses on the diagnosis and treatment of infectious diseases; thus, it is concerned with human illness due to micro-organisms. Since such disease can affect any and all organs and systems, this specialist must be prepared to deal with any region of the body.

The specialty of Medical Microbiology and Infectious Disease consists primarily of four major spheres of activity:

1. the provision of clinical consultations on the investigation, diagnosis and treatment of patients suffering from infectious diseases;
2. the establishment and direction of infection control programs across the continuum of care;
3. public health and communicable disease prevention and epidemiology;
4. the scientific and administrative direction of a diagnostic microbiology laboratory.

Source: Pathway evaluation program
General information

Once you’ve completed medical school, it takes an additional 5 years of Royal College-approved residency training to become certified in medical microbiology and infectious disease. This residency training must include:

- 1 year of basic clinical training;
- 2 years of diagnostic laboratory residency in an approved department or division of microbiology, including bacteriology, immunology, mycology, mycobacteriology, parasitology and virology. In addition the resident must attain adequate experience in general hospital microbiology, including laboratory management, infection control, molecular biology, research and how microbiology relates to other hospital departments including administration;
- 1 year of approved residency in directly relevant clinical medicine (e.g. Internal Medicine or Pediatrics). This year must include six months of clinical practice centred around the management of patients with infectious diseases;
General information

- 1 further year of residency that may consist of: residency in the clinical microbiology laboratory, infectious diseases, infection prevention and control, research, public health, epidemiology, community medicine; or residency in other branches of laboratory or clinical medicine; or residency or research at a hospital or university centre recommended by the program director.

For further details on training requirements please go to:
Royal College of Physicians and Surgeons of Canada
Association of Medical Microbiology and Infectious Disease Canada

Source: Pathway evaluation program
# Total number & number/100,000 population by province, 2019

<table>
<thead>
<tr>
<th>Province/Territory</th>
<th>Physicians</th>
<th>Phys/100k pop’n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newfoundland/Labrador</td>
<td>6</td>
<td>1.1</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>1</td>
<td>0.6</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>15</td>
<td>1.6</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>13</td>
<td>1.7</td>
</tr>
<tr>
<td>Quebec</td>
<td>245</td>
<td>2.9</td>
</tr>
<tr>
<td>Ontario</td>
<td>195</td>
<td>1.4</td>
</tr>
<tr>
<td>Manitoba</td>
<td>26</td>
<td>1.9</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>14</td>
<td>1.2</td>
</tr>
<tr>
<td>Alberta</td>
<td>87</td>
<td>2.0</td>
</tr>
<tr>
<td>British Columbia</td>
<td>95</td>
<td>1.9</td>
</tr>
<tr>
<td>Territories</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>CANADA</strong></td>
<td><strong>697</strong></td>
<td><strong>1.9</strong></td>
</tr>
</tbody>
</table>

Source: 2019 CMA Masterfile
Number/100,000 population, 1995 to 2019

Source: 1995-2019 CMA Masterfiles
Number by gender & year, 1995 to 2019

Source: 1995-2019 CMA Masterfiles
Percentage by gender & age, 2019

Gender

- Male: 54%
- Female: 46%

Age Group

- 65+: 6%
- 55 - 64: 15%
- 45 - 54: 24%
- 35 - 44: 22%
- < 35: 33%

Excludes those where gender or age is unknown.

Source: 2019 CMA Masterfile
Number by gender & age, 2019

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>65+</td>
<td>33</td>
<td>64</td>
</tr>
<tr>
<td>55-64</td>
<td>67</td>
<td>96</td>
</tr>
<tr>
<td>45-54</td>
<td>72</td>
<td>77</td>
</tr>
<tr>
<td>35-44</td>
<td>120</td>
<td>103</td>
</tr>
<tr>
<td>&lt;35</td>
<td>20</td>
<td>22</td>
</tr>
</tbody>
</table>

Excludes those where gender or age is unknown.
Source: 2019 CMA Masterfile
Percentage by main work setting, 2019

- **Academic Health Sciences Centre**: 64%
- **Community Hospital**: 13%
- **Non-AHSC Teaching Hospital**: 11%
- **Private Office/Clinic**: 5%
- **Free-standing Lab/Diag Clinic**: 5%
- **Community Clinic/Health-centre**: 2%

Source: 2019 CMA Physician Workforce Survey. Canadian Medical Association
Percentage by practice organization, 2017*

- **Solo Practice**
- **Group Practice**
- **Interprofessional Practice**
- **Hospital-based Practice**
- **NR**

*Most recent available data for this specialty

Source: 2017 CMA Workforce Survey. Canadian Medical Association
## Hours worked per week (excluding on-call), 2019

<table>
<thead>
<tr>
<th>Activity</th>
<th>Hours worked per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct patient care without teaching component</td>
<td>15.0</td>
</tr>
<tr>
<td>Direct patient care with teaching component</td>
<td>8.6</td>
</tr>
<tr>
<td>Teaching without patient care</td>
<td>3.4</td>
</tr>
<tr>
<td>Indirect patient care</td>
<td>7.2</td>
</tr>
<tr>
<td>Health facility committees</td>
<td>2.8</td>
</tr>
<tr>
<td>Administration</td>
<td>6.4</td>
</tr>
<tr>
<td>Research</td>
<td>5.4</td>
</tr>
<tr>
<td>Managing practice</td>
<td>1.2</td>
</tr>
<tr>
<td>Continued professional development</td>
<td>2.8</td>
</tr>
<tr>
<td>Other</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>TOTAL HOURS PER WEEK</strong></td>
<td><strong>55.0</strong></td>
</tr>
</tbody>
</table>

Source: 2019 CMA Physician Workforce Survey. Canadian Medical Association
On-call duty hours per month, 2019

- 80% provide on-call services
- On-call hours = 141 hours/month
- On-call hours spent in direct patient care = 72 hours/month

Source: 2019 CMA Physician Workforce Survey. Canadian Medical Association
Percentage by remuneration method

Primary payment method\(^1\) in 2017

- 21% 90% + fee-for-service
- 22% 90% + salary
- 7% 90% + other\(^*\)
- 0% Blended
- 50% NR

Average gross payment per physician for Internal Medicine & subspecialties in 2017/18 (those earning at least $60,000) = $437,000\(^2\)

Average percent overhead reported by Medical Microbiology and Infectious Diseases specialists in 2017 = 11%\(^3\)

\(^*\)Other includes capitation, sessional, contract and other methods

\(^1\) 2017 CMA Workforce Survey. Canadian Medical Association

\(^2\) National Physician Database, 2017/18, CIHI

\(^3\) 2017 CMA Workforce Survey. Canadian Medical Association
Professional & work-life balance satisfaction, 2019

Balance of personal & professional commitments
- Dissatisfied or very dissatisfied: 31%
- Neutral: 21%
- Satisfied or very satisfied: 48%

Current professional life
- Dissatisfied or very dissatisfied: 11%
- Neutral: 16%
- Satisfied or very satisfied: 73%

Source: 2019 CMA Physician Workforce Survey. Canadian Medical Association
Number of retirees during the three year period of 2016-2018

Source: CMA Masterfile – year over year comparisons
Note: “Retired” is based on giving up licence and therefore excludes those who have retired from clinical practice but are still licensed; those younger than 45 may include physicians who have temporarily given up their licence but return to practice at a later date.
Employment situation, 2017

- 25% Overworked in my discipline
- 73% Employed in my discipline to my satisfaction
- 1% Underemployed in my discipline
- 1% Not employed in my discipline
- 1% No response

Source: 2017 CMA Workforce Survey. Canadian Medical Association
Links to additional resources

- Association of Faculties of Medicine of Canada
- Canadian Institute for Health Information
- Canadian Medical Association’s Physician Data Centre
- Canadian Post-MD Education Registry (CAPER)
- College of Family Physicians of Canada
- National Physician Survey (2004-2014)
- Royal College of Physicians and Surgeons of Canada