

Medical Biochemistry Profile

Updated August 2018

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GENERAL INFORMATION

The primary role of the medical biochemist is to study and measure the biochemical abnormalities in human disease. The medical biochemist is trained in the operation and management of hospital biochemistry laboratories and acts as a consultant in all aspects of their use. As an academic specialist, the medical biochemist develops and integrates a basic medical science research program with clinical practice in a field of biochemical interest and maintains an active role as a teacher of clinically-applied biochemistry.

Technology-driven specialties such as medical biochemistry require the physician to have a broad awareness of the field at the time of completion of formal training. But the physician must also be prepared for major changes during the ensuing years of practice that are inevitable and the residency period is the time to acquire skills for life-long learning.



GENERAL INFORMATION

In medical biochemistry, role learning must be supplemented by skills in self-directed learning. It requires ability in problem solving, formulation of hypotheses, the ability to do directed information searches and also the ability to critically appraise data.

Medical biochemistry involves pathophysiology (requiring a thorough knowledge of normal and abnormal biochemistry and physiology, and the ability to apply this knowledge to the understanding of human disease); consultation; interpreting results (understanding the principles and limitations of biochemical analyses and applying these concepts to the interpretation of test results); analytical methods; and instrumentation.

Once you have completed medical school, it takes an additional 5 years of Royal College-approved residency training to become certified in medical biochemistry. This residency training must include the following:



GENERAL INFORMATION

- 1 year of basic clinical training (including rotations in medicine, pediatrics, obstetrics and surgery);
- 2 years of Royal College-approved residency in medical biochemistry, preferably spent in one university centre (at least one of these two years must be spent in the biochemistry laboratory of a general hospital);
- 1 year of residency that may be either in internal medicine or in pediatrics.

For further details on training requirements please go to:

[Royal College of Physicians and Surgeons of Canada](#)



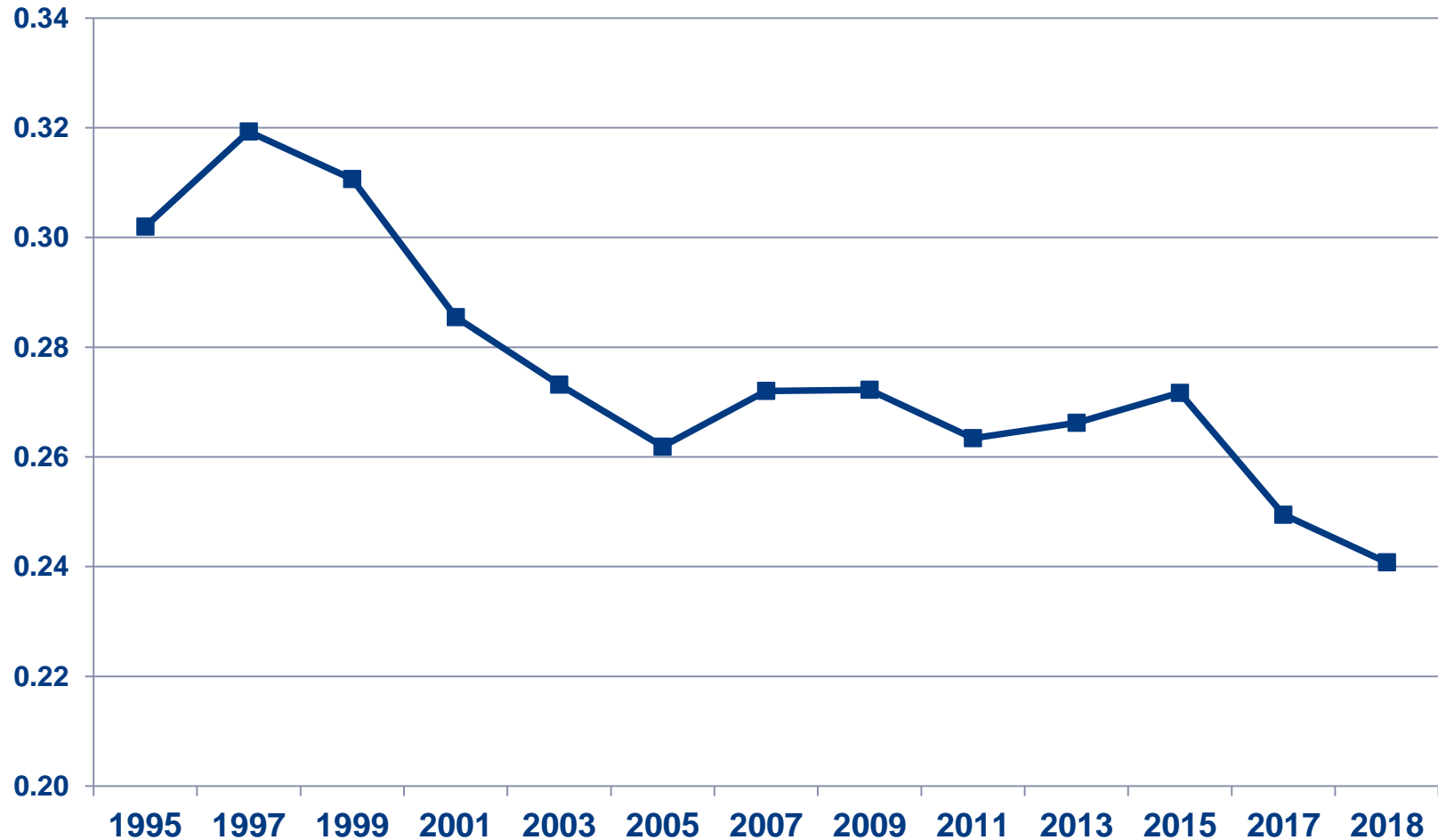
Total number & number/100,000 population by province, 2018

Province/Territory	Physicians	Phys/100k pop'n
Newfoundland/Labrador	0	0.0
Prince Edward Island	0	0.0
Nova Scotia	1	0.1
New Brunswick	1	0.1
Quebec	56	0.7
Ontario	17	0.1
Manitoba	1	0.1
Saskatchewan	2	0.2
Alberta	0	0.0
British Columbia	13	0.3
Territories	0	0.0
CANADA	91	0.2

Source: 2018 CMA Masterfile



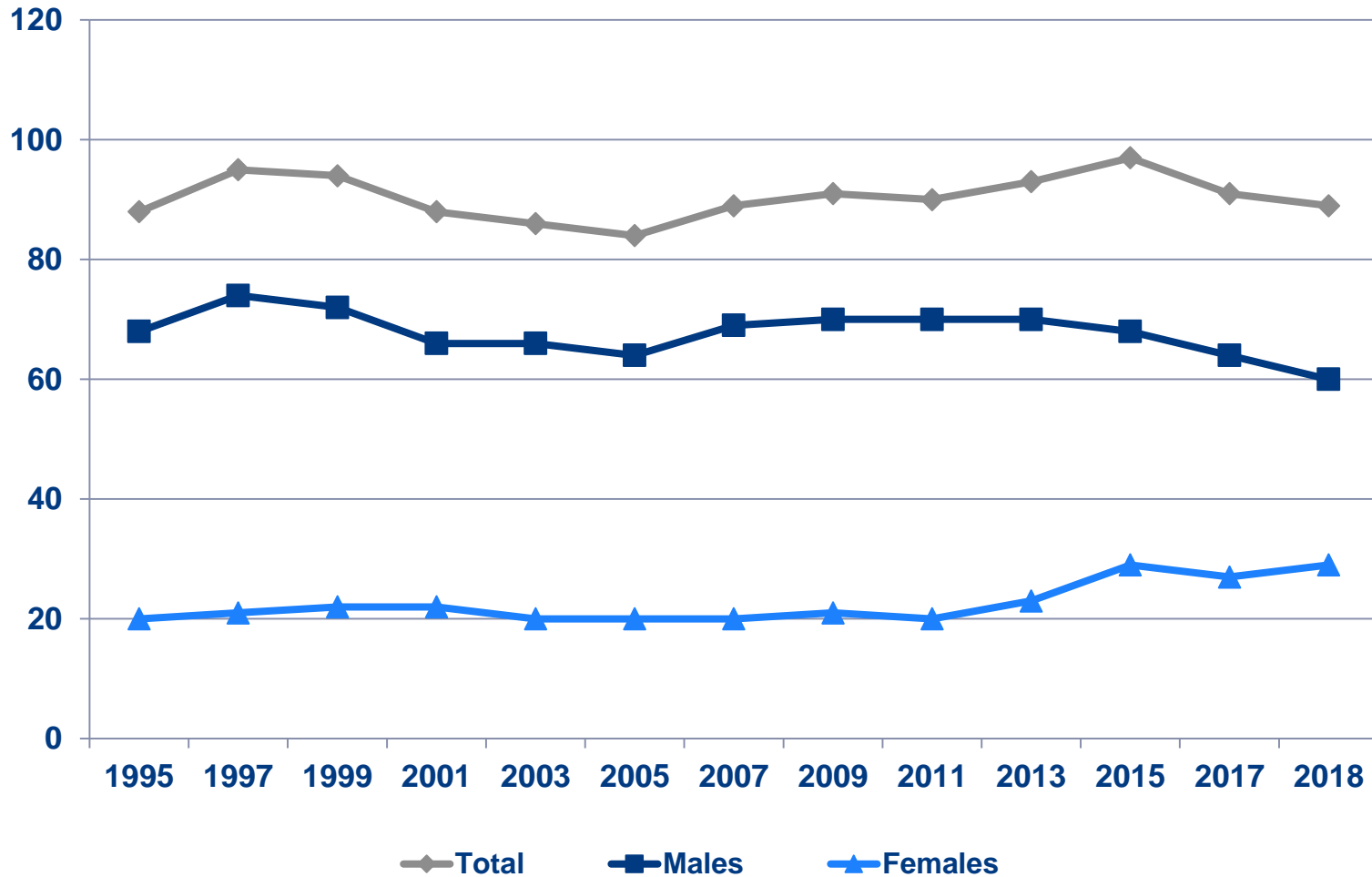
Number/100,000 population, 1995 to 2018



Source: 1995-2018 CMA Masterfiles



Number by gender & year, 1995 to 2018

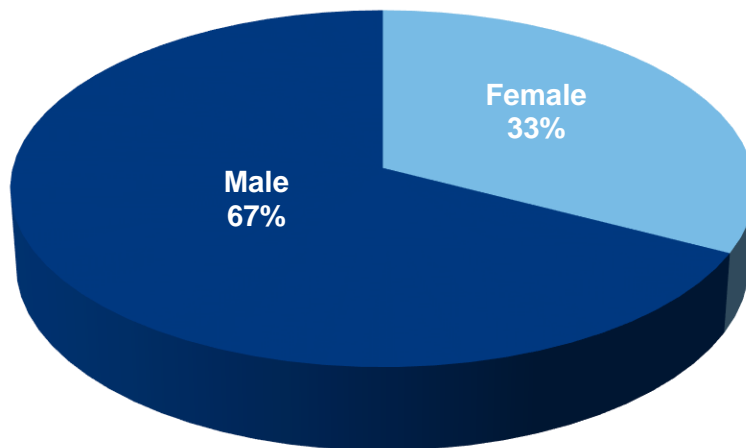


Source: 1995-2018 CMA Masterfiles

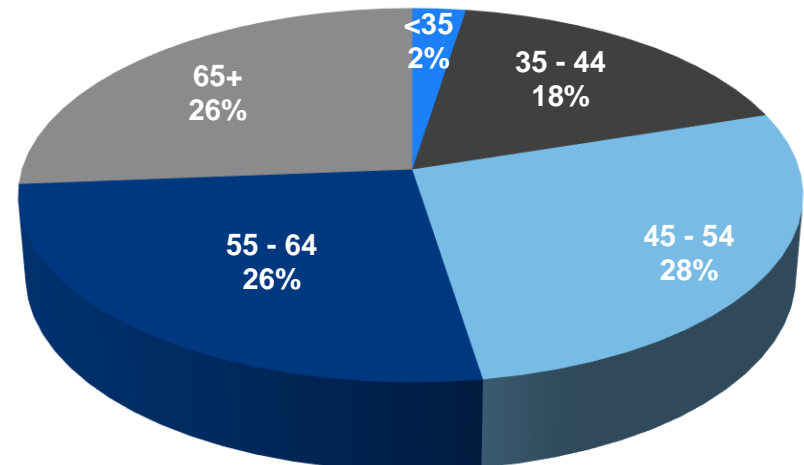


Percentage by gender & age, 2018

Gender



Age Group

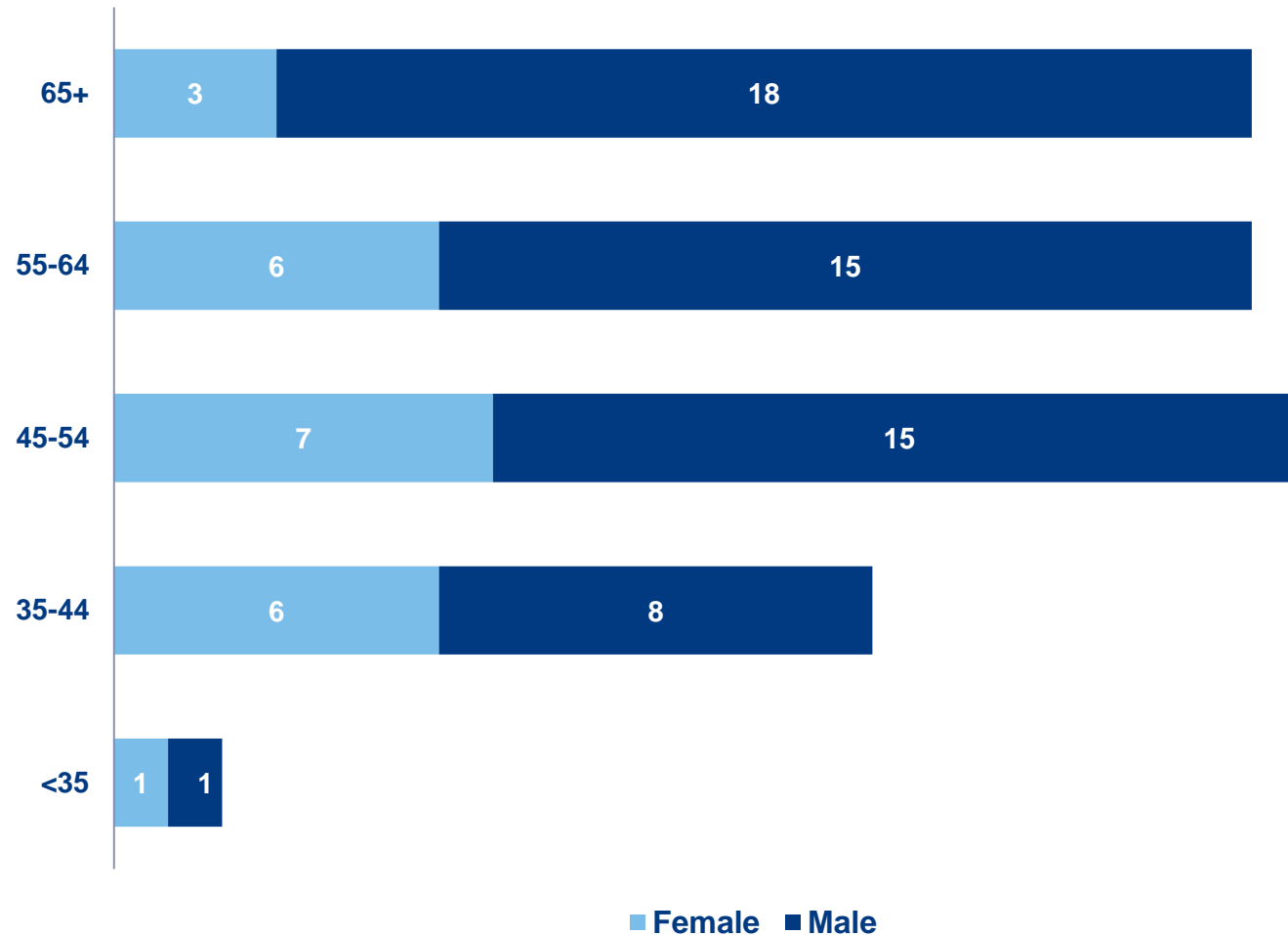


Excludes those where gender or age is unknown.

Source: 2018 CMA Masterfile



Number by gender & age, 2018

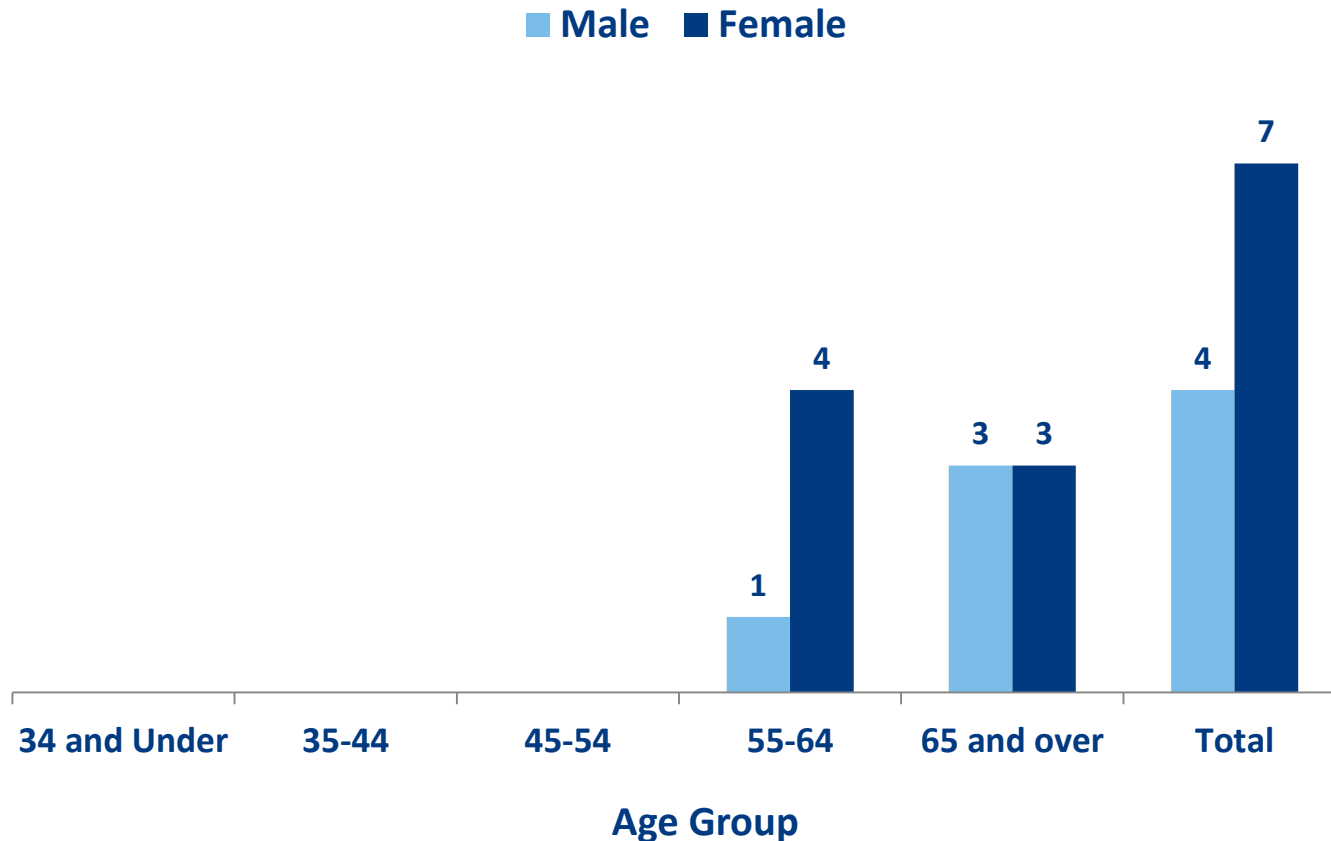


Excludes those where gender or age is unknown.

Source: 2018 CMA Masterfile



Number of retirees during the three year period of 2014-2016



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.



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](#)