Nephrology is a subspecialty of internal medicine. Practitioners diagnose and treat diseases of the kidneys and urinary system. Nephrologists are motivated by the opportunity to restore chronically ill patients to productive lives and are often challenged by life-and-death situations.

The practice of nephrology is closely linked to a teaching hospital so these specialists incorporate a major component of teaching and research into their overall activity profile. This may be viewed as one of the attractions of nephrology, inasmuch as it allows for tremendous diversity and flexibility.

The resident must acquire a working knowledge of the theoretical basis of the specialty, including its foundations in the basic medical sciences and research. On completion of the program, the resident should be able to demonstrate the knowledge, attitudes and skills needed to independently care for patients with kidney disease (including the management of dialysis and renal transplantation) and with disturbances of acid-base, fluid and electrolyte metabolism.
It is important for the nephrologist to have a working knowledge of the basic sciences (physiology, pathophysiology and immunology) and applied sciences (pharmacology, pathology) as they apply to renal disease and their treatments. These physicians should be able to act as both an attending physician and as a consultant. They work in a variety of health care settings including acute and chronic care hospitals, dialysis units (hemodialysis and peritoneal dialysis), as well as ambulatory care clinics (general nephrology, pre-dialysis, renal transplantation). They should function as a member of a multi-disciplinary team, effectively collaborating with other health professionals.

Upon completing medical school, only candidates certificated by the Royal College of Physicians and Surgeons of Canada in internal medicine or pediatrics may be eligible for the Certificate of Special Competence in nephrology. This involves about 6 years of training in total. Once certified in one of these two specialties, a further 2 years of Royal College-approved residency in adult or pediatric nephrology is required. Residency must incorporate the principal of graded responsibility and include 1 year of approved clinical residency at a senior level in adult or pediatric nephrology, and 1 year of further training.

For further training requirements go to:
http://www.royalcollege.ca/portal/page/portal/rc/credentials/start/routes/traditional_route

Canadian Society of Nephrology
https://www.csns.cn.ca/
### Number of physicians and physicians/100,000 population in Nephrology in Canada, 2015

<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>11</td>
<td>2.1</td>
</tr>
<tr>
<td>Prince Edward Island</td>
<td>2</td>
<td>1.4</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>16</td>
<td>1.7</td>
</tr>
<tr>
<td>New Brunswick</td>
<td>12</td>
<td>1.6</td>
</tr>
<tr>
<td>Quebec</td>
<td>179</td>
<td>2.2</td>
</tr>
<tr>
<td>Ontario</td>
<td>231</td>
<td>1.7</td>
</tr>
<tr>
<td>Manitoba</td>
<td>30</td>
<td>2.3</td>
</tr>
<tr>
<td>Saskatchewan</td>
<td>22</td>
<td>1.9</td>
</tr>
<tr>
<td>Alberta</td>
<td>69</td>
<td>1.7</td>
</tr>
<tr>
<td>British Columbia</td>
<td>75</td>
<td>1.6</td>
</tr>
<tr>
<td>Territories</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Canada</strong></td>
<td><strong>647</strong></td>
<td><strong>1.8</strong></td>
</tr>
</tbody>
</table>

Source: 2015 CMA Masterfile
Physicians per 100,000 population in Nephrology in Canada, 1995 to 2015

Source: CMA Masterfile
Nephrologists by gender and year in Canada, 1995 to 2015

Source: CMA Masterfile
Nephrologists by age and gender in Canada, 2015

Gender

- Male: 62%
- Female: 38%

Age Group

- 34 and under: 5%
- 35 - 44: 41%
- 45 - 54: 29%
- 55 - 64: 17%
- 65 and over: 8%

Source: 2015 CMA Masterfile
Nephrologists by age and gender in Canada, 2015

Source: 2015 CMA Masterfile
Main work setting of Nephrologists in Canada, 2014

- Academic Health Sciences Centre: 52%
- Community Hospital: 22%
- Private Office/Clinic: 11%
- Non-AHSC Teaching Hospital: 11%
- Free-standing Lab/Diag Clinic: 3%
- Other: 1%

Source: 2014 National Physician Survey. CFPC, CMA, Royal College
Practice organization for **Nephrologists** in Canada, 2014

Source: 2014 National Physician Survey. CFPC, CMA, Royal College
### Hours worked per week (excluding on-call) by Nephrologists in Canada, 2014

<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>27.1</td>
</tr>
<tr>
<td>Direct patient care with teaching component</td>
<td>8.3</td>
</tr>
<tr>
<td>Teaching without patient care</td>
<td>2.3</td>
</tr>
<tr>
<td>Indirect patient care</td>
<td>7.5</td>
</tr>
<tr>
<td>Health facility committees</td>
<td>1.3</td>
</tr>
<tr>
<td>Administration</td>
<td>2.7</td>
</tr>
<tr>
<td>Research</td>
<td>1.4</td>
</tr>
<tr>
<td>Managing practice</td>
<td>1.2</td>
</tr>
<tr>
<td>Continued professional development</td>
<td>3.4</td>
</tr>
<tr>
<td>Other</td>
<td>1.2</td>
</tr>
<tr>
<td><strong>TOTAL HOURS PER WEEK</strong></td>
<td><strong>56.5</strong></td>
</tr>
</tbody>
</table>

Source: 2014 National Physician Survey. CFPC, CMA, Royal College
Time spent on call spent in direct patient care = 46 hrs./month

Source: 2014 National Physician Survey. CFPC, CMA, Royal College
Remuneration for **Nephrologists** in Canada

**Primary payment method**\(^1\) in 2013

- 61%: Blended
- 30%: 90% + salary
- 8%: 90% + fee-for-service
- 2%: 90% + other* (Other includes capitation, sessional, contract and other methods)

**Average gross clinical earnings** for **Int Med & subspecialties** in 2013/14 (those earning at least $60,000) = $396,105\(^2\)

**Average percent overhead reported** by Internal Medicine specialists in 2010 = 22%\(^3\)

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\(^1\) National Physician Survey, 2013, CFPC, CMA, Royal College

\(^2\) National Physician Database, 2013/14, CIHI

\(^3\) National Physician Survey, 2010, CFPC, CMA, Royal College
Satisfaction among **Nephrologists** in Canada, 2013

Balance of personal & professional commitments:
- **Very dissatisfied**: 4%
- **Dissatisfied**: 7%
- **Neutral**: 25%
- **Satisfied**: 36%
- **Very satisfied**: 23%
- **Neutral**: 6%

Current professional life:
- **Very dissatisfied**: 4%
- **Dissatisfied**: 3%
- **Neutral**: 19%
- **Satisfied**: 13%
- **Very satisfied**: 43%
- **Neutral**: 19%

Source: 2013 National Physician Survey. CFPC, CMA, Royal College
Nephrologists who are Royal College, CFPC or CMQ certified in Canada, 2014

- **Royal College**: 98%
- **CFPC**: 11%
- **CMQ**: 12%
- **Outside Canada**

Note: Subset of those who reported a certification. Physicians could indicate more than one certification body.

Source: 2014 National Physician Survey. CFPC, CMA, Royal College
Number of Nephrologists who retired during the THREE year period of 2012 to 2014

Source: CMA Masterfile – year over year comparisons

Note: “Retired” is based on giving up licence and is therefore excludes those who have retired from clinical practice but are still licensed; it includes physicians who have temporarily given up their licence but may return to practice at a later date.
### Total and Ministry funded postgraduate MD trainees in 2014/15 – Nephrology*

<table>
<thead>
<tr>
<th>Faculty of Medicine</th>
<th>Ministry funded</th>
<th>Total</th>
<th>Faculty of Medicine</th>
<th>Ministry funded</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorial U N&amp;L</td>
<td>1</td>
<td>1</td>
<td>McMaster U</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Dalhousie U</td>
<td>1</td>
<td>1</td>
<td>UWO</td>
<td>7</td>
<td>25</td>
</tr>
<tr>
<td>U Laval</td>
<td>0</td>
<td>0</td>
<td>NOSM</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>U Sherbrooke</td>
<td>0</td>
<td>0</td>
<td>U Manitoba</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>U Montréal</td>
<td>9</td>
<td>9</td>
<td>U Sask</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>McGill U</td>
<td>3</td>
<td>11</td>
<td>U Alberta</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>U Ottawa</td>
<td>1</td>
<td>12</td>
<td>U Calgary</td>
<td>7</td>
<td>11</td>
</tr>
<tr>
<td>Queens U</td>
<td>0</td>
<td>3</td>
<td>UBC</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>U Toronto</td>
<td>6</td>
<td>47</td>
<td>Canada</td>
<td>51</td>
<td>154</td>
</tr>
</tbody>
</table>

* Includes Nephrology (Int Med) and Nephrology (Ped)

Source: 2014/15 Annual Census of Post-MD Trainees, CAPER
PGY-4 and exiting postgraduate-MD trainees in 2014/15 – Nephrology

Source: 2014/15 Annual Census of Post-MD Trainees, CAPER
Postgraduate-MD trainees in 2014/15 – **Nephrology**

- Total of 25 PGY-4 Nephrology trainees representing 49% of all Nephrology trainees.

- Total of 51 Nephrology trainees representing 0.4% of all Ministry funded trainees.

- Total of 77 visa trainees in Nephrology.

- Total of 22 Nephrology trainees completed postgraduate training in 2014.

Source: 2014/15 Annual Census of Post-MD Trainees, CAPER
Location of 2013 Postgraduate-MD exits in 2015 – Nephrology

Of the 26 exits in 2013, 24 (92%) were known to be practising in Canada

Source: 2014/15 Annual Census of Post-MD Trainees, CAPER
Stress associated with finding employment at end of residency

Source: 2012 National Physician Survey of residents. CFPC, CMA, Royal College
Links to the organizations supplying information for this document

National Physician Survey
http://www.nationalphysiciansurvey.ca

Canadian Medical Association
http://www.cma.ca/pdc

Association of Faculties of Medicine of Canada
http://www.caper.ca/

Royal College of Physicians and Surgeons of Canada
http://www.royalcollege.ca/portal/page/portal/rc/credentials/start/routes/traditional_route

College of Family Physicians of Canada
http://www.cfpc.ca

Canadian Institute for Health Information
http://www.cihi.ca