

Evidence-Based Practice for Speech Pathology in Australia





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Statement of Purpose

The purpose of this document is to affirm that the principles of evidence-based practice should inform all aspects of the work of speech pathologists (Speech Pathology Australia, 2020a) and underpin ethical practice (Speech Pathology Australia, 2020b).

This document should not be read in isolation. Speech pathologists should also be cognisant of, and comply with, relevant legislation, Speech Pathology Australia policies and the Speech Pathology Australia Professional Standards (2020a) and Code of Ethics (2020b).

Introduction

Evidence-based practice (EBP) is critical to the provision of quality services to clients. Evidence-based practice as described throughout this document refers to the integration of evidence gleaned from the best available external research evidence, the perspectives and values of clients, clinical expertise and the external context.

Speech pathology is an evidence-based profession. A commitment to EBP in speech pathology is the responsibility of Speech Pathology Australia (The Association), speech pathologists, workplaces, researchers, universities and student speech pathologists. Speech Pathology Australia is committed to ensuring that EBP is adopted throughout the profession in Australia.

Background

Evidence-based practice originated within the field of clinical medicine where it was defined as “the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients.... evidence-based [practice] means integrating individual clinical expertise with the best available external clinical evidence from systematic research” (Sackett et al., 1996, p. 71). There is a need to use both clinical expertise and best available external evidence “...and neither alone is enough” (ibid, p. 72). The concept of EBP has since been applied in a number of contexts.

There is consensus across health disciplines regarding the fundamental importance of EBP to client wellbeing. Albarqouni et al. (2018) report that competence in EBP is a common expectation of professional registration and accreditation bodies across a range of health professions. Evidence-based practice is embedded within the ethos of major governing bodies including the American Speech-Language Hearing Association (ASHA), The Royal College of Speech and Language Therapists (RCSLT) and The Australian Medical Association (AMA) as part of a general movement towards greater accountability and professional responsibility (Dollaghan, 2007; Hoffman et al., 2013).

Advances in the knowledge base, service provision and scope of practice of speech pathologists have significantly impacted the complexity and diversity of the profession (Speech Pathology Australia, 2018). These advances have resulted in significant work changes. When making service decisions, speech pathologists must now consider factors (needs, values and preferences) relating to the individuals, families and communities they serve, the local and national context, their personal clinical expertise, and the best available evidence from published research.

Evidence-based practice in speech pathology

Within speech pathology, EBP has been defined as “an approach in which current, high-quality research evidence is integrated with practitioner expertise and client preferences and values, into the process of making clinical decisions” (ASHA, 2005, p. 1). It involves moving the foundation for clinical decisions from clinical protocols centred solely on expert opinion to the integration of clinical expertise, the best current research evidence, and individual client values (ASHA, 2005). Evidence-based practice requires that highest quality research evidence from the most relevant high-quality scientific studies is used in conjunction with clinical expertise, client perspectives and knowledge of contextual factors to inform assessment and treatment. Recently, there has been a reconceptualisation of EBP to focus on personalised or precision evidence-based medicine (Olstad et al., 2019). Personalised or precision medicine means that every consumer is treated as an individual, with their treatment targeted to their particular characteristics. For the purposes of this document, we will continue to use the simpler term ‘evidence-based practice (EBP)’.

Dollaghan (2007) proposed a model of EBP for the profession of speech pathology. She termed this model E3BP, reflecting the importance of evidence from systematic research, clinical expertise and client preferences and values. Evidence-based practice was seen to consist of the interaction between these three factors. In 2013, Hoffman, Bennett, and Delmar argued that the model should also consider the practice context. The practice context includes potential service constraints, available resources and wider policies and practices. They assert that the use of clinical reasoning to integrate information from these four factors results in EBP. Within this document, EBP refers to the integration of evidence gleaned from the best available external research evidence, the perspectives and values of clients, clinical expertise and the external context.

External scientific evidence

It is important that external scientific evidence, both quantitative and qualitative, is not only consulted to inform decision making, but carefully considered and evaluated. There are several approaches to considering scientific evidence, each of which offers different perspectives. These perspectives can be described using three categories: frameworks for selecting optimal types of evidence; curated evaluations of evidence; and rating systems for appraising evidence from individual studies or bodies of evidence.

Frameworks for selecting optimal types of evidence

The Oxford Centre for Evidence-Based Medicine (OCEBM) levels of evidence, revised in 2011, provides a framework to identify the type of evidence that would provide the best answer to particular clinical questions (Howick et al., 2011). The framework is shown in Table 1. It is recommended that the [introductory document](#) be read before engaging with the framework. Systematic reviews of randomised controlled trials are traditionally the highest form of evidence in medical research (Greenhalgh, 2001; Tate et al., 2008). Of relevance to speech pathology, the OCEBM also recognises that well controlled single case studies, namely N =1 randomised control trials, may provide high level evidence for questions related to intervention. As N=1 trials closely reflect a clinician's work with individual clients, their importance to EBP is apparent (Perdices et al., 2006; Tate et al., 2008).

Table 1. Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence

| Question | Step 1 (Level 1*) | Step 2 (Level 2*) | Step 3 (Level 3*) | Step 4 (Level 4*) | Step 5 (Level 5) |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------|
| How common is the problem? | Local and current random sample surveys (or censuses) | Systematic review of surveys allow matching to local circumstances** | Local non-random sample** | Case-series** | n/a |
| Is this diagnostic or monitoring test accurate? (Diagnosis) | Systematic review of cross-sectional studies with consistently applied reference standard and blinding | Individual cross-sectional studies with consistently applied reference standard and blinding | Non-consecutive studies, or studies without consistently applied reference standards** | Case-control studies, or "poor or non-independent reference standard** | Mechanism-based reasoning |
| What will happen if we do not add a therapy? (Prognosis) | Systematic review of inception cohort studies | Inception cohort studies | Cohort study or control arm of randomized trial* | Case-series or case-control studies, or poor quality prognostic cohort study** | n/a |
| Does this intervention help? (Treatment Benefits) | Systematic review of randomized trials or n-of-1 trials | Randomized trial or observational study with dramatic effect | Non-randomized controlled cohort/follow-up study** | Case-series, case-control studies, or historically controlled studies** | Mechanism-based reasoning |
| What are the COMMON harms? (Treatment Harms) | Systematic review of randomized trials, systematic review of nested case-control studies, n- of-1 trial with the patient you are raising the question about, or observational study with dramatic effect | Individual randomized trial or (exceptionally) observational study with dramatic effect | Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient)** | Case-series, case-control, or historically controlled studies** | Mechanism-based reasoning |
| What are the RARE harms? (Treatment Harms) | Systematic review of randomized trials or n-of-1 trial | Randomized trial or (exceptionally) observational study with dramatic effect | | | |
| Is this (early detection) test worthwhile? (Screening) | Systematic review of randomized trials | Randomized trial | Non-randomized controlled cohort/follow-up study** | Case-series, case-control, or historically controlled studies** | Mechanism-based reasoning |

* Level may be graded down on the basis of study quality, imprecision, indirectness (study PICO does not match questions PICO), because of inconsistency between studies, or because the absolute effect size is very small; Level may be graded up if there is a large or very large effect size.

** As always, a systematic review is generally better than an individual study.

<https://www.cebm.net/wp-content/uploads/2014/06/CEBM-Levels-of-Evidence-2.1.pdf>

Curated evaluations of evidence

Evidence-based practice guidelines, where available, provide excellent guidance for speech pathologists, consumers, and funding bodies by offering a curated summary of the highest available levels of evidence and giving direction for practice. Examples of these for speech pathologists include the Australian National Health and Medical Research Council (NHMRC) Guideline for Management of Communication and Swallowing for Paediatric Traumatic Brain Injury (Morgan et al, 2017) and Guideline for Management of Communication and Swallowing in Children Diagnosed with Brain Tumour or Leukaemia (Docking et al, 2020); [Australian Aphasia Rehabilitation Pathway Best Practice Statements](#) (Power et al., 2015); the International Cognitive (INCOG) Guidelines for Cognitive Rehabilitation Following Moderate to Severe Traumatic Brain Injury (Bayley, et al., 2014; Togher et al., 2014) and the [World Health Organisation Rehabilitation Package of Rehabilitation Interventions](#) (under development).

Curated databases may also provide a ready resource of the evidence underlying approaches in an area of speech pathology practice. Examples of EBP databases include: [SpeechBITE™](#); [What Works: ASHA Evidence Maps](#).

Rating systems for appraising evidence

The current internationally accepted best practice for rating the overall certainty or quality of scientific evidence is use of the Grading of Recommendations, Assessment, Development and Evaluations (GRADE); Grade Working Group (n.d.). GRADE is the preferred system used by the Cochrane Database of Systematic Reviews and the World Health Organisation. In applying GRADE, authors pose a clinical question of interest, identify the population of relevance, and identify which outcomes are critical to those asking the clinical question. For example, if the question was ‘what is the best type of speech therapy for children with dysarthria?’, then core outcomes of interest for a parent, clinician or organisation may be improvement in a child’s intelligibility, activity, participation or wellbeing measures. Authors then rate the quality of evidence available, applied separately for each outcome as the quality of evidence typically varies between outcomes. A body of evidence (several studies, or a systematic review if such a relevant review exists) is evaluated, and an overall GRADE rating (very low, low, moderate, high) is then assigned. The ratings indicate the certainty of evidence (see Table 2). These ratings can be marked up or down due to several factors (see Table 3).

Table 2. GRADE certainty ratings^[1,2]

| Certainty | What it means |
|-----------|--------------------------------------------------------------------------------------|
| Very low | The true effect is probably very different from the estimated effect |
| Low | The true effect might be markedly different from the estimated effect |
| Moderate | The authors believe that the true effect is probably close to the estimated effect |
| High | There is a lot of confidence that the true effect is similar to the estimated effect |

Table 3. Reasons to rate certainty in evidence up or down^[1,2]

| Certainty can be rated down for: | Certainty can be rated up for: |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Risk of bias• Imprecision• Inconsistency• Indirectness• Publication bias | <ul style="list-style-type: none">• Large magnitude of effect• Dose-response gradient• All residual confounding would decrease magnitude of effect (in situations with an effect) |

¹<https://bestpractice.bmj.com/info/toolkit/learn-ebm/what-is-grade/>

² <https://www.gradeworkinggroup.org>

In addition to GRADE there are alternative systems that are appropriate for rating single case studies, such as the Risk of Bias in N-of-1 Trials RoBiNT Scale (Tate et al., 2015). Other useful checklists to guide appraisal of published studies of various designs are available from <https://jbi.global/critical-appraisal-tools>.

It must be recognised that appraisals of evidence are typically based on western models which may not take into account cultural issues. Speech pathologists have a responsibility to place evidence in the appropriate context and to consider other critical factors that may influence its relevance to particular contexts.

Clinical expertise

Sackett et al. (2006, p.71) described clinical expertise as “the proficiency and judgment that individual clinicians acquire through clinical experience and clinical practice”. They highlight the importance of clinical expertise in deciding whether external evidence is relevant to individual clients, and in deciding how this evidence might be applied within their clinical practice. Over the course of their careers, speech pathologists acquire a wealth of experience, at both individual and collective levels, that can inform clinical decision making within an evidence-based framework. Accumulation of this experiential knowledge is driven by reflective practice (Speech Pathology Australia, 2020a). Translating this experience into clinical evidence requires a systematic approach to goal setting, data collection and evaluation as the basis for data driven decision-making.

Speech pathologists work within a systematic clinical decision-making framework that includes appropriate assessment, goal selection, planning, implementation and evaluation (Speech Pathology Australia, 2020). At each stage, the information gathered (e.g., assessing a client’s skills and needs), the approaches used (e.g., trialling an intervention), and the data collected (as part of monitoring progress) support a data-driven decision-making process. Speech Pathology Australia not only mandates that such an approach is taken but acknowledges the inherent value of doing so as the basis for accumulating evidence from practice within the EBP framework. When individual speech pathologists approach goal setting and data collection in a systematic manner, it becomes possible for them to examine functional relationship between interventions and outcomes for individual clients and to identify relationships and patterns in data across multiple clients within the workplace.

Evidence from practice must be evaluated for quality, in the same way that occurs for external evidence. Key issues to consider include whether (a) the information (data) was collected in a systematic way, (b) the assessment or intervention was delivered with fidelity (e.g., as per the manual), (c) the data were collected in a way that show an association between the intervention provided and changes for the client (association) or show that the intervention likely caused the change for the client (causation), and (d) any strategies were used to help reduce the risk of bias in reporting (e.g., a colleague completed progress ratings, rather than the clinician administering the intervention). Anecdotal reports of approaches and outcomes can be useful for identifying avenues for further practice-based research; however, the use of anecdotes does not constitute the application of clinical expertise within the EBP framework.

Client preferences

Understanding the goals, values, preferences, expectations, and concerns of clients, families and/or caregivers is an essential aspect of EBP. These understandings may be developed through self-report, or through proxy report provided by parents, carers and/or significant others (ASHA, 2004). Person, family and community centred practice provide opportunities to engage with clients, communities, families and/or caregivers to identify the factors which are important to the individual. This knowledge may be used to inform approaches to intervention that are consistent with client values and cultural preferences, and that will deliver relevant and meaningful outcomes for the client.

Qualitative research may provide evidence of the perspectives of groups of clients regarding the impact of conditions, assessment and intervention processes. As with all research, qualitative research should be subject to critical appraisal. The findings of qualitative research may be informative but should not replace consideration of the perspectives of individual clients. It is necessary to consider whether the outcomes reported in the literature are those which are meaningful to and valued by clients and families (Roulstone, 2015).

The practice context

The practice context includes consideration of factors at the international, national and local levels. At the international level, overarching frameworks may impact on service decisions. These include such frameworks as the [United Nations Universal Declaration of Human Rights](#) and the [United Nations Convention on the Rights of Persons with Disabilities](#). At the national level, federal policies such those set down by the [National Disability Insurance Authority](#) may be pertinent. Local level factors include state and organisational service delivery models, financial constraints, staffing, equipment and training availability.

Evidence-based practice and diversity

Australia is a multicultural society made up of people from diverse cultural backgrounds. Culture has been defined as "... the shared, accumulated, and integrated set of learned beliefs, habits, attitudes and behaviors of a group or people or community... the context in which language is developed and used and the primary vehicle by which it is transmitted." (Kohnert, 2008, p. 28). Cultural diversity includes indigeneity, ethnicity, race, nationality, religion/spirituality, gender and dis/ability (Richardson et al, 2017).

Working cross-culturally

Sources of evidence must be scrutinised as part of EBP. This should not only include traditional levels of evidence, but also the cultural world construct and / or methodological framework from which the evidence emanates. Evidence of effectiveness and/or efficacy is determined within research involving particular populations in a particular place at a particular time and is often framed by a particular worldview. Most frequently, current discussions of evidence are embedded within a western biomedical scientific framework. However, the central role of culture must be recognised in evaluating evidence. Evidence for the effectiveness of a particular treatment within a particular ethnic group, setting or participant group cannot necessarily be generalised across different cultural groups or settings. For example, a partner training program focused on stimulating conversational interactions found to be effective with a group of Australian middle class white people with aphasia and their families may not be effective with a group of Aboriginal or Torres Strait Islander, African American, Italian, African or Chinese people with aphasia and their families, where the constructs and rules surrounding communication and conversation may be very different from those of the original group of participants. Similarly, evidence for the assessment, diagnosis and management of specific communication differences such as those related to voice may be informed by traditional notions of binary gender norms, age and/or lifestyle and fail to account for or accommodate dimensions of diversity that include an individual's gender identity, group alliances, and positioning to and within specific sociocultural groups (Hyter & Salas-Provence, 2019). Speech pathologists have a responsibility to place evidence in the appropriate context and to consider factors that may influence its relevance to different populations. Communication is central to culture, hence attempting to equate evidence across cultural groups may be at best problematic and at worst harmful.

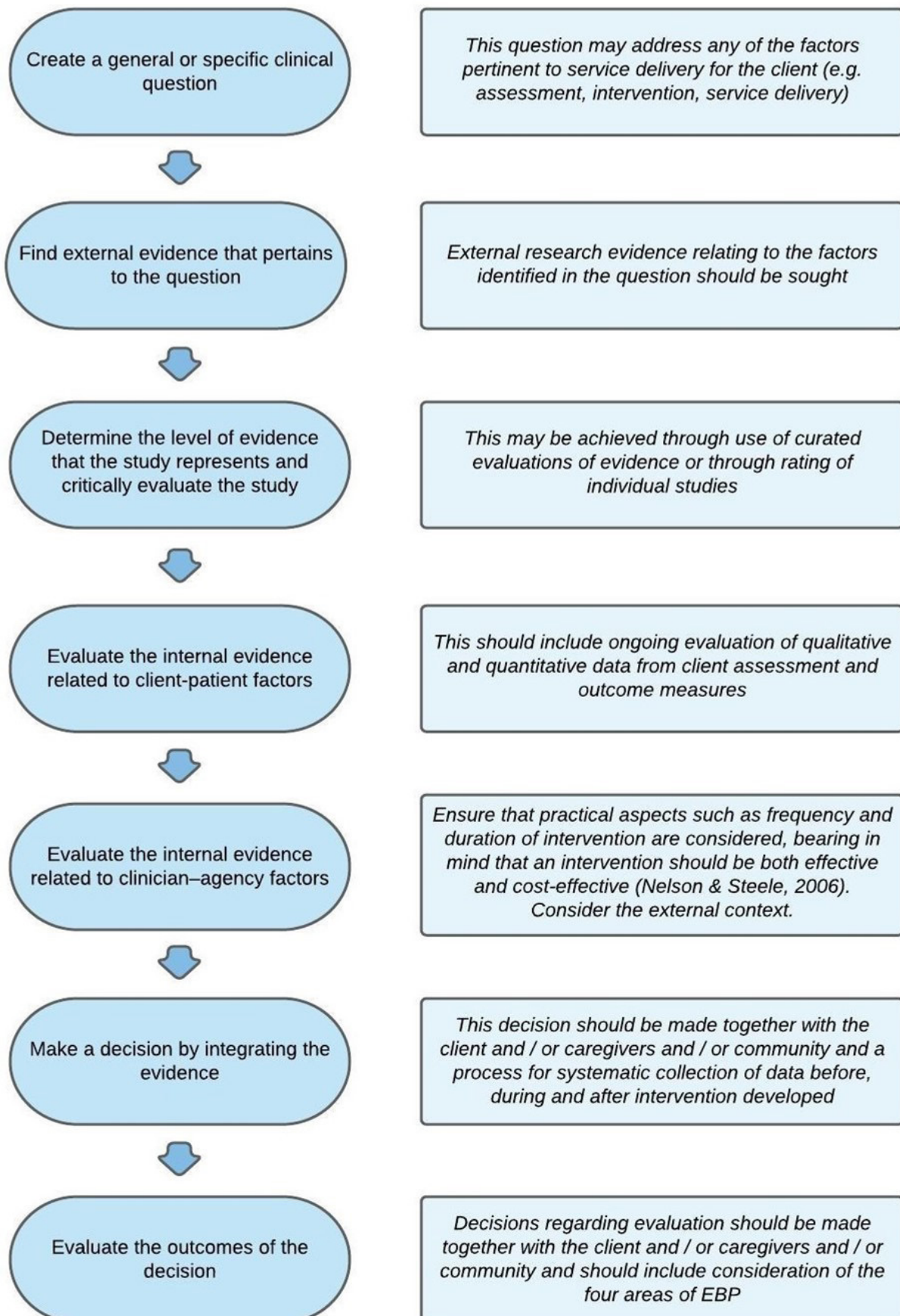
Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples are Australia's First Nations peoples and make up approximately 3% of the population (Australian Bureau of Statistics, 2018). Diversity exists within this population with regard to language, however there is a shared history and enduring connection to family, community, lands, seas and waters. Evidence based practice in working with Aboriginal and Torres Strait Islander peoples must be informed by understanding of historical wrongs, current contexts, community and family involvement and research underpinned by Indigenous perspectives (Speech Pathology Australia, 2020a).

Integrating evidence into practice

A readily accessible EBP process has been described by Gillam and Gillam (2006, p. 304). The steps in this process have been adapted in Figure 1, and explanatory text added. Annotations have been added in italics.

Figure 1. Evidence-based practice decision making process, based on Gillam and Gillam (2006)



At all stages of the EBP process, the expressed needs of the client should be considered, with the use of inclusive and informed decision-making processes. The client should be made aware of the options available to them, to engage in the decision-making process with the clinician regarding the course of action which will be taken, and to jointly develop the outcomes used to evaluate the treatment process.

Evidence-based tools and resources

Tools and resources to support the implementation of EBP include those supported by Speech Pathology Australia and those available through other sources. [Appendix 1](#) provides details of some of these resources.

Challenges related to implementing evidence-based practice

It is important that challenges to the implementation of EBP are recognised and addressed. These challenges can be categorised as evidence-related, speech pathologist-related, and workplace-related.

Evidence-related challenges

There is limited high-quality research evidence in some areas in which speech pathologists work (McCurtin et al., 2012). Even amongst published research, inadequate descriptions of intervention may render that research unusable to speech pathologists (Ludemann, et al., 2017). The complexity and diversity of clients and the nature of strict research conditions may result in research that excludes typical speech pathology client populations and caseloads.

Engaging in EBP often requires flexibility, particularly in settings in which a relatively small body of evidence exists to guide decision making. This lack of evidence may be related to the use of specific assessments, intervention techniques, and/or service delivery models. The rapidly changing research and clinical care environment may also mean that previously implemented interventions are no longer in keeping with contemporary practice. Alternative interventions supported by the different dimensions of evidence but meeting the unique constraints faced by speech pathologists may need to be found and implemented.

Engagement in EBP involves consideration of client preferences throughout the span of the service delivery. Collaborative goal setting and supporting clients to make informed decisions about their care may be challenging when working with clients with complex communication needs. It is recommended that speech pathologists actively support clients to identify and prioritise their goals as part of the assessment process. Clients come with a broad range of perspectives about their own care and may measure success differently to the clinician (Rautakoski, 2010). Speech pathologists are encouraged to collaborate with clients to set goals and measure progress across the range of domains within the [biopsychosocial model of functioning disability and health](#) (World Health Organisation, 2001).

Speech pathologist-related challenges

Implementation of EBP may be influenced by speech pathologist experience and personal and philosophical preferences (Skeat et al., 2010; Vallino-Napoli et al., 2004).

Speech pathologists have a professional responsibility to engage in lifelong learning for the maintenance of professional competency throughout their careers (Speech Pathology Australia, 2020a; 2020b) and to engage in independent learning to access the latest evidence. All speech pathologists should be empowered to play an active role in the incorporation of evidence into practice regardless of experience or professional role.

Professional supervision and/or mentoring is evidence-based, adopting an EBP framework within discussions regarding client cases and service delivery models. Both supervisees and supervisors contribute to the discussions and discuss strategies to improve speech pathologist confidence and knowledge in accessing, interpreting, and translating evidence if required.

Workplace-related challenges

Speech pathologists may lack adequate resources (such as access to relevant journals and databases) to allow for engagement with external scientific evidence in practice (Hadely et al., 2014; Harding et al., 2014; Ludemann et al., 2017). Professional workload demands and the priorities of organisations may not allow for time to read and absorb new information from external evidence (Fulcher-Rood et al., 2020; O'Connor et al., 2009; Vallino-Napoli et al., 2004; Zipoli et al., 2005). Time is also a factor limiting the

ability to locate and review literature pertaining to a clinical question (Brackenbury et al., 2008). Use of curated databases such as [SpeechBITE™](#) assist in addressing this difficulty.

Organisational directives or limited budgets may reduce the ability of speech pathologists to implement those interventions informed by robust research and a strong evidence base (Skeat et al., 2010). Service delivery and funding models may also challenge the implementation of best available research in practice.

Organisations employing speech pathologists are encouraged to support their employees' access the evidence and resources to inform practice. Leadership roles should promote the inclusion of a positive workplace culture supportive of EBP and research in practice (Skeat et al., 2010).

A range of strategies may be implemented in the workplace to support the development of knowledge of EBP and its incorporation into practice. These include team journal clubs, professional learning sessions, group and peer supervision, and attendance at special interest groups, webinars or formal workshops. Speech pathologists are encouraged to take an active role in the initiation of and participation in quality improvement, clinical audits, and research activities to extend the current evidence base. Speech pathologists can advocate for funding for clinical research in the workplace and for partnerships with Universities in undertaking relevant research.

Responsibilities for evidence-based practice in speech pathology in Australia

Responsibility for EBP is shared, requiring the successful interplay and contributions of The Association and its members, universities, speech pathology students and workplaces.

Speech Pathology Australia promotes and supports evidence-based practice

Speech Pathology Australia produces and provides access to a [range of resources](#) to support members to develop, maintain and extend knowledge and skills related to EBP.

Speech Pathology Australia uses current best evidence to advocate for the rights of people with communication and swallowing needs, engage with international associations in collaborative evidence-based initiatives (e.g. [International Communication Project](#)) and collaborate with key national and international stakeholders.

Speech pathologists engage in evidence-based practice

Speech pathologists engage in EBP, take responsibility for their professional learning, contribute to the growth of the evidence base related to communication and swallowing disorders and communicate the importance of evidence-based approaches within their workplace and the wider community (Speech Pathology Australia, 2020a; 2020b).

To provide high quality care, speech pathologists implement the principles and steps of EBP by asking answerable clinical questions and sourcing best current evidence pertinent to the questions. They use clinical expertise in selecting and communicating alternatives to clients. They consider the client's needs and perspectives and the service context. They evaluate the effectiveness of services and update the process as new evidence emerges (ASHA, 2005).

Speech pathologists take responsibility for their professional learning (Speech Pathology Australia, 2020a; 2020b). They develop and maintain skills in searching for, identifying, evaluating and selecting external research from a range of sources that is appropriate to the clients, families and communities they work with. They develop and maintain listening and negotiation skills that support effective collaboration and responsiveness to the priorities of people with communication and swallowing needs.

Speech pathologists contribute to the growth of the evidence base for communication and swallowing disorders. They contribute practice-based evidence through adopting scientific approaches within practice and identifying clinical questions. They contribute to external scientific research by partnering with researchers to investigate questions of mutual interest, supporting patients and clients to make the decision to participate in research, advocating with researchers for inclusion of client groups in research and participating in research surveys.

Speech pathologists communicate the importance of EBP to clients, organisations and the wider community by supporting practices with a strong evidence base and refuting approaches which are not based in evidence. Speech pathologists have a responsibility to advocate for, and utilise, service delivery models that are consistent with EBP.

Speech pathology clinicians and researchers contribute to building the evidence-base

Speech pathologists engage in lifelong learning and contribute to the speech pathology evidence base (Speech Pathology Australia, 2020a). Researchers conduct ethical, high quality research which makes a positive contribution to the evidence-base for speech pathology, and make findings accessible to all (for example, through publication in open access journals, presenting evidence-based professional learning workshops). The design, implementation, and reporting of research are consistent with international guidelines for conducting different types of studies (e.g., the [Equator Network](#)), and research is made available for scrutiny and further use.

Research is conducted in ways that are consistent with key guidelines in use in the Australian context, including the [National Statement on Ethical Conduct in Human Research](#) (2018).

Research involving Aboriginal and Torres Strait Islander peoples conforms to principles of culturally responsive research as outlined by the [NHMRC](#) and the [Australian Institute of Aboriginal and Torres Strait Islander Studies](#). The NHMRC [document](#) helps to reconcile related guidelines (n.d.). The findings of such research are vested in community and disseminated to Aboriginal and Torres Strait Islander individuals, families and communities in culturally appropriate ways.

Consumer engagement is informed by [NHMRC guidelines](#). Researchers work collaboratively with clinicians, consumers and community to address clinically relevant questions within real world contexts, thus enabling knowledge translation. Co-design principles are used to enable clinicians and consumers/stakeholders to contribute to the development of research questions, and to engage with the research teams throughout the research project. Clinician and consumer/stakeholder involvement in research informs and promotes the development of relevant, feasible, acceptable assessments and interventions commensurate with current policy and funding constraints.

Universities promote knowledge of evidence-based practice

Universities incorporate EBP across the curriculum, in teaching, research and clinical practice. Researchers, university staff and clinical educators hosting practice placements model the use of EBP. They support speech pathologists to develop skills in the use of EBP through provision of continuing education activities in various modes.

Workplaces support evidence-based practice

Workplaces enable speech pathologists to engage in EBP. They provide time and resources that allow speech pathologists to access the tools and develop the skills needed to implement the principles and steps of EBP. Workplaces are integral in supporting employees who hold management positions to understand, and have authority to support and uphold, speech pathologists' engagement in EBP. The use of appropriate, evidence-based models of service delivery and specific assessment and intervention practices is supported within the workplace. Workplaces support professional development and education opportunities for speech pathologists wherever possible.

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Appendix 1

Evidence-based resources

| Speech Pathology Australia supported resources | |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scholarly research journals | Member access to the evidence base is supported through the provision of scholarly research journals (<i>International Journal of Speech Language Pathology</i> , <i>Journal of Clinical Practice in Speech Language Pathology</i>). |
| Practice Guidelines | Practice guidelines provide a comprehensive outline of clinical and workplace issues in a specific content or area of practice. They reflect best practice and best available evidence at a point in time. |
| SpeechBITE™ | Provides access to pre-appraised evidence for interventions in communication and swallowing disorders. |
| Professional learning | Continuing professional development activities in EBP are supported through development and provision of a range of activities, including workshops at national conferences, professional learning packages, and information disseminated through podcasts and social media. |
| Research grants | Clinical research to inform evidence-based practice is supported through the Association's research grants. |

National and state and territory guidelines, organisational guidelines and information from other professional associations or peak bodies such as ASHA and the RCSLT may also provide evidence for practice. At all times it is essential to consider how the information was developed and its relevance to the Australian context.

Speech Pathology Australia provides opportunities for speech pathologists to obtain formal and informal training to support the incorporation of evidence into practice. The Association supports the development and provision of a range of continuing professional development activities in EBP that include workshops at national conferences, professional learning packages, and information disseminated through podcasts and social media. Speech Pathology Australia's professional learning program is available through the [Learning Hub](#).

Appendix 2

History of the document

In 2010, Speech Pathology Australia published a position statement on EBP. This statement was developed in response to an increasing emphasis on the importance of the evidence base across many contexts. The statement was developed by a project officer, overseen by staff members of the Association, and involved consultation with speech pathologists and managers across Australia. Contributions were sought via Association Councillors, Professional Standards and Practice, Workplace and Government Portfolio Leaders and Committees, Heads of Speech Pathology Programs and professional contacts. In the ensuing decade, the importance of EBP within the profession of speech pathology has continued to increase. The revision of the position statement was undertaken by a working party which included researchers and clinicians, allowing for consideration of EBP across the profession. Feedback sourced from across Australia has been carefully considered and integrated within the document. The process has underscored the critical importance of EBP to the profession of speech pathology in Australia and led to the realisation that the statement should be reconceptualised as a core document of the Association.

EBP for Speech Pathology in Australia incorporates recent developments in the field and recognises the differing elements which are critical to this practice. It considers the need to consider evidence within the social and cultural frameworks of individuals, families and communities.

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