



# SCOPE OF PRACTICE FOR AUDIOLOGISTS AND AUDIOMETRISTS

Audiology Australia (AudA)
Australian College of Audiology (AC*Aud*)
Hearing Aid Audiometrist Society of Australia (HAASA)

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# **Executive Summary**

The Scope of Practice for audiologists and audiometrists (the Scope of Practice) was developed through a collaboration between the three Practitioner Professional Bodies (PPBs); Audiology Australia, the Australian College of Audiology (ACAud) and the Hearing Aid Audiometrist Society of Australia (HAASA). The Scope of Practice Project Group (the Project Group) was established to facilitate the development of the Scope of Practice for audiologists and audiometrists. The Project Group consisted of two members from each of the three PPBs.

Members of the three PPBs contributed to the development of the Scope of Practice by providing their personal experience and opinion of the tasks that they and their audiologist and audiometrist colleagues currently undertake in clinical practice in Australia. A modified Delphi technique was used to enable the PPB members to provide structured feedback which could then be compiled and analysed by the Project Group.

The Scope of Practice for audiologists and audiometrists provides an overview of the services that may be offered by appropriately qualified and experienced audiologists and audiometrists in Australia. That is, it provides an overview of the scope of practice of the *professions* of audiology and audiometry. In summary:

Audiologists in Australia work with clients of all ages – from infants to older adults – and clients with complex needs. They can assess hearing and auditory function, vestibular (balance) function, tinnitus, auditory processing function, and neural function. Audiologists can do this by performing diagnostic tests, including advanced tests using electrophysiological methods. Audiologists provide aural, vestibular(balance) and tinnitus (re)habilitation as well as communication training. They can provide a range of (re)habilitation services including counselling and the prescription and fitting of devices/aids (e.g. bone conduction aids; earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; hearing aids; and Hearing assistive technology). Audiologists have knowledge of implantable devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids) and collaborate with other professionals in their applications in (re)habilitation.

**Audiometrists in Australia** primarily work with adult clients (including older adults) and provide a range of services to school-aged children. They focus on hearing and auditory function assessment and (re)habilitation. Audiometrists achieve this by applying a range of diagnostic tests and rehabilitation approaches including counselling and the prescription and fitting of non-implantable devices/aids (e.g. bone conduction aids; earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; hearing aids; and Hearing assistive technology). Audiometrists may also provide rehabilitation for tinnitus using education and hearing aids.

The Scope of Practice **cannot** be used to define, regulate or restrict the scope of an individual's practice. These regulatory aims are instead achieved via a suite of other relevant policies and by-laws that Audiology Australia, AC*Aud* and HAASA members must adhere to.

It is the responsibility of the individual to be aware of, and only engage in, those aspects of the Scope of Practice that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves. A Decision Tool to aid individuals when determining the scope of their own practice is made available in Appendix 2.

#### **Definitions**

**Audiologists** are those individuals who have met the relevant membership and clinical competency requirements for audiologists set by the Australian Practitioner Professional Bodies. This means that audiologists are:

- Full members of Audiology Australia with a Certificate of Clinical Practice (CCP), and/or
- Full/Ordinary members of the Australian College of Audiology (ACAud) with Hearing Rehabilitation Specialist (HRS) and Diagnostic Rehabilitation Specialist (DRS) competencies.

Audiologists must have completed at least the equivalent of an Australian university Masters-level degree in clinical audiology.

**Audiology Australia (AudA)** One of the three Practitioner Professional Bodies. Audiology Australia represents audiologists.

**Audiometrists** are those individuals who have met the relevant membership and clinical competency requirements for audiometrists set by the Australian Practitioner Professional Bodies. This means that audiometrists are:

- Full/Ordinary members of ACAud with a Hearing Rehabilitation Specialist (HRS) competency, and/or
- Full members of HAASA.

Audiometrists must have undertaken at least the equivalent of an Australian Diploma-level Technical and Further Education (TAFE) vocational qualification in audiometry or a Bachelor of Audiometry from an Australian university.

**Australian College of Audiology (AC***Aud***)** One of the three Practitioner Professional Bodies. AC*Aud* represents audiologists and audiometrists.

Clients with complex needs (not necessarily relating to hearing threshold levels) are defined as having:

- Non-audiological co-morbidities that prevent the standard age-appropriate procedures from being performed, or
- Audiological conditions that prevent the standard age-appropriate procedures from being performed.

**Code of Conduct-** The Code of Conduct for members of Audiology Australia, AC*Aud* and HAASA which was enacted on the 1<sup>st</sup> of July 2016.

**Extended scope of practice-** In certain settings and contexts it may be that audiologists and audiometrists perform tasks beyond those described in this Scope of Practice for audiologists and audiometrists. It is the responsibility of the individual to be aware of, and only engage in, those aspects of the Scope of Practice that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves. The decision tool provided in Appendix 2 can aid audiologists and audiometrists in extending the scope of their own practice safely and ethically.

Has knowledge of- The items in the 'Foundations of audiology' sections in the Scope of Practice refer to this phrase. In this context it means that individuals of the profession have theoretical knowledge of this aspect of audiology and would be able to recognise clients presenting with associated diagnoses/needs and be able to refer them to the appropriate clinical professional if clinically indicated.

**Hearing Aid Audiometrist Society of Australia (HAASA)** One of the three Practitioner Professional Bodies. HAASA represents audiometrists.

**Infants and young children** are defined as being from birth to pre-kindergarten age (i.e. two to four years). The definition of this age group has intentionally been left as an age bracket rather than a specific age. This is because it aims to capture a series of developmental stages where it is appropriate to use certain tests and different children may reach these stages at different ages.

#### Practitioner Professional Body (PPB) An Australian professional body that:

- Advocates for the professions of audiology and/or audiometry;
- Has membership and clinical certification requirements that include minimum education thresholds for audiologists and/or audiometrists;
- · Has a code of conduct that members must adhere to; and
- Requires that members continue their professional development and provides a program to enable members to meet this requirement.

There are currently three PPBs in Australia: Audiology Australia, ACAud and HAASA.

**School-aged children** are defined as being from kindergarten age (i.e. three to five years old) to the end of secondary school (i.e. from 16 to 18 years old). The definition of this age group has intentionally been left as an age bracket rather than a specific age. This is because it aims to capture a series of developmental stages where it is appropriate to use certain tests and different children may reach these stages at different ages.

Scope of Practice for audiologists and audiometrists aims to provide an overview of the services that may be offered by appropriately qualified and experienced audiologists and audiometrists in Australia. That is, it provides an overview of the scope of practice of the professions of audiology and audiometry.

**Scope of practice for an individual** The scope of an individual audiologist's or audiometrist's practice may be more narrowly defined than the Scope of Practice for their profession. It is the responsibility of the individual to be aware of, and only engage in, those aspects of the Scope of Practice that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves.

**Understands and can apply in practice-** The items in the 'Foundations of audiology' sections in the Scope of Practice refer to this phrase. In this context it means that individuals of the profession not only have knowledge of this aspect of audiology but also possesses the deep understanding needed to apply this knowledge in clinical practice in order to meet the client's needs through prevention, identification, diagnosis, rehabilitation and advocacy.

# **Background**

## How was the Scope of Practice developed?

The Scope of Practice for audiologists and audiometrists (the Scope of Practice) was developed through a collaboration between the three Practitioner Professional Bodies (PPBs); Audiology Australia, the Australian College of Audiology (ACAud) and the Hearing Aid Audiometrist Society of Australia (HAASA). The Scope of Practice Project Group (the Project Group) was established to facilitate the development of the Scope of Practice for audiologists and audiometrists. The Project Group consisted of two members from each of the three PPBs.

Members of the three PPBs contributed to the development of the Scope of Practice by providing their personal experience, and opinion, of the tasks that they and their audiologist and audiometrist colleagues currently undertake in clinical practice in Australia. A modified Delphi technique<sup>1</sup> was used to enable the PPB members to provide structured feedback which could then be compiled and analysed by the Project Group. More information on how the Delphi technique was used to develop the Scope of Practice can be found in Appendix 1.

#### How can the Scope of Practice be used?

The Scope of Practice for audiologists and audiometrists aims to provide an overview of the full range of services that may be offered by appropriately qualified and experienced audiologists and audiometrists in Australia. That is, it provides an overview of the scope of practice of the *professions* of audiology and audiometry. The Scope of Practice advocates for audiologists and audiometrists by:

- Acting as an educational tool for clients and their families, members of the general public, and other health care professionals;
- Providing information to assist policy makers concerned with regulation, legislation and third party reimbursement; and
- Being a resource to current and potential members of Audiology Australia, ACAud and HAASA who wish to gain an overview of the tasks they may be expected to be able to safely and independently perform in clinical practice, dependent on their qualifications and clinical experience.

It is the responsibility of the individual to be aware of, and only engage in, those aspects of the Scope of Practice that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves.

The Scope of Practice describes the full range of tasks that can be performed by audiologists and audiometrists, given the current clinical and educational settings in Australia. However, in certain settings and contexts it may be that audiologists and audiometrists perform, or assist in, tasks beyond those described in this Scope of Practice (so called 'extended scope of practice'). Examples of such settings and contexts where extended scopes of practice may be more common include:

- In rural and remote settings;
- In emergency settings; and/or
- When performing tasks on behalf of another health professional, such as an Ear Nose and Throat surgeon (ENT).

<sup>&</sup>lt;sup>1</sup> Reid N. The Delphi technique, its contribution to the evaluation of professional practice. In: Professional Competence and Quality Assurance in the Caring Professions, Ed Roger Ellis. 1988: Chapman & Hall

#### How can I determine the scope of my own practice?

The scope of an individual audiologist or audiometrist's practice may be more narrowly defined than the Scope of Practice for their profession. It is the responsibility of the individual to be aware of, and only engage in, those aspects of the Scope of Practice that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves<sup>2</sup>.

A Decision Tool to aid individuals when determining the scope of their own practice is available in Appendix 2.

#### How can't the Scope of Practice be used?

The Scope of Practice is not intended to be applied to individual audiologists or audiometrists. The Scope of Practice therefore cannot:

- Provide an assurance that an individual audiologist or audiometrist has the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards, and does not pose any danger to the public or to themselves;
- Be used to restrict or determine the scope of an individual audiologist's or audiometrist's practice; or
- Be used to discipline an individual audiologist or audiometrist for performing tasks that they do not have the educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively.

These regulatory aims are instead achieved via a suite of other relevant policies and by-laws that Audiology Australia, AC*Aud* and HAASA members must adhere to. These include those outlining requirements regarding membership, internships, clinical certification, recognition of specific competencies, professional development, and recency and resumption of practice. Organisational, jurisdictional, and/or national guidelines, standards and regulations may further define the scope of an individual's practice.

The Code of Conduct for members of Audiology Australia, AC*Aud* and HAASA which was enacted on the 1<sup>st</sup> of July 2016 provides an additional tool in the suite of regulatory documents described above. In Standard 1.2f in the Code of Conduct, it is stated that members must be aware of, and only engage in, the area or areas of their profession that they have the appropriate educational qualifications, knowledge, skills and experience to practice lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves.

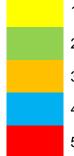
Furthermore, the three PPBs' continuing work with developing and improving the higher education programmes also contributes to ensuring that audiologists and audiometrists have the knowledge, skills and experience required to practice lawfully, safely and effectively. This includes the continuing work of:

- Audiology Australia in reviewing and accrediting Master's degrees in audiology;
- ACAud and HAASA in the development and implementation of the Bachelor of Audiometry at the University of New England; and
- ACAud and HAASA in contributing to the development and review of TAFE NSW participating colleges diplomas and certificates in audiometry.

<sup>&</sup>lt;sup>2</sup> As required by Standard 1.2f in the Code of Conduct for members of Audiology Australia, AC*Aud* and HAASA.

# Scope of Practice for audiologists and audiometrists

The sections from page 10 to 28 present the Scope of Practice Knowledge and Tasks lists for audiologists and audiometrists. These lists are divided into five different categories to reflect the different ages and needs of clients:



- 1. Overarching knowledge and tasks related to all client groups
- 2. Knowledge and tasks applicable to adults
- 3. Knowledge and tasks applicable to school-aged children
- 4. Knowledge and tasks applicable to **infants and young children**
- 5. Knowledge and tasks applicable to clients with complex needs

The columns on the left indicate with a tick mark whether the item is in scope for audiologists, audiometrists or both professions. The Scope of Practice for audiologists only can be found in Appendix 3, and the entire Scope of Practice for audiometrists only can be found in Appendix 4.

## Who are audiologists?

Audiologists are those individuals who have met the relevant membership and clinical competency requirements for audiologists set by the Australian Practitioner Professional Bodies. This means that audiologists are:

- Full members of Audiology Australia with a Certificate of Clinical Practice (CCP), and/or
- Full/Ordinary members of the Australian College of Audiology (ACAud) with Hearing Rehabilitation Specialist (HRS) and Diagnostic Rehabilitation Specialist (DRS) competencies.

Audiologists must have completed at least the equivalent of an Australian university Masters-level degree in clinical audiology.

#### Who are audiometrists?

Audiometrists are those individuals who have met the relevant membership and clinical competency requirements for audiometrists set by the Australian Practitioner Professional Bodies. This means that audiometrists are:

- Full/Ordinary members of ACAud with a Hearing Rehabilitation Specialist (HRS) competency, and/or
- Full members of HAASA.

Audiometrists must have undertaken at least the equivalent of an Australian Diploma-level Technical and Further Education (TAFE) vocational qualification in audiometry or a Bachelor of Audiometry from an Australian university.

## Summary of the Scope of Practice for audiologists and audiometrists

Audiologists in Australia work with clients of all ages – from infants to older adults – and clients with complex needs. They can assess hearing and auditory function, vestibular (balance) function, tinnitus, auditory processing function, and neural function. Audiologists can do this by performing diagnostic tests, including advanced tests using electrophysiological methods. Audiologists provide aural, vestibular(balance) and tinnitus (re)habilitation as well as communication training. They can provide a range of (re)habilitation services including counselling and the prescription and fitting of devices/aids (e.g. bone conduction aids; earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; hearing aids; and Hearing assistive technology). Audiologists have knowledge of implantable devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids) and collaborate with other professionals in their applications in (re)habilitation.

Audiometrists in Australia primarily work with adult clients (including older adults) and provide a range of services to school-aged children. They focus on hearing and auditory function assessment and (re)habilitation. Audiometrists achieve this by applying a range of diagnostic tests and rehabilitation approaches including counselling and the prescription and fitting of nonimplantable devices/aids (e.g. bone conduction aids; earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; hearing aids; and Hearing assistive technology). Audiometrists may also provide rehabilitation for tinnitus using education and hearing aids.

# ALL CLIENT GROUPS

# Overarching knowledge and tasks applicable to all client groups

Foundations of Audiology	Audiologist	Audiometris
Has knowledge of all the different individual scopes of practice across audiology services to the level required to be able to refer appropriately	✓	✓
Understands common ototoxic agents and mechanisms and can apply this knowledge in practice	✓	✓
Understands principles, methods and applications of acoustics as related to audiology and can apply this knowledge in practice	✓	✓
Understands principles, methods and applications of psychoacoustics as related to audiology and can apply this knowledge in practice	✓	✓
Understands principles of primary health care and the social determinants of health, including wellbeing and education, and can apply this knowledge in practice	✓	✓
Understands normal processes of communication and auditory behaviour over the lifespan and can apply this knowledge in practice	✓	✓
Understands basic epidemiological terms about hearing loss, tinnitus and other auditory-related disorders and can apply this knowledge in practice	✓	✓
Understands the potential effects of noise exposure on auditory mechanisms and the factors that contribute to noise-induced hearing loss and can apply this knowledge in practice	✓	✓
Understands the anatomy and physiology of the <b>peripheral auditory system</b> and can apply this knowledge in practice	✓	✓
Understands mechanisms of disease and injury of the <b>peripheral auditory system</b> and can apply this knowledge in practice	✓	✓
Understands the pathology and clinical course of common syndromes, diseases and injuries involving <b>the peripheral auditory system</b> and can apply this knowledge in practice	✓	✓
Has knowledge of the anatomy and physiology of the vestibular (balance) system	✓	✓
Understands the anatomy and physiology of the <b>vestibular (balance) system</b> and can apply this knowledge in practice	✓	
Has knowledge of mechanisms of disease and injury of the vestibular (balance) system	✓	✓
Understands mechanisms of disease and injury of the vestibular (balance) system and can apply this knowledge in practice	✓	
Has knowledge of the pathology and clinical course of common syndromes, diseases and injuries involving the vestibular (balance) system	✓	✓
Understands the pathology and clinical course of common syndromes, diseases and injuries involving the <b>vestibular (balance) system</b> and can apply this knowledge in practice	✓	
Has knowledge of the anatomy and physiology of the central auditory system	✓	✓
Understands the anatomy and physiology of the central auditory system and can apply this knowledge in practice	✓	
Has knowledge of the pathology and clinical course of common syndromes, diseases and injuries involving the <b>central auditory system</b>	✓	✓

	Audiologist	Audiometrist
Understands the pathology and clinical course of common syndromes, diseases and injuries involving the central auditory system and can apply this knowledge in practice	✓	
Maintains professional standards, including:  - Adhering to relevant codes of conduct and ethics for their profession;  - Meeting the requirements of their professional body(ies) regarding continuing education/professional development; and  - Working to relevant practice standards and guidelines.	<b>√</b>	✓
Prevention		
Employs strategies and procedures for the prevention of hearing loss and communication disorders in occupational and non-occupational settings	✓	✓
Promotes hearing wellness, as well as the prevention of hearing loss and protection of hearing function by designing, implementing, and coordinating occupational, school, and community hearing conservation and identification programs	✓	✓
Participates in noise measurements of the acoustic environment to improve accessibility and to promote hearing wellness	✓	✓
Diagnostic assessments		
Applies principles and methods in order to adhere to appropriate standards for calibration and maintenance of equipment and the testing environment	✓	✓
Has a theoretical knowledge of the clinical applications of medical imaging techniques such as (but not limited to) MRI, CAT & PET	✓	✓
Refers immediately (at the time of initial assessment) to an appropriate professional where clinically indicated	✓	✓
Re/habilitation		
Collaborates with other health professionals and the client regarding ongoing management of their hearing, balance and communication function	✓	✓
Involves clients and family members in decisions about management	✓	✓
Provides a high standard of patient-practitioner relationship	✓	✓
Provides appropriate ongoing after care for any device or service provided	✓	✓
Within their area of expertise, provides training for professionals of related and/or allied services when needed	✓	✓
Manages the selection, purchase, installation, and evaluation of large-area amplification systems	✓	✓
Advocacy/Consultation		
Within their area of clinical expertise, advocates for the communication needs of their clients, including for their rights and for funding of services	✓	✓
Advocates for issues (i.e., acoustic accessibility) that affect the rights of individuals with normal hearing	✓	✓
Consults with professionals of related and/or allied services when needed	✓	✓

	Audiologist	Audiometrist
Consults about accessibility for persons with hearing loss and other auditory dysfunction in public and private buildings, programs, and services	✓	✓
Within their area of clinical expertise, conducts interviews and assessments to a standard required to carry weight in a court of law, and recognises the medico-legal implications of any assessments	✓	✓
Within their area of clinical expertise, provides consultation to individuals, public and private agencies, and governmental bodies, or as an expert witness regarding legal interpretations of clinical assessments they have conducted	✓	✓
Within their area of clinical expertise, provides case management and services as a liaison for the client, family, and agencies in order to monitor audiological status and management and to make recommendations about educational and vocational programming	✓	✓
Within their area of clinical expertise, provides consultation to the industry on the development of products and instrumentation	✓	✓
Within their area of clinical expertise, provides consultation to educators as members of interdisciplinary teams about communication management, educational implications of hearing loss and other auditory dysfunction, educational programming, classroom acoustics, and large-area amplification systems for children with hearing loss and other auditory dysfunction	<b>√</b>	
Education/Research/Administration		
Measures functional outcomes, consumer satisfaction, efficacy, effectiveness, and efficiency of devices, practices and programs to maintain and improve the quality of audiological services	✓	✓
Understands the concept of evidence-based practice and applies it to clinical decision making	✓	✓
Participates in the development of professional and technical standards	✓	✓
Participates in quality improvement programs	✓	✓
Undertakes program administration and supervision of professionals as well as support personnel	✓	✓
Within their area of clinical expertise, provides education, supervision, and administration for audiology and/or audiometry graduates and other professional programs	✓	✓
Disseminates research findings to other professionals and to the public	✓	✓
Designs and conducts basic and applied audiological research to increase the knowledge base, to develop new methods and programs, and to determine the efficacy, effectiveness, and efficiency of assessment and treatment paradigms	✓	✓
Critically evaluates published research for scientific validity and clinical applicability		<b>√</b>

# Knowledge and tasks applicable to adult clients

Foundations of audiology	Audiologist	Audiometris
Understands risk factors for hearing loss in adults and can apply this knowledge in practice	<b>√</b>	✓
Has knowledge of communication function in adults and refers appropriately	✓	✓
Has knowledge of speech and language development throughout an adult's lifetime and can apply this in recommending referral to appropriate professionals	✓	
Identification/Screening		
In adults, undertakes activities to identify:		
Hearing impairment Tinnitus	✓	✓
Vestibular (balance) dysfunction  Dysfunction in other auditory-related systems (including those involved in cognition and processing)	<b>√</b>	
Provides accurate and appropriate recommendations to the adults regarding their screening results	✓	✓
Diagnostic assessments		
Interviews the adult client and their significant others to obtain an appropriate in-depth case history relevant to audiological and client needs	✓	✓
Appraises information from the adult client's client files to facilitate planning for audiological assessments	✓	✓
Assesses activity and participation in adults by selecting and interpreting appropriate self-report questionnaires and understands individual factors that may impact how a person experiences their impairment	✓	✓
Instructs the adult client in standard hearing test procedures and maintains their engagement throughout the test appointment	✓	✓
Selects a range of suitable diagnostic assessments for the adult client	✓	✓
Assesses and improves the test environment in order to make it more suitable for audiological assessment of the adult client	✓	✓
Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as their motivation	✓	✓
Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in adult client	✓	✓
Assesses hearing and auditory function in adults by the conduct and interpretation of selected tests, including:		
<ul> <li>- Air and bone conduction testing with appropriate masking;</li> <li>- Speech audiometry with appropriate masking;</li> <li>- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);</li> </ul>	✓	<b>√</b>
<ul> <li>- Auditory Brainstem Response (ABR);</li> <li>- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);</li> <li>- Electrocochleography (ECochG);</li> <li>- Middle latency potentials (such as Auditory Steady-State Response (ASSR));</li> <li>and/or</li> <li>- Otoacoustic Emmissions (OAEs).</li> </ul>	✓	

Assassas candidaev of adults for:	Audiologist	Audiometris
Assesses candidacy of adults for:  Bone conduction aids;		
Earplugs (custom noise/swim/musician plugs);		
FM and other remote sensing systems;	<b>√</b>	./
Hearing aids;	•	•
Hearing assistive technology; and		
Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully	,	
implantable hearing aids, bone anchored hearing aids)	✓	
Based on the needs of the adult client and their significant others, <b>recommends</b>		
solutions from a range of devices and services available, including:		
Bone conduction aids;		
Communication training;		
Earplugs (custom noise/swim/musician plugs);	✓	J
FM and other remote sensing systems;	•	•
Hearing aids;		
Hearing assistive technology; and/or		
Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully	✓	
implantable hearing aids, bone anchored hearing aids)		
Refers to relevant medical professional(s) if the possible need for implantable devices is	✓	./
clinically indicated for the adult client	V	V
Collaborates with medical professional(s) regarding the selection of and fitting of	,	
mplantable devices for adult clients	✓	
According to the adult client's needs, <b>prescribes and fits/provides</b> :		
Bone conduction aids;		
Earplugs (custom noise/swim/musician plugs);		
FM and other remote sensing systems;	$\checkmark$	$\checkmark$
Hearing aids; and/or		
Hearing assistive technology		
Takes ear canal impressions of adult clients to produce custom earmoulds or hearing	,	
aids of sufficient quality	✓	✓
Undertakes programming and maintenance of adult clients':		
FM and other remote sensing systems		
Hearing aids	✓	✓
Hearing assistive technology	•	•
Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing		
aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Provides rehabilitation and management for adult clients with tinnitus using, as		
appropriate, education and/or hearing aids (which may include tinnitus maskers and	✓	1
sound generators)	•	•
Provides rehabilitation and management for adult clients with severe or complex		
tinnitus using, as appropriate, behavioural management, counselling, and/or tinnitus	✓	
maskers and sound generators	v	
Provides vestibular (balance) rehabilitation therapy to adult clients	✓	
Provides auditory processing rehabilitation for adults	✓	
Provides <b>pre- and post-surgical counselling</b> to adult clients and their significant others	,	
following implant surgery (e.g. cochlear implants, middle ear implantable hearing aids,	✓	
ully implantable hearing aids, bone anchored hearing aids)		

# Knowledge and tasks applicable to school-aged children (from kindergarten until end of secondary school)

Foundations of audiology	Audiologist	Audiometris
Understands risk factors for hearing loss in school-aged children and can apply this knowledge in practice	✓	✓
Has knowledge of communication function in school-aged children and refers appropriately	✓	✓
Has knowledge of speech and language development throughout a child's lifetime and can apply this in recommending referral to appropriate professionals	✓	
Identification/Screening		
In school-aged children, undertakes activities to identify:		
Hearing impairment	✓	<b>√</b>
Tinnitus Vestibular (balance) dysfunction Dysfunction in other auditory-related systems (including those involved in cognition and processing)	✓	·
Provides accurate and appropriate recommendations to the school-aged child and/or their parents/caregivers regarding their screening results	✓	✓
Undertakes supervision, implementation, and follow-up of school hearing screening programmes	✓	✓
Diagnostic assessments		
Interviews the school-age child and their parents/caregivers to obtain an appropriate indepth case history relevant to audiological and client needs	✓	
Appraises information from the school-aged child's client files to facilitate planning for audiological assessments	✓	
Assesses activity and participation in school-aged children by selecting and interpreting appropriate self-report and/or parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment	<b>√</b>	
Instructs the school-aged child and their parents/caregivers in standard hearing test procedures and maintains the engagement of both the school-aged child and their parents/caregivers throughout the test appointment	<b>√</b>	✓
Selects a range of suitable diagnostic assessments for the school-aged child	✓	
Assesses and improves the test environment in order to make it more suitable for audiological assessment of the school-aged child	✓	✓
Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as developmental stage and motivation of the school-aged child	✓	
Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in school-aged children	✓	✓

	Audiologist	Audiometrist
Assesses hearing and auditory function in school-aged children by the conduct and interpretation of the most age and ability-appropriate diagnostic process, such as: - Air and bone conduction testing with appropriate masking when possible;	<b>√</b> ³	<b>√</b> <sup>4</sup>
<ul> <li>Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);</li> </ul>	<b>√</b>	<b>√</b>
<ul> <li>Appropriate speech perception tests;</li> <li>Auditory Brainstem Response (ABR);</li> <li>Behavioural observation audiometry (BOA) (using noisemakers);</li> <li>Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);</li> <li>Electrocochleography (ECochG);</li> <li>Middle latency potentials (such as Auditory Steady-State Response (ASSR));</li> <li>and/or</li> <li>Otoacoustic Emmissions (OAEs).</li> </ul>	✓	
Assesses tinnitus in school-aged children by the conduct and interpretation of processes including:  - Degree of residual inhibition (both total and partial);  - Information gathered regarding the client's perception and degree of distress;  - Masking (for both broad and narrow band stimuli); and/or  - Matching (including pitch and intensity matching).	<b>√</b>	
Assesses vestibular (balance) function in school-aged children by the conduct and interpretation of tests such as Electronystagmography (ENG)/Videonystagmography (VNG), Hallpike or equivalent test, Head Impulse Test, Rotational chair, and/or Vestibular evoked potentials	<b>√</b>	
Assesses neural function in school-aged children for differential diagnosis, pre- and post-operative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as Electromyography, Sensory and motor-evoked potentials; and/or Tests of nerve conduction velocity	<b>√</b>	
Assesses auditory processing function in school-aged children by the conduct and interpretation of tests such as Dichotic Digits Test, Frequency Pattern Test (temporal patterning), Gaps in Noise (temporal resolution), TONI 4 (IQ), Brain Train (attention tests), LiSN-S (Spatial listening)	✓	
Prepares an assessment report for the school-aged child and their parents/caregivers including:  - an interpretation of the data (including a consideration of the consistency of the findings from different tests);  - a summary of findings;  - recommendations (including the need for referral); and  - an audiological treatment/management plan.	<b>√</b>	
Habilitation		
Establishes a therapeutic relationship with the school-aged child and their parents/caregivers	✓	✓
Plans habilitation together with the school-aged children and their parents/caregivers, with consideration of:  - theories of aural habilitation;  - the effects of impairments on communication and their impact in terms of activity - limitations and participation restrictions;  - audiological and non-audiological factors that may influence habilitation;  - the psychological impact of hearing loss on the individual and their families; and - age-related conditions, including physical and cognitive, and how to modify delivery of habilitation program in light of these conditions.	✓	

These tests may be performed by methods such as play audiometry and/or Visual Reinforcement Audiometry (VRA)
 These tests may be performed by a method such as play audiometry

	Audiologist	Audiometri
Manages cerumen (ear wax) in school-aged children to prevent obstruction of the external ear canal and of amplification devices	✓	
n the context of habilitation of school-aged children, <b>understands the application and imitations</b> of:		
Earplugs (custom noise/swim/musician plugs);	✓	✓
Bone conduction aids; Communication training; FM and other remote sensing systems; Hearing aids; Hearing assistive technology; and Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Assesses candidacy of school-aged children for:		
Earplugs (custom noise/swim/musician plugs);	<b>√</b>	J
Bone conduction aids; FM and other remote sensing systems; and Hearing aids; Hearing assistive technology; Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Based on the needs of the school-aged child and their parents/caregivers, recommends solutions from a range of devices and services available, including:		
Earplugs (custom noise/swim/musician plugs);	<b>√</b>	J
Bone conduction aids; Communication training; FM and other remote sensing systems; Hearing aids; Hearing assistive technology; and/or Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the school-aged child	✓	<b>√</b>
Collaborates with medical professional(s) regarding the selection of and fitting of mplantable devices for school-aged children	✓	
According to the school-aged child's needs, prescribes and fits/provides:		
Earplugs (custom noise/swim/musician plugs);	✓	✓
Bone conduction aids; FM and other remote sensing systems; Hearing aids; and/or Hearing assistive technology	✓	
Takes ear canal impressions of school-aged children to produce custom earmoulds or nearing aids of sufficient quality	✓	✓
Undertakes programming and maintenance of school-aged children's:  FM and other remote sensing systems Hearing aids Hearing assistive technology Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Provides rehabilitation and management for school-aged children with tinnitus using, as appropriate, behavioural management, counselling, education, hearing aids, and/or tinnitus maskers and sound generators	<b>√</b>	

	Audiologist	Audiometrist
Provides vestibular (balance) rehabilitation therapy to school-aged children	✓	
Provides auditory processing habilitation for school-aged children	✓	
Provides <b>pre- and post-surgical counselling</b> to school-aged children and their parents/caregivers <b>following implant surgery</b> (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Provides communication training for school-aged children with hearing loss or other auditory dysfunction, including, as appropriate, analytical and synthetic training, communication strategies, and/or speechreading	✓	
Provides counselling to the school-aged child and their parents/caregivers relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence	✓	
Provides in-service programs for school personnel, and advising school districts in planning educational programs and accessibility for students with hearing loss and other auditory dysfunction	✓	
Develops an appropriate, audiological habilitative management plan for the school-aged child and their parents/caregivers including, when appropriate:  - Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the school-aged child  - Education of school-aged children and their parents/caregivers in the application, use and/or maintenance of devices and services  - Possible funding options for school-aged children  - Ensuring deep understanding of school-aged children's and their parents'/caregivers' expectations and motivation  - Need for counselling to school-aged children and their parents/caregivers relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence  - Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for school-aged children  - Evaluation and revision of the audiological management plan  - The need for other rehabilitation options such as counselling or speech and language habilitation for the school-aged child which may be provided by other allied health professionals or community services	✓	
Verifies habilitation intervention for the school-aged child via both objective and subjective means, including approaches such as:  Client input and preferences Electrophysiological aided evaluation Real Ear Measures using a validated prescription method Sound field aided assessment Speech Mapping Test Box Measures	<b>√</b>	
Validates habilitation intervention for the school-aged child via objective and subjective means, including approaches such as self-report and/or parental/caregiver questionnaires and speech testing	✓	

# Knowledge and tasks applicable to infants and young children (prekindergarten age)

Foundations of audiology	Audiologist	Audiometris
Has knowledge of risk factors for hearing loss in infants and young children	<b>√</b>	<b>√</b>
Understands risk factors for hearing loss in infants and young children and can apply this knowledge in practice	<b>√</b>	
Has knowledge of communication function in infants and young children and refers appropriately	✓	
Has knowledge of speech and language development in normal hearing infants and young children and can apply this in recommending referral to appropriate professionals	✓	
Identification/Screening		
In infants and young children, undertakes activities to identify:  Hearing impairment  Dysfunction in other auditory-related systems (including those involved in cognition and processing)	<b>√</b>	
Provides accurate and appropriate recommendations to parents/caregivers of infants and young children regarding their screening results	✓	
Undertakes supervision, implementation, and follow-up of newborn hearing screening programmes	<b>√</b>	
Diagnostic assessments		
Interviews the infant's or young child's parents/caregivers to obtain an appropriate indepth case history relevant to audiological and client needs	✓	
	,	
Appraises information from the infant's or young child's client files to facilitate planning for audiological assessments	✓	
	<b>√</b>	
for audiological assessments  Assesses activity and participation in infants and young children by selecting and interpreting appropriate parental/caregiver questionnaires and understands individual		
Assesses activity and participation in infants and young children by selecting and interpreting appropriate parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment  Instructs the infant's or young child's parents/caregivers in standard hearing test procedures and maintains the engagement of both the infant or young child and their	<b>√</b>	
Assesses activity and participation in infants and young children by selecting and interpreting appropriate parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment  Instructs the infant's or young child's parents/caregivers in standard hearing test procedures and maintains the engagement of both the infant or young child and their parents/caregivers throughout the test appointment	√ √	
Assesses activity and participation in infants and young children by selecting and interpreting appropriate parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment  Instructs the infant's or young child's parents/caregivers in standard hearing test procedures and maintains the engagement of both the infant or young child and their parents/caregivers throughout the test appointment  Selects a range of suitable diagnostic assessments for the infant or young child  Assesses and improves the test environment in order to make it more suitable for	√ √	

Assesses hearing and auditory function in infants and young children by the conduct and interpretation of the most age and ability-appropriate diagnostic process, such as:

- Air and bone conduction testing with appropriate masking when possible<sup>5</sup>;
- Auditory Brainstem Response (ABR);
- Behavioural observation audiometry (BOA) (using noisemakers);
- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);
- Electrocochleography (ECochG);
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);
- Middle latency potentials (such as Auditory Steady-State Response (ASSR)); and/or
- Otoacoustic Emmissions (OAEs).

Assesses neural function in infants and young children for differential diagnosis, pre- and post-operative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as sensory and motor-evoked potentials

Prepares an assessment report for the infant's or young child's parents/caregivers including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests);

- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### Habilitation

Establishes a therapeutic relationship with the infant or young child and their parents/caregivers

**√** 

Plans habilitation together with the infant's or young child's parents/caregivers, with consideration of:

- theories of aural habilitation;
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions;
- audiological and non-audiological factors that may influence habilitation;
- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of habilitation program in light of these conditions.

Manages cerumen (ear wax) in infants and young children to prevent obstruction of the external ear canal and of amplification devices

**√** 

In the context of habilitation of infants and young children, understands the application and limitations of:

Bone conduction aids:

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

<sup>&</sup>lt;sup>5</sup> These tests may be performed by methods such as Visual Reinforcement Audiometry (VRA)

	Audiologist	Audiometrist
Assesses candidacy of infants and young children for:  Bone conduction aids;  Earplugs (custom noise/swim/musician plugs);  FM and other remote sensing systems; and  Hearing aids;  Hearing assistive technology;  Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	<b>√</b>	
Based on the needs of the infant or young child and their parents/caregivers, recommends solutions from a range of devices and services available, including: Bone conduction aids; Communication training; Earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; Hearing aids; Hearing assistive technology; and/or Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	√	
Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the infant or young child	<b>√</b>	
Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for infants and young children	✓	
According to the infant's or young child's needs, prescribes and fits/provides:  Bone conduction aids;  Earplugs (custom noise/swim/musician plugs);  FM and other remote sensing systems;  Hearing aids; and/or  Hearing assistive technology	<b>√</b>	
Takes ear canal impressions of infants and young children to produce custom earmoulds or hearing aids of sufficient quality	✓	
Undertakes <b>programming and maintenance</b> of infants' and young children's:  FM and other remote sensing systems Hearing aids Hearing assistive technology Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	<b>√</b>	
Provides <b>pre- and post-surgical counselling</b> to parents/caregivers of infants and young children <b>following implant surgery</b> (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Provides communication training for infants and young children with hearing loss or other auditory dysfunction and/or their parents/caregivers, including, as appropriate, auditory-verbal training, communication strategies, and/or speechreading	<b>√</b>	
Provides counselling to the parents/caregivers of infants and young children relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence	<b>√</b>	
Provides appropriate audiological habilitation based on an understanding of the audiological and educational implications of Ottitis Media and other ear-related conditions in the general paediatric population and in high risk groups (e.g. Aboriginal & Torres Strait Islander children)	<b>√</b>	

Develops an appropriate, audiological habilitative management plan for the infant or young child and their parents/caregivers including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the infant or young
- Education of parents/caregivers of infants and young children in the application, use and/or maintenance of devices and services
- Possible funding options for infants and young children
- Ensuring deep understanding of parents'/caregivers' expectations and motivation
- Need for counselling to parents/caregivers of infants and young children relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for infants and young children
- Evaluation and revision of the audiological management plan
- The need for other rehabilitation options such as counselling or speech and language habilitation for the infant or young child which may be provided by other allied health professionals or community services

Verifies habilitation intervention for the infant or young child via both objective and subjective means, including approaches such as:

Parental/cargiver input and preferences

Electrophysiological aided evaluation

Real Ear Measures using a validated prescription method

Sound field aided assessment

Speech Mapping

**Test Box Measures** 



Validates habilitation intervention for the infant or young child via objective and subjective means, including approaches such as parental/caregiver questionnaires and receptive abilities

# **CLIENTS WITH COMPLEX NEEDS**

# Knowledge and tasks applicable to <u>clients with complex needs</u>

Clients with complex needs (not necessarily relating to hearing threshold levels) are defined as having:

- Non-audiological co-morbidities that prevent the standard age-appropriate procedures from being performed, or
- Audiological conditions that prevent the standard age-appropriate procedures from being performed.

Foundations of audiology	Audiologist	Audiometris
Has knowledge of risk factors for hearing loss in clients with complex needs	✓	<b>√</b>
Understands risk factors for hearing loss in clients with complex needs and can apply this knowledge in practice	✓	
Has knowledge of communication function in clients with complex needs and refers appropriately	✓	
Has knowledge of speech and language development throughout a client's lifetime and can apply this in recommending referral to appropriate professionals	✓	
Identification/Screening		
In clients with complex needs, undertakes activities to identify: Hearing impairment Tinnitus Vestibular (balance) dysfunction Dysfunction in other auditory-related systems (including those involved in cognition and processing)	<b>√</b>	
Provides accurate and appropriate recommendations to the clients with complex needs and/or their significant others/carers regarding their screening results	✓	
Diagnostic assessments		
Interviews the client with complex needs and/or their significant others/carers to obtain an appropriate in-depth case history relevant to audiological and client needs	<b>√</b>	
Appraises information from the client's files to facilitate planning for audiological assessments, taking into account their complex needs	✓	
Assesses activity and participation in clients with complex needs by selecting and interpreting appropriate self-report and/or significant other/carer questionnaires and understands individual factors that may impact how a person experiences their impairment	✓	
Instructs the client with complex needs and/or their significant others/carers in standard hearing test procedures and maintains the engagement of both the client and their significant others/carers throughout the test appointment	✓	
Selects a range of suitable diagnostic assessments for the client, while taking into account their complex needs	✓	

	Audiologist	Audiometris
Assesses and improves the test environment in order to make it more suitable for audiological assessment of the client, while taking into account their complex needs	✓	
Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as cognitive and physical ability	✓	
Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in clients with complex needs	✓	
Assesses hearing and auditory function in clients with complex needs by the conduct and interpretation of selected tests, including:  - Auditory Brainstem Response (ABR);  - Air and bone conduction testing with appropriate masking;  - Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);  - Electrocochleography (ECochG);  - Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);  - Middle latency potentials (such as Auditory Steady-State Response (ASSR));  - Otoacoustic Emmissions (OAEs); and/or  - Speech audiometry with appropriate masking.	<b>√</b>	
Assesses tinnitus in clients with complex needs by the conduct and interpretation of processes including:  - Degree of residual inhibition (both total and partial);  - Information gathered regarding the client's perception and degree of distress;  - Masking (for both broad and narrow band stimuli); and/or  - Matching (including pitch and intensity matching).	✓	
Assesses vestibular (balance) function in clients with complex needs by the conduct and interpretation of tests such as Electronystagmography (ENG)/Videonystagmography (VNG), Hallpike or equivalent test, Head Impulse Test, Rotational chair, and/or Vestibular evoked potentials	<b>√</b>	
Assesses cognitive function in clients with complex needs	✓	
Assesses neural function in clients with complex needs for differential diagnosis, pre- and post-operative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as Electromyography, Sensory and motor-evoked potentials; and/or Tests of nerve conduction velocity	<b>√</b>	
Assesses auditory processing function in clients with complex needs by the conduct and interpretation of tests such as Dichotic Digits Test, Frequency Pattern Test (temporal patterning), Gaps in Noise (temporal resolution), TONI 4 (IQ), Brain Train (attention tests), LiSN-S (Spatial listening)	<b>√</b>	
Prepares an assessment report for the client with complex needs and/or their significant others/carers including: - an interpretation of the data (including a consideration of the consistency of the findings from different tests); - a summary of findings; - recommendations (including the need for referral); and - an audiological treatment/management plan.	<b>√</b>	

(Re)habilitation	Audiologist	Audiometris
Establishes a therapeutic relationship with clients with complex needs and their significant others/carers	✓	
Plans (re)habilitation together with the client and their significant others/carers others, with consideration of their complex needs and:  - theories of aural (re)habilitation;  - the effects of impairments on communication and their impact in terms of activity - limitations and participation restrictions;  - audiological and non-audiological factors that may influence (re)habilitation;  - the psychological impact of hearing loss on the individual and their families; and - age-related conditions, including physical and cognitive, and how to modify delivery of (re)habilitation program in light of these conditions.	<b>√</b>	
Manages cerumen (ear wax) in clients with complex needs to prevent obstruction of the external ear canal and of amplification devices	✓	
In the context of (re)habilitation in clients with complex needs, understands the application and limitations of:  Bone conduction aids;  Communication training;  Earplugs (custom noise/swim/musician plugs);  FM and other remote sensing systems;  Hearing aids;  Hearing assistive technology; and  Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Assesses candidacy of clients with complex needs for:  Bone conduction aids; Earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; Hearing aids; Hearing assistive technology; and Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Based on the complex needs of the client and/or and their significant others/carers, recommends solutions from a range of devices and services available, including:  Bone conduction aids; Communication training; Earplugs (custom noise/swim/musician plugs); FM and other remote sensing systems; Hearing aids; Hearing assistive technology; and/or Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for clients with complex needs	✓	
Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for clients with complex needs	<b>√</b>	
According to the client's complex needs, <b>prescribes and fits/provides</b> :  Bone conduction aids;  Earplugs (custom noise/swim/musician plugs);  FM and other remote sensing systems;  Hearing aids; and/or  Hearing assistive technology	<b>√</b>	
Takes ear canal impressions of clients with complex needs to produce custom earmoulds or hearing aids of sufficient quality	<b>√</b>	

	Audiologist	Audiometrist
Undertakes <b>programming and maintenance</b> of clients with complex needs': FM and other remote sensing systems Hearing aids Hearing assistive technology Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	✓	
Provides <b>rehabilitation and management for tinnitus in clients with complex needs</b> using, as appropriate, behavioural management, counselling, education, hearing aids and/or tinnitus maskers and sound generators	✓	
Provides vestibular (balance) rehabilitation therapy to clients with complex needs	✓	
Provides auditory processing rehabilitation for clients with complex needs	✓	
Provides <b>pre- and post-surgical counselling</b> to clients with complex needs and their significant others/carers <b>following implant surgery</b> (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)	<b>√</b>	
Provides communication training for clients with complex needs and hearing loss or other auditory dysfunction, including, as appropriate:  Analytical and synthetic auditory training Communication strategies Speechreading	✓	
Provides counselling to clients with complex needs and their significant others/carers relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence	✓	
Develops an appropriate, audiological (re)habilitative management plan for the client with complex needs and their significant others/carers including, when appropriate:  - Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the client with complex needs  - Education of clients and/or their significant others/carers in the application, use and/or maintenance of devices and services, taking into account their complex needs  - Possible funding options for clients with complex needs  - Ensuring deep understanding of clients' and their significant others'/carers' expectations and motivation  - Need for counselling to clients with complex needs and their significant others/carers relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence  - Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for clients with complex needs  - Evaluation and revision of the audiological management plan  - The need for other (re)habilitation options such as counselling or speech and language rehabilitation for clients with complex needs which may be provided by other allied health professionals or community services	✓	
Verifies (re)habilitation intervention for the client with complex needs via both objective and subjective means, including approaches such as:  Client and/or significant other/carer input and preferences Electrophysiological aided evaluation Real Ear Measures using a validated prescription method Sound field aided assessment Speech Mapping Test Box Measures	<b>√</b>	
Validates (re)habilitation intervention for the client with complex needs via objective and subjective means, including approaches such as self-report and/or significant/other carer questionnaires and speech testing	✓	

# Appendix 1- How was the Delphi technique used to develop the Scope of Practice?

The Delphi technique was used to seek consensus among a group of experts (the Delphi panel) as to which items should be included in the Scope of Practice. This was done through a series of questionnaires where Delphi panel members were asked to give their opinion on which items should be included. They were also able to suggest additional items for inclusion in subsequent rounds of the Delphi process.

The list of items that was considered by the Delphi panel was compiled and modified to suit the Australian context by the Scope of Practice Project Group. The following documents from professional bodies in the U.S.A., New Zealand and Australia, as well as higher education degree/certificates/diploma accreditation agencies in Australia were used as a basis:

- American Academy of Audiology. Scope of Practice. 2004;
- Australian College of Audiology. By-Law 97-5: Professional Competency Standards for Hearing Care Professionals in Australia and Requirements for Recognition of Specific Competencies. 2015;
- American Speech-Language-Hearing Association. Scope of Practice in Audiology. 2004. Available from: www.asha.org/policy;
- Audiology Australia. Core knowledge and competencies required of Master of Audiology graduates in Australia. 2015;
- Audiology Australia. Knowledge and Skills Matrix for clinical interns. 2015;
- Australian Government. Training Guidelines for Certificate IV in Audiometry (HLT47415) and the Diploma of Audiometry (HLT57415). 2015;
- Hearing Aid Audiometrist Society of Australia. Rules: Standards of Practice. 2008; and
- New Zealand Audiological Society. Scope of Practice for Audiometrists. Auckland; 2015.

Delphi panel members were given the following information to assist them in filling in the questionnaires:

"When responding to this questionnaire, please think of the activities you and your audiologist and audiometrist colleagues currently undertake in clinical practice in Australia. One way to work through each item is to ask yourself:

#### Do I, or audiologist and/or any audiometrist colleagues I know of, perform this task in clinical practice in Australia?

If no, then this item is likely not to be within Scope of Practice for audiologists and/or audiometrists in Australia.

If yes, ask yourself:

Do I feel that it is acceptable that audiologists and/or audiometrists perform this task in Australia? (i.e. that at least some audiologists and/or audiometrists have the knowledge, skills and experience necessary to perform this task lawfully, safely and effectively, in a way that meets professional standards and does not pose any danger to the public or to themselves)

If yes, then this item is likely to be within Scope of Practice for audiologists and/or audiometrists in Australia.

You may believe that a particular task is currently, and should be, performed by audiologists and/or audiometrists but that specialised education and/or training is necessary in order to be able perform this task lawfully, safely and effectively. In this case, you should click "Within Scope of Practice" for the relevant profession(s) and then indicate the nature of the further education and/or training you feel is required in the comments field, as well as a motivation as to why you feel that further education and/or training is needed."

An important part of the process was that Delphi panel members were given individual (deidentified) feedback on the panel's responses from the previous round and the opportunity to adjust their response upon consideration of this information. The Delphi panel members remained anonymous; one of the core principles of the Delphi method. This is hoped to prevent the authority, personality, or reputation of some participants from dominating others in the process.

#### How were the Delphi panel members selected?

All members of Audiology Australia, ACAud and HAASA were invited to participate in the development of the Scope of Practice for audiologists and audiometrists by applying to become a Delphi panel member.

The selection process involved taking a random sample of 100 of the audiologists and audiometrists who applied to become a Delphi panel member. The Delphi panel comprised an equal number of audiologists and audiometrists with a broad range of qualifications, skillsets and clinical experience.

#### How were the Delphi panel's opinions incorporated into the final Scope of Practice document?

The Scope of Practice for audiologists and audiometrists should complement but not contradict existing course requirements, membership requirements, clinical certification requirements, and/or clinical practice standards.

Following the completion of the Delphi process, the Scope of Practice Project Group worked through the information received from the Delphi panel. This process involved considering whether or not it is legally, ethically and practicably appropriate for each item to be included in the Scope of Practice for audiologists and/or audiometrists. This work included consultation with higher education providers and accreditation agencies, as well as a consideration of all available documentation regarding the education, internship and professional development opportunities available to audiologists and audiometrists.

Once agreement was reached by the Scope of Practice Project Group as to the content and format of the Scope of Practice for audiologists and audiometrists, the document was forward to the PPBs for consideration. The Scope of Practice was approved by all three governing bodies of the PPBs on the 24th of August 2016.

# **Appendix 2- Decision Tool to aid individuals when** determining the scope of their own practice

The scope of an individual audiologist or audiometrist's practice may be more narrowly defined than the Scope of Practice for their profession. This Decision Tool presented on the following page provides a framework for audiologists and audiometrists when determining the scope of their own practice. It can also aid audiologists and audiometrists in extending the scope of their own practice safely and ethically. This tool is designed to facilitate self-reflection on the part of the individual clinician. It may also be used by individuals when determining and defining the scope of their own practice together with their employer. It has been adapted from the Dietitians Association of Australia (DAA) Dietitians Scope of Practice Framework 2015<sup>6</sup>.

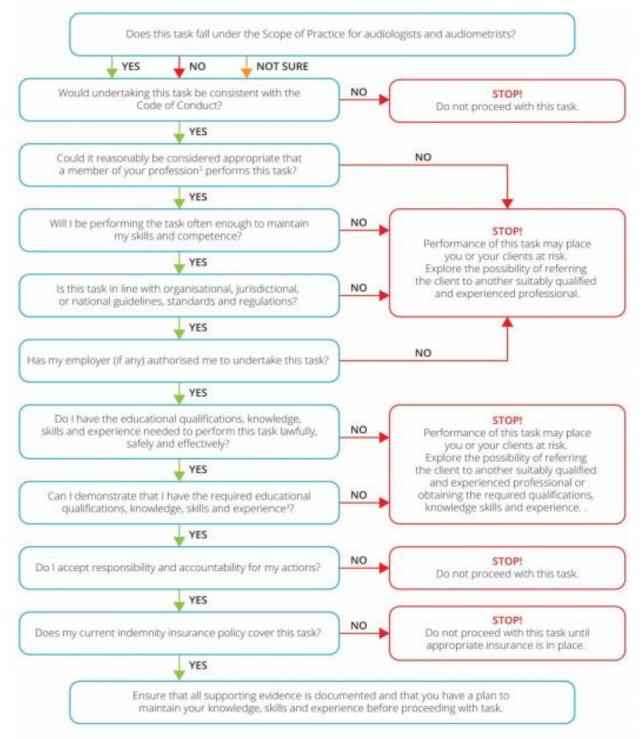
<sup>&</sup>lt;sup>6</sup> The DAA tool was adapted from O'Sullivan Maillet J, Skates J, Pritchett E. 2005. American Dietetic Association: Scope of Dietetic Practice Framework. J Am Diet Assoc; 105(4):634-40.

## Decision Tool to aid individuals when determining the scope of their own practice









The Code of Conduct for members of Audiology Australia, ACAud and HAASA which was enacted on the 1st of July 2016.

That is, an audiologist or audiometrist.

For example, through the possession of a relevant clinical accreditation (such as, Full member of Auda with CCP, a Full/ Ordinary membership with ACAud with HRS and/or DRS competency, Full membership with HAASA) and any relevant further education/training certificates.

# **Appendix 3- Scope of Practice for audiologists**

## Overarching knowledge and tasks applicable to all client groups

#### Foundations of Audiology

Has knowledge of all the different individual scopes of practice across audiology services to the level required to be able to refer appropriately

Understands common ototoxic agents and mechanisms and can apply this knowledge in practice

Understands principles, methods and applications of acoustics as related to audiology and can apply this knowledge in practice

Understands principles, methods and applications of psychoacoustics as related to audiology and can apply this knowledge in practice

Understands principles of primary health care and the social determinants of health, including wellbeing and education, and can apply this knowledge in practice

Understands normal processes of communication and auditory behaviour over the lifespan and can apply this knowledge in practice

Understands basic epidemiological terms about hearing loss, tinnitus and other auditory-related disorders and can apply this knowledge in practice

Understands the potential effects of noise exposure on auditory mechanisms and the factors that contribute to noise-induced hearing loss and can apply this knowledge in practice

Understands the anatomy and physiology of the **peripheral auditory system** and can apply this knowledge in practice

Understands mechanisms of disease and injury of the **peripheral auditory system** and can apply this knowledge in practice

Understands the pathology and clinical course of common syndromes, diseases and injuries involving **the peripheral auditory system** and can apply this knowledge in practice

Understands the anatomy and physiology of the **vestibular (balance) system** and can apply this knowledge in practice

Understands mechanisms of disease and injury of the **vestibular (balance) system** and can apply this knowledge in practice

*Understands* the pathology and clinical course of common syndromes, diseases and injuries involving the **vestibular (balance) system** *and can apply this knowledge in practice* 

*Understands* the anatomy and physiology of the **central auditory system** *and can apply this knowledge in practice* 

*Understands* the pathology and clinical course of common syndromes, diseases and injuries involving the **central auditory system** *and can apply this knowledge in practice* 

Maintains professional standards, including:

- Adhering to relevant codes of conduct and ethics for their profession;
- Meeting the requirements of their professional body(ies) regarding continuing education/professional development; and
- Working to relevant practice standards and guidelines.

#### Prevention

Employs strategies and procedures for the prevention of hearing loss and communication disorders in occupational and non-occupational settings

Promotes hearing wellness, as well as the prevention of hearing loss and protection of hearing function by designing, implementing, and coordinating occupational, school, and community hearing conservation and identification programs

Participates in noise measurements of the acoustic environment to improve accessibility and to promote hearing wellness

#### Diagnostic assessments

Applies principles and methods in order to adhere to appropriate standards for calibration and maintenance of equipment and the testing environment

Has a theoretical knowledge of the clinical applications of medical imaging techniques such as (but not limited to) MRI, CAT & PET

Refers immediately (at the time of initial assessment) to an appropriate professional where clinically indicated

#### (Re)habilitation

Collaborates with other health professionals and the client regarding ongoing management of their hearing, balance and communication function

Involves clients and family members in decisions about management

Provides a high standard of patient-practitioner relationship

Provides appropriate ongoing after care for any device or service provided

Within their area of expertise, provides training for professionals of related and/or allied services when needed

Manages the selection, purchase, installation, and evaluation of large-area amplification systems

#### Advocacy/Consultation

Within their area of clinical expertise, advocates for the communication needs of their clients, including for their rights and for funding of services

Advocates for issues (i.e., acoustic accessibility) that affect the rights of individuals with normal hearing

Consults with professionals of related and/or allied services when needed

Consults about accessibility for persons with hearing loss and other auditory dysfunction in public and private buildings, programs, and services

Within their area of clinical expertise, conducts interviews and assessments to a standard required to carry weight in a court of law, and recognises the medico-legal implications of any assessments

Within their area of clinical expertise, provides consultation to individuals, public and private agencies, and governmental bodies, or as an expert witness regarding legal interpretations of clinical assessments they have conducted

Within their area of clinical expertise, provides case management and services as a liaison for the client, family, and agencies in order to monitor audiological status and management and to make recommendations about educational and vocational programming

Within their area of clinical expertise, provides consultation to the industry on the development of products and instrumentation

Within their area of clinical expertise, provides consultation to educators as members of interdisciplinary teams about communication management, educational implications of hearing loss and other auditory dysfunction, educational programming, classroom acoustics, and large-area amplification systems for children with hearing loss and other auditory dysfunction

#### Education/Research/Administration

Measures functional outcomes, consumer satisfaction, efficacy, effectiveness, and efficiency of devices, practices and programs to maintain and improve the quality of audiological services

Understands the concept of evidence-based practice and applies it to clinical decision making

Participates in the development of professional and technical standards

Participates in quality improvement programs

Undertakes program administration and supervision of professionals as well as support personnel

Within their area of clinical expertise, provides education, supervision, and administration for audiology and/or audiometry graduates and other professional programs

Disseminates research findings to other professionals and to the public

Designs and conducts basic and applied audiological research to increase the knowledge base, to develop new methods and programs, and to determine the efficacy, effectiveness, and efficiency of assessment and treatment paradigms

Critically evaluates published research for scientific validity and clinical applicability

# Knowledge and tasks applicable to adult clients

#### Foundations of audiology

Understands risk factors for hearing loss in adults and can apply this knowledge in practice

Has knowledge of communication function in adults and refers appropriately

Has knowledge of speech and language development throughout an adult's lifetime and can apply this in recommending referral to appropriate professionals

#### Identification/Screening

In adults, undertakes activities to identify:

Hearing impairment

**Tinnitus** 

Vestibular (balance) dysfunction

Dysfunction in other auditory-related systems (including those involved in cognition and processing)

Provides accurate and appropriate recommendations to the adults regarding their screening results

#### Diagnostic assessments

Interviews the adult client and their significant others to obtain an appropriate in-depth case history relevant to audiological and client needs

Appraises information from the adult client's client files to facilitate planning for audiological assessments

Assesses activity and participation in adults by selecting and interpreting appropriate self-report questionnaires and understands individual factors that may impact how a person experiences their impairment

Instructs the adult client in standard hearing test procedures and maintains their engagement throughout the test appointment

Selects a range of suitable diagnostic assessments for the adult client

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the adult client

Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as their motivation

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in adult client

Assesses hearing and auditory function in adults by the conduct and interpretation of selected tests, including:

- Air and bone conduction testing with appropriate masking:
- Speech audiometry with appropriate masking:
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex
- Auditory Brainstem Response (ABR);
- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);
- Electrocochleography (ECochG);
- Middle latency potentials (such as Auditory Steady-State Response (ASSR)); and/or
- Otoacoustic Emmissions (OAEs).

Assesses tinnitus in adults by the conduct and interpretation of processes including:

- Degree of residual inhibition (both total and partial);
- Information gathered regarding the client's perception and degree of distress;
- Masking (for both broad and narrow band stimuli); and/or
- Matching (including pitch and intensity matching).

Assesses vestibular (balance) function in adults by the conduct and interpretation of tests such as Electronystagmography (ENG)/Videonystagmography (VNG), Hallpike or equivalent test, Head Impulse Test, Rotational chair, and/or Vestibular evoked potentials

Assesses neural function in adults for differential diagnosis, pre- and post-operative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as Electromyography, Sensory and motor-evoked potentials; and/or Tests of nerve conduction velocity

Assesses auditory processing function in adults by the conduct and interpretation of tests such as Dichotic Digits Test, Frequency Pattern Test (temporal patterning), Gaps in Noise (temporal resolution), TONI 4 (IQ), Brain Train (attention tests), LiSN-S (Spatial listening)

Prepares an assessment report for the adult client including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests):
- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### Rehabilitation

Establishes a therapeutic relationship with adult client and their significant others

Plans rehabilitation together with the adult client and their significant others, with consideration of:

- theories of aural rehabilitation;
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions;
- audiological and non-audiological factors that may influence rehabilitation;
- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of rehabilitation program in light of these conditions.

Manages cerumen (ear wax) in adult clients to prevent obstruction of the external ear canal and of amplification devices

In the context of rehabilitation in adults, understands the application and limitations of:

Bone conduction aids:

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids:

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Assesses candidacy of adults for:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Based on the needs of the adult client and their significant others, recommends solutions from a range of devices and services available, including:

Bone conduction aids;

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and/or

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the adult client

Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for adult clients

According to the adult client's needs, prescribes and fits/provides:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs):

FM and other remote sensing systems:

Hearing aids: and/or

Hearing assistive technology

Takes ear canal impressions of adult clients to produce custom earmoulds or hearing aids of sufficient quality

Undertakes programming and maintenance of adult clients':

FM and other remote sensing systems

Hearing aids

Hearing assistive technology

Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides rehabilitation and management for adult clients with tinnitus (including complex cases of tinnitus) using, as appropriate, behavioural management, counselling, education, hearing aids, and/or tinnitus maskers and sound generators

Provides vestibular (balance) rehabilitation therapy to adult clients

Provides auditory processing rehabilitation for adults

Provides pre- and post-surgical counselling to adult clients and their significant others following implant surgery (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides communication training for adults with hearing loss or other auditory dysfunction, including, as appropriate:

Communication strategies

Speechreading

Analytical and synthetic auditory training

Provides counselling to the adults clients and their significant others relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence

Develops an appropriate, audiological rehabilitative management plan for the adult client and their significant others including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the adult client
- Education of adult clients in the application, use and/or maintenance of devices and services
- Possible funding options for adult clients
- Ensuring deep understanding of adult clients' and their significant others' expectations and motivation
- Need for counselling to adult clients and their significant others relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for adult clients
- Evaluation and revision of the audiological management plan
- The need for other rehabilitation options such as counselling or speech and language rehabilitation for the adult client which may be provided by other allied health professionals or community services

Verifies rehabilitation intervention for the adult client via both objective and subjective means, including approaches such as:

Client input and preferences

Real Ear Measures using a validated prescription method Sound field aided assessment Speech Mapping Test Box Measures Electrophysiological aided evaluation

Validates rehabilitation intervention for the adult client via objective and subjective means, including approaches such as self-report questionnaires and speech testing

# Knowledge and tasks applicable to school-aged children (from kindergarten until end of secondary school)

#### Foundations of audiology

Understands risk factors for hearing loss in school-aged children and can apply this knowledge in practice

Has knowledge of communication function in school-aged children and refers appropriately

Has knowledge of speech and language development throughout a child's lifetime and can apply this in recommending referral to appropriate professionals

#### Identification/Screening

In school-aged children, undertakes activities to identify:

Hearing impairment

**Tinnitus** 

Vestibular (balance) dysfunction

Dysfunction in other auditory-related systems (including those involved in cognition and processing)

Provides accurate and appropriate recommendations to the school-aged child and/or their parents/caregivers regarding their screening results

Undertakes supervision, implementation, and follow-up of school hearing screening programmes

#### Diagnostic assessments

Interviews the school-age child and their parents/caregivers to obtain an appropriate in-depth case history relevant to audiological and client needs

Appraises information from the school-aged child's client files to facilitate planning for audiological assessments

Assesses activity and participation in school-aged children by selecting and interpreting appropriate self-report and/or parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment

Instructs the school-aged child and their parents/caregivers in standard hearing test procedures and maintains the engagement of both the school-aged child and their parents/caregivers throughout the test appointment

Selects a range of suitable diagnostic assessments for the school-aged child

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the school-aged child

Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as developmental stage and motivation of the school-aged child

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in school-aged children

**Assesses hearing and auditory function in school-aged children** by the conduct and interpretation of the most age and ability-appropriate diagnostic process, such as:

- Air and bone conduction testing with appropriate masking when possible;
- Appropriate speech perception tests;
- Auditory Brainstem Response (ABR);
- Behavioural observation audiometry (BOA) (using noisemakers);
- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);
- Electrocochleography (ECochG);
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);
- Middle latency potentials (such as Auditory Steady-State Response (ASSR)); and/or
- Otoacoustic Emmissions (OAEs).

**Assesses tinnitus in school-aged children** by the conduct and interpretation of processes including:

- Degree of residual inhibition (both total and partial);
- Information gathered regarding the client's perception and degree of distress;
- Masking (for both broad and narrow band stimuli); and/or
- Matching (including pitch and intensity matching).

Assesses vestibular (balance) function in school-aged children by the conduct and interpretation of tests such as Electronystagmography (ENG)/Videonystagmography (VNG), Hallpike or equivalent test, Head Impulse Test, Rotational chair, and/or Vestibular evoked potentials

Assesses neural function in school-aged children for differential diagnosis, pre- and post-operative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as Electromyography, Sensory and motor-evoked potentials; and/or Tests of nerve conduction velocity

Assesses auditory processing function in school-aged children by the conduct and interpretation of tests such as Dichotic Digits Test, Frequency Pattern Test (temporal patterning), Gaps in Noise (temporal resolution), TONI 4 (IQ), Brain Train (attention tests), LiSN-S (Spatial listening)

Prepares an assessment report for the school-aged child and their parents/caregivers including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests):
- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### Habilitation

Establishes a therapeutic relationship with the school-aged child and their parents/caregivers

Plans habilitation together with the school-aged children and their parents/caregivers, with consideration

- theories of aural habilitation;
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions:
- audiological and non-audiological factors that may influence habilitation;
- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of habilitation program in light of these conditions.

Manages cerumen (ear wax) in school-aged children to prevent obstruction of the external ear canal and of amplification devices

In the context of habilitation of school-aged children, understands the application and limitations of:

Bone conduction aids;

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Assesses candidacy of school-aged children for:

Bone conduction aids;

Earplugs (custom noise/swim/musician plugs):

FM and other remote sensing systems; and

Hearing aids;

Hearing assistive technology;

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Based on the needs of the school-aged child and their parents/caregivers, recommends solutions from a range of devices and services available, including:

Bone conduction aids:

Communication training;

FM and other remote sensing systems;

Earplugs (custom noise/swim/musician plugs);

Hearing aids;

Hearing assistive technology; and/or

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the school-aged child

Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for school-aged children

According to the school-aged child's needs, prescribes and fits/provides:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems:

Hearing aids; and/or

Hearing assistive technology

Takes ear canal impressions of school-aged children to produce custom earmoulds or hearing aids of sufficient quality

Undertakes programming and maintenance of school-aged children's:

FM and other remote sensing systems

Hearing aids

Hearing assistive technology

Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides rehabilitation and management for school-aged children with tinnitus using, as appropriate, behavioural management, counselling, education, hearing aids, and/or tinnitus maskers and sound generators

Provides vestibular (balance) rehabilitation therapy to school-aged children

Provides auditory processing habilitation for school-aged children

Provides pre- and post-surgical counselling to school-aged children and their parents/caregivers following implant surgery (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides communication training for school-aged children with hearing loss or other auditory dysfunction, including, as appropriate, analytical and synthetic training, communication strategies, and/or speechreading

Provides counselling to the school-aged child and their parents/caregivers relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence

Provides in-service programs for school personnel, and advising school districts in planning educational programs and accessibility for students with hearing loss and other auditory dysfunction

Develops an appropriate, audiological habilitative management plan for the school-aged child and their parents/caregivers including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the school-aged child
- Education of school-aged children and their parents/caregivers in the application, use and/or maintenance of devices and services
- Possible funding options for school-aged children
- Ensuring deep understanding of school-aged children's and their parents'/caregivers' expectations and motivation
- Need for counselling to school-aged children and their parents/caregivers relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for school-aged children

- Evaluation and revision of the audiological management plan
- The need for other rehabilitation options such as counselling or speech and language habilitation for the school-aged child which may be provided by other allied health professionals or community services

Verifies habilitation intervention for the school-aged child via both objective and subjective means, including approaches such as:

Client input and preferences

Electrophysiological aided evaluation

Real Ear Measures using a validated prescription method

Sound field aided assessment

Speech Mapping

Test Box Measures

Validates habilitation intervention for the school-aged child via objective and subjective means, including approaches such as self-report and/or parental/caregiver questionnaires and speech testing

# Knowledge and tasks applicable to infants and young children (prekindergarten age)

#### Foundations of audiology

Understands risk factors for hearing loss in infants and young children and can apply this knowledge in practice

Has knowledge of communication function in infants and young children and refers appropriately

Has knowledge of speech and language development in normal hearing infants and young children and can apply this in recommending referral to appropriate professionals

#### Identification/Screening

In infants and young children, undertakes activities to identify:

Hearing impairment

Dysfunction in other auditory-related systems (including those involved in cognition and processing)

Provides accurate and appropriate recommendations to parents/caregivers of infants and young children regarding their screening results

Undertakes supervision, implementation, and follow-up of newborn hearing screening programmes

#### Diagnostic assessments

Interviews the infant's or young child's parents/caregivers to obtain an appropriate in-depth case history relevant to audiological and client needs

Appraises information from the infant's or young child's client files to facilitate planning for audiological assessments

Assesses activity and participation in infants and young children by selecting and interpreting appropriate parental/caregiver questionnaires and understands individual factors that may impact how a person experiences their impairment

Instructs the infant's or young child's parents/caregivers in standard hearing test procedures and maintains the engagement of both the infant or young child and their parents/caregivers throughout the test appointment

Selects a range of suitable diagnostic assessments for the infant or young child

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the infant or young child

Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as developmental stage, motivation and intellectual ability of the infant or young child

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in infants and young children

Assesses hearing and auditory function in infants and young children by the conduct and interpretation of the most age and ability-appropriate diagnostic process, such as:

- Air and bone conduction testing with appropriate masking when possible<sup>7</sup>;
- Auditory Brainstem Response (ABR);
- Behavioural observation audiometry (BOA) (using noisemakers);
- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);
- Electrocochleography (ECochG);
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);
- Middle latency potentials (such as Auditory Steady-State Response (ASSR)); and/or
- Otoacoustic Emmissions (OAEs).

<sup>&</sup>lt;sup>7</sup> These tests may be performed by methods such as Visual Reinforcement Audiometry (VRA)

Assesses neural function in infants and young children for differential diagnosis, pre- and postoperative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as sensory and motor-evoked potentials

Prepares an assessment report for the infant's or young child's parents/caregivers including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests);
- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### Habilitation

#### Establishes a therapeutic relationship with the infant or young child and their parents/caregivers

Plans habilitation together with the infant's or young child's parents/caregivers, with consideration of:

- theories of aural habilitation;
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions;
- audiological and non-audiological factors that may influence habilitation;
- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of habilitation program in light of these conditions.

Manages cerumen (ear wax) in infants and young children to prevent obstruction of the external ear canal and of amplification devices

In the context of habilitation of infants and young children, understands the application and limitations of:

Bone conduction aids:

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids:

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Assesses candidacy of infants and young children for:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs):

FM and other remote sensing systems; and

Hearing aids:

Hearing assistive technology:

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Based on the needs of the infant or young child and their parents/caregivers, recommends solutions from a range of devices and services available, including:

Bone conduction aids:

Communication training:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and/or

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the infant or young child

Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for infants and young children

According to the infant's or young child's needs, prescribes and fits/provides:

Bone conduction aids;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids; and/or

Hearing assistive technology

Takes ear canal impressions of infants and young children to produce custom earmoulds or hearing aids of sufficient quality

#### Undertakes **programming and maintenance** of infants' and young children's:

FM and other remote sensing systems

Hearing aids

Hearing assistive technology

Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides pre- and post-surgical counselling to parents/caregivers of infants and young children following implant surgery (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides communication training for infants and young children with hearing loss or other auditory **dysfunction** and/or their parents/caregivers, including, as appropriate, auditory-verbal training, communication strategies, and/or speechreading

Provides counselling to the parents/caregivers of infants and young children relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence

Provides appropriate audiological habilitation based on an understanding of the audiological and educational implications of Ottitis Media and other ear-related conditions in the general paediatric population and in high risk groups (e.g. Aboriginal & Torres Strait Islander children)

Develops an appropriate, audiological habilitative management plan for the infant or young child and their parents/caregivers including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the infant or young child
- Education of parents/caregivers of infants and young children in the application, use and/or maintenance of devices and services
- Possible funding options for infants and young children
- Ensuring deep understanding of parents'/caregivers' expectations and motivation
- Need for counselling to parents/caregivers of infants and young children relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for infants and young children
- Evaluation and revision of the audiological management plan
- The need for other rehabilitation options such as counselling or speech and language habilitation for the infant or young child which may be provided by other allied health professionals or community services

Verifies habilitation intervention for the infant or young child via both objective and subjective means, including approaches such as:

Parental/cargiver input and preferences

Electrophysiological aided evaluation

Real Ear Measures using a validated prescription method

Sound field aided assessment

Speech Mapping

**Test Box Measures** 

Validates habilitation intervention for the infant or young child via objective and subjective means, including approaches such as parental/caregiver questionnaires and receptive abilities

# Knowledge and tasks applicable to <u>clients with complex needs</u>

**Clients with complex needs** (not necessarily relating to hearing threshold levels) are defined as having:

- Non-audiological co-morbidities that prevent the standard age-appropriate procedures from being performed, or
- Audiological conditions that prevent the standard age-appropriate procedures from being performed.

#### Foundations of audiology

Understands risk factors for hearing loss in clients with complex needs and can apply this knowledge in practice

Has knowledge of communication function in clients with complex needs and refers appropriately

Has knowledge of speech and language development throughout a client's lifetime and can apply this in recommending referral to appropriate professionals

#### Identification/Screening

In clients with complex needs, undertakes activities to identify:

Hearing impairment

**Tinnitus** 

Vestibular (balance) dysfunction

Dysfunction in other auditory-related systems (including those involved in cognition and processing)

Provides accurate and appropriate recommendations to the clients with complex needs and/or their significant others/carers regarding their screening results

#### Diagnostic assessments

Interviews the client with complex needs and/or their significant others/carers to obtain an appropriate indepth case history relevant to audiological and client needs

Appraises information from the client's files to facilitate planning for audiological assessments, taking into account their complex needs

Assesses activity and participation in clients with complex needs by selecting and interpreting appropriate self-report and/or significant other/carer questionnaires and understands individual factors that may impact how a person experiences their impairment

Instructs the client with complex needs and/or their significant others/carers in standard hearing test procedures and maintains the engagement of both the client and their significant others/carers throughout the test appointment

Selects a range of suitable diagnostic assessments for the client, while taking into account their complex needs

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the client, while taking into account their complex needs

Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as cognitive and physical ability

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in clients with complex needs

Assesses hearing and auditory function in clients with complex needs by the conduct and interpretation of selected tests, including:

- Auditory Brainstem Response (ABR);
- Air and bone conduction testing with appropriate masking;
- Cortical Auditory Evoked Potentials (CAEP) and Aided Cortical Assessment (ACA);
- Electrocochleography (ECochG);
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing);
- Middle latency potentials (such as Auditory Steady-State Response (ASSR)):
- Otoacoustic Emmissions (OAEs); and/or
- Speech audiometry with appropriate masking.

Assesses tinnitus in clients with complex needs by the conduct and interpretation of processes including:

- Degree of residual inhibition (both total and partial);
- Information gathered regarding the client's perception and degree of distress;
- Masking (for both broad and narrow band stimuli); and/or
- Matching (including pitch and intensity matching).

Assesses vestibular (balance) function in clients with complex needs by the conduct and interpretation of tests such as Electronystagmography (ENG)/Videonystagmography (VNG), Hallpike or equivalent test, Head Impulse Test, Rotational chair, and/or Vestibular evoked potentials

#### Assesses cognitive function in clients with complex needs

Assesses neural function in clients with complex needs for differential diagnosis, pre- and postoperative evaluation and intraoperative monitoring of the central nervous system using electrophysiological methods such as Electromyography, Sensory and motor-evoked potentials; and/or Tests of nerve conduction velocity

Assesses auditory processing function in clients with complex needs by the conduct and interpretation of tests such as Dichotic Digits Test, Frequency Pattern Test (temporal patterning), Gaps in Noise (temporal resolution), TONI 4 (IQ), Brain Train (attention tests), LiSN-S (Spatial listening)

Prepares an assessment report for the client with complex needs and/or their significant others/carers including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests):
- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### (Re)habilitation

Establishes a therapeutic relationship with clients with complex needs and their significant others/carers

Plans (re)habilitation together with the client and their significant others/carers others, with consideration of their complex needs and:

- theories of aural (re)habilitation;
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions;
- audiological and non-audiological factors that may influence (re)habilitation;
- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of (re)habilitation program in light of these conditions.

Manages cerumen (ear wax) in clients with complex needs to prevent obstruction of the external ear canal and of amplification devices

In the context of (re)habilitation in clients with complex needs, understands the application and limitations of:

Bone conduction aids:

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids:

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Assesses candidacy of clients with complex needs for:

Bone conduction aids;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems:

Hearing aids;

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Based on the complex needs of the client and/or and their significant others/carers, recommends solutions from a range of devices and services available, including:

Bone conduction aids:

Communication training:

Earplugs (custom noise/swim/musician plugs):

FM and other remote sensing systems;

Hearing aids:

Hearing assistive technology; and/or

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for clients with complex needs

Collaborates with medical professional(s) regarding the selection of and fitting of implantable devices for clients with complex needs

#### According to the client's complex needs, prescribes and fits/provides:

Bone conduction aids;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids; and/or

Hearing assistive technology

Takes ear canal impressions of clients with complex needs to produce custom earmoulds or hearing aids of sufficient quality

#### Undertakes programming and maintenance of clients with complex needs':

FM and other remote sensing systems

Hearing aids

Hearing assistive technology

Implantable hearing devices (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides rehabilitation and management for tinnitus in clients with complex needs using, as appropriate, behavioural management, counselling, education, and/or hearing aids and/or tinnitus maskers and sound generators

Provides vestibular (balance) rehabilitation therapy to clients with complex needs

#### Provides auditory processing rehabilitation for clients with complex needs

Provides pre- and post-surgical counselling to clients with complex needs and their significant others/carers following implant surgery (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

Provides communication training for clients with complex needs and hearing loss or other auditory dysfunction, including, as appropriate:

Analytical and synthetic auditory training

#### Communication strategies Speechreading

Provides counselling to clients with complex needs and their significant others/carers relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence

Develops an appropriate, audiological (re)habilitative management plan for the client with complex needs and their significant others/carers including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the client with complex needs
- Education of clients and/or their significant others/carers in the application, use and/or maintenance of devices and services, taking into account their complex needs
- Possible funding options for clients with complex needs
- Ensuring deep understanding of clients' and their significant others'/carers' expectations and motivation
- Need for counselling to clients with complex needs and their significant others/carers relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for clients with complex needs
- Evaluation and revision of the audiological management plan
- The need for other (re)habilitation options such as counselling or speech and language rehabilitation for clients with complex needs which may be provided by other allied health professionals or community services

Verifies (re)habilitation intervention for the client with complex needs via both objective and subjective means, including approaches such as:

Client and/or significant other/carer input and preferences

Electrophysiological aided evaluation

Real Ear Measures using a validated prescription method

Sound field aided assessment

Speech Mapping

**Test Box Measures** 

Validates (re)habilitation intervention for the client with complex needs via objective and subjective means, including approaches such as self-report and/or significant/other carer questionnaires and speech testing

# **Appendix 4- Scope of Practice for audiometrists**

# Overarching knowledge and tasks applicable to all client groups

### Foundations of Audiology

Has knowledge of all the different individual scopes of practice across audiology services to the level required to be able to refer appropriately

Understands common ototoxic agents and mechanisms and can apply this knowledge in practice

Understands principles, methods and applications of acoustics as related to audiology and can apply this knowledge in practice

Understands principles, methods and applications of psychoacoustics as related to audiology and can apply this knowledge in practice

Understands principles of primary health care and the social determinants of health, including wellbeing and education, and can apply this knowledge in practice

Understands normal processes of communication and auditory behaviour over the lifespan and can apply this knowledge in practice

Has knowledge of the risk factors for hearing loss in infants and young children and clients with complex needs

Understands basic epidemiological terms about hearing loss, tinnitus and other auditory-related disorders and can apply this knowledge in practice

Understands the potential effects of noise exposure on auditory mechanisms and the factors that contribute to noise-induced hearing loss and can apply this knowledge in practice

Understands the anatomy and physiology of the peripheral auditory system and can apply this knowledge in practice

Understands mechanisms of disease and injury of the peripheral auditory system and can apply this knowledge in practice

Understands the pathology and clinical course of common syndromes, diseases and injuries involving the peripheral auditory system and can apply this knowledge in practice

Has knowledge of the anatomy and physiology of the vestibular (balance) system

Has knowledge of mechanisms of disease and injury of the vestibular (balance) system

Has knowledge of the pathology and clinical course of common syndromes, diseases and injuries involving the vestibular (balance) system

Has knowledge of the anatomy and physiology of the central auditory system

Has knowledge of the pathology and clinical course of common syndromes, diseases and injuries involving the central auditory system

Maintains professional standards, including:

- Adhering to relevant codes of conduct and ethics for their profession;
- Meeting the requirements of their professional body(ies) regarding continuing education/professional development; and
- Working to relevant practice standards and guidelines.

#### Prevention

Employs strategies and procedures for the prevention of hearing loss and communication disorders in occupational and non-occupational settings

Promotes hearing wellness, as well as the prevention of hearing loss and protection of hearing function by designing, implementing, and coordinating occupational, school, and community hearing conservation and identification programs

Participates in noise measurements of the acoustic environment to improve accessibility and to promote hearing wellness

#### Diagnostic assessments

Applies principles and methods in order to adhere to appropriate standards for calibration and maintenance of equipment and the testing environment

Has a theoretical knowledge of the clinical applications of medical imaging techniques such as (but not limited to) MRI, CAT & PET

Refers immediately (at the time of initial assessment) to an appropriate professional where clinically indicated

#### Re/habilitation

Collaborates with other health professionals and the client regarding ongoing management of their hearing, balance and communication function

Involves clients and family members in decisions about management

Provides a high standard of patient-practitioner relationship

Provides appropriate ongoing after care for any device or service provided

Within their area of expertise, provides training for professionals of related and/or allied services when needed

Manages the selection, purchase, installation, and evaluation of large-area amplification systems

## Advocacy/Consultation

Within their area of clinical expertise, advocates for the communication needs of their clients, including for their rights and for funding of services

Advocates for issues (i.e., acoustic accessibility) that affect the rights of individuals with normal hearing

Consults with professionals of related and/or allied services when needed

Consults about accessibility for persons with hearing loss and other auditory dysfunction in public and private buildings, programs, and services

Within their area of clinical expertise, conducts interviews and assessments to a standard required to carry weight in a court of law, and recognises the medico-legal implications of any assessments

Within their area of clinical expertise, provides consultation to individuals, public and private agencies, and governmental bodies, or as an expert witness regarding legal interpretations of clinical assessments they have conducted

Within their area of clinical expertise, provides case management and services as a liaison for the client, family, and agencies in order to monitor audiological status and management and to make recommendations about educational and vocational programming

Within their area of clinical expertise, provides consultation to the industry on the development of products and instrumentation

#### Education/Research/Administration

Measures functional outcomes, consumer satisfaction, efficacy, effectiveness, and efficiency of devices, practices and programs to maintain and improve the quality of audiological services

Understands the concept of evidence-based practice and applies it to clinical decision making

Participates in the development of professional and technical standards

Participates in quality improvement programs

Undertakes program administration and supervision of professionals as well as support personnel

Within their area of clinical expertise, provides education, supervision, and administration for audiology and/or audiometry graduates and other professional programs

Disseminates research findings to other professionals and to the public

Designs and conducts basic and applied audiological research to increase the knowledge base, to develop new methods and programs, and to determine the efficacy, effectiveness, and efficiency of assessment and treatment paradigms

Critically evaluates published research for scientific validity and clinical applicability

# Knowledge and tasks applicable to adult clients

#### Foundations of audiology

Understands risk factors for hearing loss in adults and can apply this knowledge in practice

Has knowledge of communication function in adults and refers appropriately

#### Identification/Screening

In adults, undertakes activities to identify:

Hearing impairment

**Tinnitus** 

Provides accurate and appropriate recommendations to the adults regarding their screening results

#### Diagnostic assessments

Interviews the adult client and their significant others to obtain an appropriate in-depth case history relevant to audiological and client needs

Appraises information from the adult client's client files to facilitate planning for audiological assessments

Assesses activity and participation in adults by selecting and interpreting appropriate self-report questionnaires and understands individual factors that may impact how a person experiences their impairment

Instructs the adult client in standard hearing test procedures and maintains their engagement throughout the test appointment

Selects a range of suitable diagnostic assessments for the adult client

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the adult client

Makes modifications or simplifications to the test procedure in order to adapt it to client variables such as their motivation

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in adult client

Assesses hearing and auditory function in adults by the conduct and interpretation of selected tests, including:

- Air and bone conduction testing with appropriate masking:
- Speech audiometry with appropriate masking; and/or
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing).

Prepares an assessment report for the adult client including:

- an interpretation of the data (including a consideration of the consistency of the findings from different tests):
- a summary of findings;
- recommendations (including the need for referral); and
- an audiological treatment/management plan.

#### Rehabilitation

Establishes a therapeutic relationship with adult client and their significant others

Plans rehabilitation together with the adult client and their significant others, with consideration of:

- theories of aural rehabilitation:
- the effects of impairments on communication and their impact in terms of activity limitations and participation restrictions:
- audiological and non-audiological factors that may influence rehabilitation;

- the psychological impact of hearing loss on the individual and their families; and
- age-related conditions, including physical and cognitive, and how to modify delivery of rehabilitation program in light of these conditions.

Manages cerumen (ear wax) in adult clients to prevent obstruction of the external ear canal and of amplification devices

In the context of rehabilitation in adults, understands the application and limitations of:

Bone conduction aids:

Communication training;

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids;

Hearing assistive technology; and

Implants (e.g. cochlear implants, middle ear implantable hearing aids, fully implantable hearing aids, bone anchored hearing aids)

#### Assesses candidacy of adults for:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids; and

Hearing assistive technology.

Based on the needs of the adult client and their significant others, recommends solutions from a range of devices and services available, including:

Bone conduction aids:

Communication training:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids; and/or

Hearing assistive technology.

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the adult client

According to the adult client's needs, prescribes and fits/provides:

Bone conduction aids:

Earplugs (custom noise/swim/musician plugs);

FM and other remote sensing systems;

Hearing aids; and/or

Hearing assistive technology.

Takes ear canal impressions of adult clients to produce custom earmoulds or hearing aids of sufficient quality

#### Undertakes programming and maintenance of adult clients':

FM and other remote sensing systems

Hearing aids

Hearing assistive technology

Provides rehabilitation and management for adult clients with tinnitus using, as appropriate, education and hearing aids (which may include tinnitus maskers and sound generators)

Provides communication training for adults with hearing loss or other auditory dysfunction, including, as appropriate:

Communication strategies

Speechreading

Provides counselling to the adults clients and their significant others relating to psychosocial aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence

Develops an appropriate, audiological rehabilitative management plan for the adult client and their significant others including, when appropriate:

- Based on the range of services and devices and services available, recommendations for fitting/providing devices and services to the adult client
- Education of adult clients in the application, use and/or maintenance of devices and services
- Possible funding options for adult clients
- Ensuring deep understanding of adult clients' and their significant others' expectations and motivation
- Need for counselling to adult clients and their significant others relating to psycho social aspects of hearing loss, other auditory dysfunction, and processes to enhance communication competence
- Skills training and consultation concerning environmental modifications to facilitate development of receptive and expressive communication for adult clients
- Evaluation and revision of the audiological management plan
- The need for other rehabilitation options such as counselling or speech and language rehabilitation for the adult client which may be provided by other allied health professionals or community services

Verifies rehabilitation intervention for the adult client via both objective and subjective means, including approaches such as:

Client input and preferences

Real Ear Measures using a validated prescription method

Sound field aided assessment

Speech Mapping

**Test Box Measures** 

Validates rehabilitation intervention for the adult client via objective and subjective means, including approaches such as self-report questionnaires and speech testing

# Knowledge and tasks applicable to school-aged children (from kindergarten until end of secondary school)

#### Foundations of audiology

Understands risk factors for hearing loss in school-aged children and can apply this knowledge in practice

Has knowledge of communication function in school-aged children and refers appropriately

#### Identification/Screening

In school-aged children, undertakes activities to identify:

Hearing impairment

Provides accurate and appropriate recommendations to the school-aged child and/or their parents/caregivers regarding their screening results

Undertakes supervision, implementation, and follow-up of school hearing screening programmes

#### Diagnostic assessments

Instructs the school-aged child and their parents/caregivers in standard hearing test procedures and maintains the engagement of both the school-aged child and their parents/caregivers throughout the test appointment

Assesses and improves the test environment in order to make it more suitable for audiological assessment of the school-aged child

Performs otoscopic examination and examination of the outer ear to assess abnormalities (e.g. whether wax is in the ear canal) in school-aged children

Assesses hearing and auditory function in school-aged children by the conduct and interpretation of the most age and ability-appropriate diagnostic process, such as:

- Air and bone conduction testing with appropriate masking when possible<sup>8</sup>; and/or
- Impedance audiometry (a.k.a. immittance audiometry, including tympanometry and acoustic reflex testing).

#### Habilitation

Establishes a therapeutic relationship with the school-aged child and their parents/caregivers

In the context of habilitation of school-aged children, understands the application and limitations of: Earplugs (custom noise/swim/musician plugs)

Assesses candidacy of school-aged children for:

Earplugs (custom noise/swim/musician plugs)

Based on the needs of the school-aged child and their parents/caregivers, recommends solutions from a range of devices and services available, including:

Earplugs (custom noise/swim/musician plugs)

Refers to relevant medical professional(s) if the possible need for implantable devices is clinically indicated for the school-aged child

According to the school-aged child's needs, prescribes and fits/provides:

Earplugs (custom noise/swim/musician plugs);

Takes ear canal impressions of school-aged children to produce custom earmoulds or hearing aids of sufficient quality

<sup>&</sup>lt;sup>8</sup> These tests may be performed by a method such as play audiometry