

# Perspectives on audiology training and education in Canada and New Zealand

In this edition of Trainee Matters we look at audiology training in two different locations from around the world, **Canada** and **New Zealand**. **Marshall Chasin** gives us an overview of the education system in Canada, while **Amy Arrowsmith** explains the history of audiology training in New Zealand.



## CANADA

The term 'Audiologist' is protected under many provincial regulatory colleges of audiology (and speech-language pathology) but the scopes of practice for an audiologist throughout Canada may differ from province to province and between the three territories. Health care in Canada is regulated provincially with some policies provided nationally. In Canada, the only entry into the professional field of audiology is at the master's level. Currently there are five full-time only professional and clinical audiology programmes – two in French – all of them in conjunction with speech-language pathology departments. In total, there are 11 Canadian speech-language pathology programmes.

Requirements for regulatory licensing / registration in audiology may vary from province to province in Canada and this is mandatory in order to practice. Currently, audiology is regulated in eight provinces in Canada. Membership in Speech-Language and Audiology Canada (SAC), the national professional association representing audiologists, speech-language pathologists and communication health assistants, is voluntary. SAC administers a clinical certification programme. To

become clinically certified with SAC, an audiologist or speech-language pathologist (including graduating students) must meet all educational and clinical requirements as well as pass SAC's clinical certification exam. Although SAC clinical certification is voluntary, some employers do require it as a term for employment. For more information, visit SAC's website, [www.sac-oac.ca](http://www.sac-oac.ca).

The Canadian Alliance of Audiology and Speech-Language Pathology Regulators (<http://www.caaspr.ca/>) oversees development of common standards among the provincial regulators.

### English and French clinical and professional audiology programmes

The English-only audiology programmes are available at Dalhousie University in Halifax, Nova Scotia, Western University in London, Ontario (formerly known as the University of Western Ontario) and the University of British Columbia, Vancouver, British Columbia. These three programmes are in the eastern part of Canada, central Canada, and western Canada, respectively.

In addition, the two French only professional audiology programmes

are at Université d'Ottawa, in Ottawa, Ontario and Université de Montréal, in Montréal, Québec. Despite these programmes being taught in French, graduates typically are conversant in English as well. Many of their textbooks are written in English.

Although the University of Alberta, in Edmonton, Alberta does not offer a clinical or professional degree in audiology, they do have research programmes that can offer an emphasis on audiology or hearing science. Doctoral level programmes in Canada vary by institution and many follow an interprofessional model and may be housed in a different department such as psychology or rehabilitation medicine.

Currently the universities listed previously offer a PhD programme in some form, for both full time and for part time students, but typically in association with another academic department such as rehabilitation medicine. The latest federal statistics indicate that there are only ten PhD graduates in this area from all Canadian universities each year. No Canadian university offers a doctorate in audiology (e.g. AuD) programme although many Canadian

**"In addition to the academic preparation, all Canadian professional and clinical programmes in audiology require that the applicant have some volunteer experience in the field."**

audiologists are eligible and do apply for an American-based distance learning programme if they meet the admission requirements. Many Canadian audiologists have earned the AuD designation from non-Canadian universities.

Only the Université de Montréal offers a programme at the bachelor's level, although this must be followed up with a master's level degree in order to meet entry to practice requirements in Canada. Université de Montréal will likely be undergoing changes to their educational model in the near future.

The names of the degrees also vary depending on the granting institution, and may include a Master's of Science, MSc, at Dalhousie University and the University of British Columbia; a Master's of Health Sciences, MHSc, at Université d'Ottawa; a Master's of Clinical Science, MClSc, at Western University; or a Maîtrise Professionnelle en Audiologie, MPA, at Université de Montréal.

The prerequisites for applying to one of the five Canadian professional and clinical audiology programmes are similar although there is some variation among the universities. Undergraduate courses in physics, statistics, biology, linguistics, anatomy and psychology are typically required. In the case of the Université de Montréal, the bachelor's level degree (which also incorporates clinical practicums) from that institution is also acceptable.

In addition to the academic preparation, all Canadian professional and clinical programmes in audiology require that the applicant have some volunteer experience in the field and in most cases, require a letter of reference from the volunteer supervisor, as well as one or more academic references.

The Université de Montréal also requires proof of French language competency (expressive and reception) if the master's level applicant has not completed their bachelor's training

## “Like all professional groups, in Canada and around the world, continuing education is a requirement for maintenance of one's certification.”

at that institution. The other English speaking universities may require their own proof of language competency, on a case by case basis.

The academic and clinical length of the programmes is typically 24 months long, with the exception of the Université de Montréal's programme which is only 12 months long and Dalhousie University which is three years in length. Special considerations can be made for many students who may need to take an additional year of study if they do not have the requisite courses when they apply to the master's programme. This 24 month period includes the required coursework and clinical externships that are necessary for their training as well as to meet any provincial regulations for registration / licensure and eligibility for SAC membership and certification. Currently all Canadian programmes offer an optional thesis (and in some cases, this would be instead of writing comprehensive exams). Alternatively some programmes would require an extensive comparative literature review (Western University and the Université de Montréal), or a research project (Dalhousie University, Université d'Ottawa and the Université de Montréal).

Three Canadian universities offer a research master's degree that will

not lead to registration / licensure as a clinical or professional audiologist. These all require a thesis and are 24 months in length. The universities that offer such a degree are Western University, University of Alberta, and Université de Montréal. Throughout Canada, based on the most recent statistics, there are fewer than 10 candidates in this non-clinical category, and some of these students are studying some other aspect of rehabilitation sciences and not just audiology.

Clinical placements or externships are required of all Canadian programmes. Between in-house supervision and externships the students must have 350 hours of supervised clinical practicum for a student to graduate.

Of the reasons for difficulty in obtaining clinical externship placements, the three most commonly cited appear to be related to not enough placements for the student body, lack of funding for those placements away from where the student lives, and lack of fluency in both Canadian official languages depending on where the placement is. For the last year that there are statistics for all five Canadian programmes, there were 80 spots available across Canada and nearly 300 applications. The number of students accepted each year ranges from 13 (Dalhousie University) to 30 (Université de Montréal). This is certainly increasing throughout Canada as more and more young people become more aware of the field of audiology. An informal survey indicated that currently there are approximately 6-8 applicants for each student space.

Like all professional groups, in Canada and around the world, continuing education is a requirement for maintenance of one's certification. Again this varies from jurisdiction to jurisdiction but typically is about 15 continuing education credits each year

## FURTHER INFORMATION

A 2010 survey, performed by SAC of all five professional and clinical audiology programmes in Canada can be found at [http://sac-oac.ca/sites/default/files/resources/university\\_survey\\_%202010\\_audiology\\_o.pdf](http://sac-oac.ca/sites/default/files/resources/university_survey_%202010_audiology_o.pdf).

### Canadian clinical and professional audiology training programmes (E: English; F: French)

Western University <http://www.uwo.ca/fhs/csd/> (E)

University of British Columbia <http://www.audiospeech.ubc.ca/> (E)

Dalhousie University <http://www.dal.ca/faculty/healthprofessions/human-communication-disorders.html> (E)

Université de Montréal <http://www.eoa.uMontréal.ca/> (F)

Université d'Ottawa <http://www.sante.uottawa.ca/esr/audio/index.htm> (F)

(or 45 over a three year period). These continuing education credits can be obtained from a wide array of activities ranging from conferences to journal clubs. Canadian Audiologist ([www.CanadianAudiologist.ca](http://www.CanadianAudiologist.ca)) is the official publication of the Canadian Academy of Audiology and lists an assortment of events that can assist in obtaining continuing education credits for audiologists. SAC also has a professional journal, CJSIPA, which can be accessed at <http://sac-oac.ca/professional-resources/canadian-journal-speech-language-pathology-and-audiology>. The link to SAC's professional development section is <http://sac-oac.ca/news-events/coming-events>.

#### Acknowledgements

I would like to acknowledge the valuable comments provided by representatives of both Speech-Language and Audiology Canada (SAC) and the Canadian Academy of Audiology ([www.CanadianAudiology.ca](http://www.CanadianAudiology.ca)). [www.sac-oac.ca](http://www.sac-oac.ca)

World Congress of Audiology  
September 2016, Vancouver Canada  
[www.WCA2016.ca](http://www.WCA2016.ca)



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**Declaration of competing interests**  
None declared.

## NEW ZEALAND

This year the New Zealand audiology profession and Auckland University celebrate 25 years of 'developing their own' audiologists. This article will provide an overview of hearing professionals in New Zealand, briefly chart the history of audiology training in New Zealand and then focus on current education and training programmes which make New Zealand trained audiologists so highly respected across the world.

#### Hearing professionals in New Zealand

There are primarily five groups of non-medical professionals working to improve the lives of hearing impaired New Zealanders: audiologists, audiometrists, hearing therapists, advisors on deaf children / resource teachers of the deaf. Although the latter three professions provide extremely valuable services, this article will focus on audiologist and audiometrist training and education. The majority of audiologists hold a postgraduate qualification in audiology (predominantly at the master's level), and work in both the private and public sector. Audiometrist qualifications and training backgrounds are more diverse and range from informal training, certificates, diplomas and undergraduate degrees in audiology. All formal audiometrist qualifications are



Professor Peter Thorne (fourth from the right) with the first MAud cohort, 1990.

obtained abroad and most audiometrists work in the private sector.

#### A historical glimpse at training

In 1973 an 'Audiology Scholarship' was set up by The Hearing Association and Department of Health which allowed two individuals to study in Australia for a year and complete a postgraduate diploma in audiology. The scholarship scheme expanded and continued until

1989, and then in 1990 the University of Auckland set up its own Master of Audiology training programme. In contrast to many other programmes across the world at this time, New Zealand took the stance that they wanted a two-year master's programme as the entry qualification into the profession. Dr Bill Keith, a key figure in setting up the audiology scholarship and the master's programme, believed that



Hands on clinical supervision at University of Canterbury.



The spectacular Southern Alps and lakes in New Zealand.

audiologists had to have experience of research if they were to become "critical consumers of science and life-long learners". Bill was very much influenced by the strong audiology research community in North America where he completed his PhD and quotes the mantra of James Jerger, "no research, no profession".

The decision to promote graduate entry into the profession resulted in few resources being put into training and upskilling of those who were already working in the field but had no formal qualifications. Technicians, who later became known as audiometrists were either trained on the job, accessed short intensive workshops or completed what is now known as the TAFE Diploma of Hearing Device Prescription and Evaluation, run through Western Sydney Institute in Australia.

#### Current training

Today a fully qualified audiologist is required to complete a New Zealand Audiological Society (NZAS)-endorsed two year Master of Audiology, run by the University of Auckland and the University of Canterbury, plus a Certificate of Clinical Competence (CCC),

which the NZAS manages. NZAS is the national body that "governs, advocates, regulates and ensures high professional standards in audiology".

The two master's programmes include 80 weeks of academic work plus a minimum of 250 hours of 'direct contact' clinical training. Both programmes integrate theory with practice, with students completing campus-based practical classes and clinical placements whilst learning the theory. Both programmes offer diverse clinical placements with students experiencing both public and private audiology practices. In addition students get exposure to more specialised areas of work including the assessment of auditory processing disorders, tinnitus assessment and rehabilitation and cochlear implantation.

The University of Auckland Programme Director, Dr David Welch says their programme aims to develop professionals who are "self-motivated, who will practise audiology from their own understanding, can adapt to changes in the environment, and can pursue their own goals in the diagnostic approaches they take, the treatment of patients, or audiological research".

## "Master level study develops critical consumers of science and life-long learners."



Associate Professor Greg O'Beirne, the Programme Director for the University of Canterbury programme believes one of their programme's strengths is that it develops clinically able students who are able to hit the ground running upon entering the workforce. A recent programme restructure sees greater alignment with Australian Master of Audiology programmes and completion of the theoretical curriculum in the first year rather than being spread over two. The rationale for this was to ensure greater alignment of theory to practise and to free up the second year so students could focus on their research thesis and consolidate their clinical skills prior to entering the workforce.

The Certificate of Clinical Competence



Lecturers and graduates celebrate 25 years of the University of Auckland MAud programme.



## "A rigorous system for continuing education and peer review processes is crucial to ensure clinical proficiency and life-long learners."

takes at a minimum 11 months and most candidates complete it whilst in employment. There have been significant changes to the CCC process over the last 25 years with the most recent changes seeing the final assessment move from a workplace 'real client' series of assessments to short objective structure clinical exams (OSCEs). The impetus for this change was to improve consistency and provide a more robust assessment process.

Once the CCC programme has been successfully completed audiologists can become full members of NZAS. In order to maintain their membership they must abide by the constitution and code of ethics. One aspect of this is to ensure clinical proficiency is maintained

through continuing education and regular peer reviews. This is a well-managed and rigorous system which helps ensure proficient life-long learners and keeps New Zealand audiology at the top of its game.

Until this year New Zealand did not have any recognised training and education processes in place to support audiometrists. The move to accept suitably qualified audiometrists into NZAS has seen the development of a 'bridging programme', which is currently run by the University of Auckland. This programme has been designed to ensure all NZAS audiometrist members have the knowledge and skills to meet the requirements of the Audiometrist Scope of Practice.

### Acknowledgements

I would like to thank Dr Bill Keith, Professor Suzanne Purdy and Professor Greg O'Beirne for their comments and input into the article.

### SUMMARY

A two year Master of Audiology degree plus a Certificate of Clinical Competence is the recognised route of entry in order to become an NZAS audiologist. NZAS's move to govern audiometrists and provide an educational framework to ensure consistency of knowledge and skills is positive both for the profession and hearing impaired public.

## Further information

New Zealand Audiological Society  
<http://www.audiology.org.nz/about-nzas.aspx>

University of Auckland Audiology  
<https://www.fmhs.auckland.ac.nz/en/soph/about/our-departments/audiology.html>

University of Canterbury The Master of Audiology Degree <http://www.cmds.canterbury.ac.nz/courses/maud.shtml>



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**Declaration of competing interests**  
None declared.

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