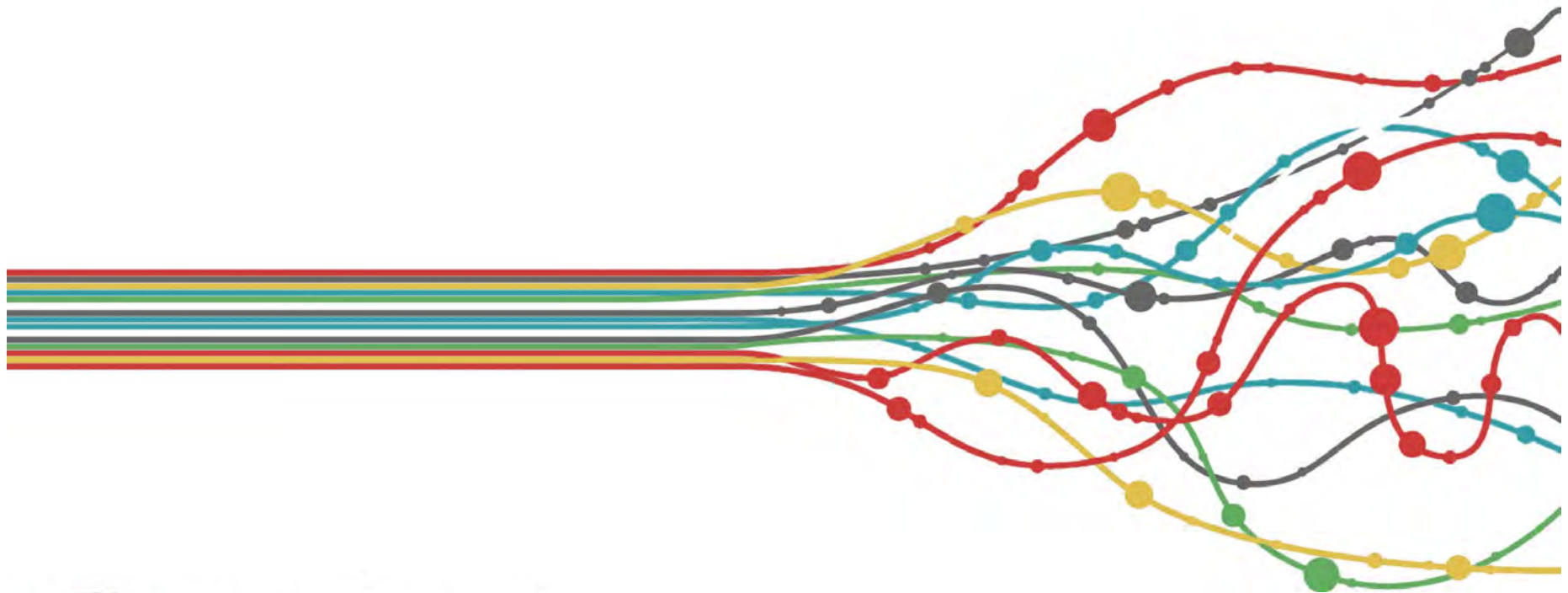


# Aphasia Rehabilitation Best Practice Statements 2024

Comprehensive supplement to the Australian Aphasia Rehabilitation Pathway



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## ACKNOWLEDGMENT OF COUNTRY

*The Aphasia CRE and the AARP committee acknowledge the traditional custodians of these beautiful Australian lands. We pay our respects to Elders past, present and emerging, and recognise and celebrate the diversity of Aboriginal and Torres Strait Islander peoples and their ongoing cultures and connections to the lands, waters, sky and community.*

[Please note, the AARP documents a range of considerations for working with Aboriginal and Torres Strait Islander peoples. These are presented within each section as well as together in section 7.]

# PART 1 - INTRODUCTION

---

## DEVELOPMENT OF THE BEST PRACTICE STATEMENTS AND THE 2024 UPDATE

This document presents updated best practice statements for post-stroke aphasia rehabilitation developed by the National Health and Medical Research Council (NHMRC) funded Centre for Research Excellence in Aphasia Recovery and Rehabilitation (Aphasia CRE). The statements were originally developed in 2014 by the NHMRC Centre for Clinical Research Excellence (CCRE) in Aphasia Rehabilitation. The CCRE in Aphasia Rehabilitation was an Australian research group that drove a national collaborative effort to improve hospital care, rehabilitation, and long-term care and self-management for people with aphasia after stroke (Thomas et al., 2014). Internationally, there is a lack of high-quality, detailed guidance for aphasia rehabilitation (Burton et al., 2023; Rohde, Worrall, & Le Dorze, 2013). Nevertheless, clinicians are required to make decisions daily about how to provide best care to their clients with aphasia. In 2014, the CCRE in Aphasia Rehabilitation published 82 best practice statements to improve the consistency of care, and these statements formed the basis for the Australian Aphasia Rehabilitation Pathway (AARP: [www.aphasiapathway.com.au](http://www.aphasiapathway.com.au)). The AARP contained these evidence-based statements along with implementation resources in a dynamic web-based implementation tool. The RAND/UCLA Appropriateness Method (RAM) (Fitch et al., 2001) was used to validate the statements. This involved an expert panel of nine aphasia researchers, clinicians and policy makers who rated each statement's 'appropriateness' on a scale of 1- 9 (not appropriate to highly appropriate). Statements with a median score greater than 7 were

included. Clinician feedback indicates that the AARP is a valuable tool for clinicians who report that it facilitates evidence-based aphasia management (Trebilcock et al., 2024). However, the need for updated content has been identified as a priority by users. In the current document, we present the updated AARP, which was designed to meet recommendations by clinicians and an expert panel of researchers.

Given the significant developments in aphasia research and practice over the past 10 years, a plan to update the AARP was initiated in 2020. An AARP committee was established consisting of 9 aphasia experts from a range of academic institutions across Australia and Mr Kelvin Hill, an expert in clinical guideline development from the Stroke Foundation, Australia.

The committee identified the following priorities in their review of the 2014 AARP:

- The large volumes of high-quality research that has been published since 2014 meant that new statements on best practice were required and the level of evidence for some statements required change.
- Some topics that were described by single statements in the 2014 edition (e.g. group therapy and community aphasia groups, rehabilitation of different language modalities) had sufficient new evidence to be presented as separate statements.
- There is much more research by Aboriginal and Torres Strait Islander researchers available now compared to 2014. We have taken care

to include the valuable work done by Aboriginal and Torres Strait Islander researchers in the 2024 AARP.

- Increasingly there is awareness and calls to action for clinicians to actively fight against discrimination in healthcare. Following the lead of Speech Pathology Australia's position statement (SPA, 2023a), the 2024 AARP addresses this more explicitly.
- Developments in technology and telerehabilitation necessitated statements on the role of technology in aphasia management (e.g. through a separate statement on tele-assessment).
- Statements have been rephrased to promote person-centred care practice.
- Some areas of research and practice (e.g. mental health and wellbeing, reconstructing social identities) have gained more prominence over the past decade and statements have been added to reflect this change.

The procedure for updating existing statements and developing new statements was as follows:

1. The statements that needed updating were identified by the committee.
2. New topics that required statements were identified by the committee.
3. The AARP update project coordinators (Dr John Pierce, Dr Sam Harvey, Dr Pauline Cuperus) conducted thorough literature searches and drafted an updated or new statement and rationale.

4. Two aphasia researchers with expertise in the statement topic were nominated by the Project lead (Prof Miranda Rose) and coordinators to review the statement and give feedback. Whenever possible, these two researchers were not members of the AARP committee. Reviewers were sourced nationally and internationally based on their expertise in particular statement topics.
5. The project coordinator updated the draft statement following the reviewers' feedback.
6. The reviewers were approached again and asked whether they approved the updated draft statement.

Steps 4-6 were repeated until both reviewers approved the draft statement.

The updated draft statement was presented to the AARP committee. The AARP committee reviewed the statement and either sought clarification, provided feedback or approved the draft statement. Where the committee sought clarification or provided feedback, the project coordinator, with assistance of the expert reviewers where necessary reviewed the statement again and resubmitted the statement for approval at the next AARP committee meeting.

This procedure has resulted in the 2024 AARP. The updated **AARP consists of 86 best practice statements to support clinicians** working across the **different stages of aphasia rehabilitation**.



## HOW TO USE THIS RESOURCE

The AARP is different from other clinical guidelines in several ways:

- 1) The AARP was written with the Australian context in mind (more on this later).
- 2) The AARP focuses on people with aphasia specifically, rather than stroke survivors more generally.
- 3) The AARP provides guidance for all stages of the care continuum.
- 4) Unlike the Australian and New Zealand Clinical Guidelines for Stroke Management (SF, 2024), the AARP has deliberately included research evidence beyond randomised controlled trials (RCTs) and systematic reviews of RCTs. We have included evidence from qualitative studies, from non-randomised group studies, single-subject experimental designs, and policy and position statements, reflecting both the broad scope of the AARP and the state of the evidence in aphasia rehabilitation.

## Context

The contextual factors in which these statements have been developed should be taken into account. While these statements are likely to apply to many international aphasia rehabilitation settings, they have been written within the Australian context and are in reference to the current Australian health care system and health challenges. This is particularly relevant for statements regarding: (i) telerehabilitation services which are important for overcoming inequities in health service access across Australia; (ii) use and access of interpreter services which are important due to the multicultural population and the largely monolingual nature of the Australian speech pathology profession; and (iii) the inclusion of best practice statements in regards to working with people from Aboriginal and Torres Strait Islander backgrounds (these statements may be helpful for clinicians working in other countries with First Nations peoples, but were written specifically for the Australian context).

# UNDERSTANDING THE PRESENTATION OF STATEMENTS

## Statements

The 86 best practice statements are presented over 8 domains of care:

1. receiving the right referrals,
2. optimising initial contact,
3. setting goals and measuring outcomes,
4. assessing,
5. providing intervention,
6. enhancing the communicative environment,
7. enhancing personal factors, and
8. planning for transitions.

Statements within each of the 8 domains of care are further categorised under subheadings. For example, the first domain, “receiving the right referrals”, has three subheadings: “community awareness of aphasia”, “communication training of health professionals”, and “referral process”.

**“Can” and “Should”.** In general, where the evidence is clear and trusted, or where there is consensus on the basis of clinical experience and expert opinion (Good Practice Point: GPP) the word “*should*” has been used to indicate that the intervention should be routinely carried out. Where the evidence is less clear, and/or there is not a clear clinical consensus, the word “*can*” has been used. However, individual patient

factors should always be taken into account when considering different intervention options.

Where the current evidence does not lead to a recommendation, a statement has not been created. For example, the current evidence on transcranial direct current stimulation (tDCS) reports that “currently there is no evidence of the effectiveness of tDCS (anodal tDCS, cathodal tDCS) versus control (sham tDCS) for improving functional communication in people with aphasia after stroke (low quality of evidence)” (Elsner et al, 2019). Therefore, no statement is listed for this intervention.

## Rationale

Each statement has an accompanying rationale that is designed to provide a short summary of the scientific evidence for the statement in question. Summaries of referenced papers are intentionally brief, highlighting the information that we believe is most clinically relevant. For more information, we encourage readers to look at the **references** (which are listed in Appendix 3) in more detail. If the statement is based on expert opinion, the rationale provides insight into the thought processes behind the statement. The rationale provides additional information to assist clinicians to understand the statement; however, it does not always describe every piece of evidence referenced. A number of the key terms and interventions mentioned within the rationales are defined in the **Glossary** (Appendix 2).

## References

In this update of the AARP, the reference column provides more detailed information about relevant references related to the statement



and comments on study design. The reference/s used as the primary study related to the statement is/are in bold. The references can be used to look up additional information if required. While every attempt has been made to provide the best available evidence, it is acknowledged that some evidence may have been overlooked during the development of the statements and future published studies may subsequently represent a higher level of evidence. A number of the research methodologies listed in this column are defined in the **Glossary** (Appendix 2).

## Levels of evidence

For each statement, the level of evidence of the primary reference/s has been included according to the NHMRC Levels of Evidence (NHMRC, 2010) (see **Appendix 1** for the NHMRC evidence hierarchy and explanatory notes). NHMRC levels of evidence were chosen as the NHMRC is the major funding body of the Aphasia CRE (and was also the major funding body of the CCRE in Aphasia Rehabilitation), and also approve the Australian and New Zealand Clinical Guidelines for Stroke Management (SF, 2024). As the NHMRC levels of evidence do not include a level for every type of study design the following decisions have been made:

- Where the highest available evidence uses a **single case experimental design**, a level IV has been assigned
- Where the study uses a **qualitative design**, the study is labelled qualitative or ‘qual.’

It must be emphasised that this system only allows for the level of study design to be assessed, which is different to the grade of evidence. The grade of evidence (e.g. A, B, C, D) takes into account the level of evidence along with evidence quantity, quality, consistency, clinical

impact, generalisability and applicability. This additional step was not feasible at the time of developing these statements. As there is no current consensus on ranking of qualitative studies, in this iteration of the updated best practice statements, qualitative studies are utilised as evidence but are not assigned a ranking. We believe the evidence emerging from co-design and co-production research, research concerning consumer and health professional perspectives, and other qualitative research is vital in shaping policy and guideline clinical decisions. Therefore, we classified qualitative evidence in a stand-alone category. Further, in order to make the statements/rationales as clinically relevant as possible, we have chosen to also include lower-level evidence (e.g. scoping reviews or qualitative research) when considered useful for context in addition to higher level evidence (e.g., systematic review of RCTs).

In addition to the NHMRC levels, we also describe in more detail the studies included in systematic reviews, for example “systematic review of 10 studies (2 RCTs, 5 group studies, 3 case series)”. We believe this additional detail allows clinicians to better gauge the level of evidence attached to a statement and to judge how they want to utilise the information based on that level of evidence. Note the information on included studies for systematic reviews is reported as closely as possible to how it was reported in the paper itself - which is why there is variation across studies in terminology/level of detail.

A disadvantage of the NHMRC-based approach is that it does not necessarily do justice to the important research done in emerging fields, where higher-level evidence (e.g. meta-analyses or systematic reviews of RCTs) may not be available. A good example is the valuable research into health experiences of Aboriginal and Torres Strait Islander people, which often consists of qualitative studies (e.g. Ciccone et al., 2019). This





field has developed rapidly since the publication of the 2014 AARP and provides clinicians and researchers with much-needed guidance. We therefore want to stress that assigning lower-level evidence to studies does not negate their importance. Indeed, current constructs of evidence-based practice (e.g. EBP-4; Hoffman et al., 2017) include not just the best research evidence but the clinician's expertise (a combination of experience, education and skills), the patient/client's own personal preferences and values, and the practice context where the healthcare interaction is occurring. We also want to acknowledge that much of the research used for the AARP is based on a Western research tradition and want to emphasise the importance of other perspectives (e.g. Aboriginal ways of knowing and doing research - see e.g., Bessarab & Ng'andu, 2010; Haynes et al., 2022) and the integration of different worldviews (Nakata, 2010).

## PERSON-CENTRED CARE

The concept of person-centred care has continued to gain traction over the past decade since the publication of the first edition of the AARP (Forsgren et al., 2020). Person-centred care is an approach to healthcare in which the perspectives, values, and preferences of an individual and their family and/or community inform treatment and in which individuals are empowered to make decisions and participate in their own healthcare (World Health Organisation, n.d.). While the AARP contains evidence-based guidelines, which should inform treatment, clinicians must therefore also consider each client's individual context. Factors including age, employment, family and community roles, and personal activities may all influence a person's treatment preferences

and priorities, and speech pathologists should collaborate with clients to ensure that their needs are met (SPA, 2020)

Use of a person-centred approach is especially important for culturally responsive practice as it enables self-determination of health and requires clinicians to consider systemic and societal factors that can influence clients' access to and experience of healthcare, including speech pathology, in the Australian healthcare system. This is particularly relevant given the fact that the speech pathology profession in Australia is overwhelmingly white, young, female, and native English-speaking (Armstrong et al., 2024; Bennett et al., 2019; SPA, 2015). This is reflective of the white origins of Australian healthcare, where monoculturalism may lead to marginalisation of certain populations and give rise to racism at individual and systemic levels (Mayes et al., 2020; SPA, 2023a). Factors related to racism can lead to detrimental consequences including hesitancy to interact with healthcare services and worse overall health outcomes (Mayes et al., 2020; SPA, 2023a; Watego et al., 2021). Speech Pathology Australia has declared in their Anti-Racism Position Statement that all clinicians have a responsibility to combat racism at individual and system levels (SPA, 2023a). This position is supported by the AARP team, who encourage clinicians to read both documents together. Culturally responsive practice may enable self-determination of health and help to combat racism when speech pathologists work with people who are from cultural and linguistic backgrounds different from their own (see also the Professional Standards for Speech Pathologists in Australia, SPA, 2020).

Culturally responsive care is about acknowledging cultural and linguistic diversity and responding to the influence of (personal) history, culture, language, and social background (SPA, 2020). Effective intercultural communication requires reflexivity on the part of the speech



pathologist, over time, to build awareness of how own identities and experiences impact upon intercultural communication (Armstrong, 2023).

In order to facilitate culturally responsive care, Hyter (2014) proposes clinicians engage in the following key constructs:

1. Global humility: Recognising that other people may have different but equally valid values and be open to learning from them.
2. Self-awareness: Critically reflecting on one's personal and professional assumptions and bias and how these influence one's attitudes to healthcare.
3. Global knowledge: Openness to constantly learning from others' cultural beliefs, values, assumptions, and worldviews.
4. Global reciprocity: Negotiating cultural differences through critical thinking and adjusting practice to be recognisable and comfortable for the client.

### **Aboriginal and Torres Strait Islander people**

In recent years, increasing research has highlighted the Aboriginal concepts of health and wellbeing. Aboriginal health and wellbeing is holistic and it encompasses physical, spiritual, social, emotional and cultural factors for individuals and their communities (Australian Institute of Health and Welfare, 2022). Much can and should be learned from this holistic approach to health, particularly given the widespread adversity and (intergenerational) trauma caused by past and current policies and practices posed upon Aboriginal and Torres Strait Islander people. Clinicians should practice trauma-informed care, reducing the risk of re-traumatisation by being sensitive to individual needs (Tujague & Ryan, 2021). The concept of clinical yarning (Bessarab & Ng'andu,

2010; Lin et al., 2016; see also statement 7.8) is particularly helpful in this regard and should be a prominent and continuing feature of speech pathology when working with Aboriginal and Torres Strait Islander people and their families/communities.

The educational resources and literature provided throughout the AARP can help people on the journey to self-reflection and learning, although we want to stress that engagement and connecting with local Aboriginal and Torres Strait Islander communities and culture and building relationships is key, not least because of the rich diversity of Aboriginal and Torres Strait Islander peoples and cultures across Australia (e.g., Cochrane et al., 2020; Penn & Armstrong, 2017). Being aimed at clinicians nation-wide, the AARP does not capture these personal and cultural differences – this is an inherent limitation of the document. We therefore strongly encourage speech pathologists to build and maintain relationships with local Aboriginal and Torres Strait Islander communities in order to facilitate trust and learning to work together with clients and their families to deliver the best possible healthcare.

### **People from Culturally and Linguistically Diverse backgrounds**

Australia is a country with rich cultural and linguistic diversity, with close to thirty percent of the population having been born overseas, almost half of the population having at least one parent who was born overseas, and over twenty percent of Australians speaking a language other than English at home (Australian Bureau of Statistics, 2022a; 2022b). Treatment priorities can differ across cultures, communities, and families (Centeno et al., 2021) and should be taken into account during aphasia rehabilitation, particularly when the cultural background of the speech pathologist differs to that of the person and family they



are supporting. It is therefore important for clinicians to be mindful of the impacts of individuals' culture and language at every stage of aphasia rehabilitation. It is also important for creating successful intercultural communication that clinicians be mindful and aware of their own culture, recognising how it shapes their personal and professional thoughts and behaviours (Armstrong, 2023).

Culturally responsive healthcare is key when working with people from culturally and linguistically diverse backgrounds. Such healthcare is respectful of, and relevant to, the health beliefs, health practices, and cultural and linguistic needs of individuals, their families, and communities (Migrant & Refugee Women's Health Partnership, 2019).

### ***Integration of CALD and Aboriginal and Torres Strait Islander content in the AARP***

In the previous AARP (2014), CALD and Aboriginal and Torres Strait Islander-related statements were presented separately within a section on "enhancing personal factors". With the updated AARP, we have attempted to strike a better balance between on the one hand, these statements being easy to locate for clinicians looking for guidance, and on the other hand clearly presenting these statements as important throughout all phases of aphasia rehabilitation, rather than a separate perhaps afterthought. A stronger focus on working with CALD and Aboriginal and Torres Strait Islander clients, with more details and specific recommendations was also previously suggested by clinicians working with the AARP (Trebilcock et al., 2024). For this reason, these statements have been woven throughout all relevant sections of the AARP, as well as presented separately in the "enhancing personal factors" domain.

We want to acknowledge here that the presentation of CALD and Aboriginal and Torres Strait Islander content as separate from or interwoven with other content is a contentious issue and there are good arguments in favour of both approaches, without a single clear-cut or agreed upon solution. In cooperation with experts on the topic, we believe that our solution is a good compromise between the two approaches. We will continue to monitor discussions about this area and decision for the next AARP update and look forward to reading more and learning from researchers who are Aboriginal and Torres Strait Islander and/or from CALD backgrounds in the future.

### **Terminology**

Care has been taken to phrase statements using language and terminologies that are as appropriate and culturally safe as possible at the time of publication, considering the most recent developments in these fields. We are aware, however, that developments in these fields are rapid and that the AARP (being a relatively static document) may therefore not reflect the most appropriate terminology and/or practice in the future. We acknowledge this as an inherent weakness of the AARP and are dedicated to ensuring that future editions of this document will be updated accordingly.

It is important to point out here that the term "CALD" can be considered "othering" and "reductive" as it does not do justice to the rich diversity within this group (Armstrong et al., 2024). We acknowledge these limitations but have chosen to use this term in the context of the AARP so as to be able to provide specific clinically relevant guidance when working with people with this background and given the prevalence of this term in Australia.



We have chosen to use the term “Aboriginal and Torres Strait Islander people” or “Aboriginal people” when referring to Australia’s First Peoples. We want to stress that whenever we use “Aboriginal people”, we intend this to also refer to Torres Strait Islander people (see Australian Public Service Commission, 2022).

### ***Additional CALD and Aboriginal and Torres Strait Islander resources***

We highly recommend readers refer to the references that are mentioned throughout the AARP, in particular in section 7. Additionally, listed below are some organisations and resources that may be helpful:

- Indigenous Allied Health Australia (IAHA). IAHA offers a range of resources (including the IAHA Framework on Cultural Responsiveness in Action (<https://iaha.com.au/workforce-support/training-and-development/cultural-responsiveness-in-acti%20on-training>)), and also offers Cultural Responsiveness Training.
- Speech Pathology Australia (SPA). At the time of writing, SPA has released a position statement regarding combatting racism (<https://www.speechpathologyaustralia.org.au/Public/libraryviewer?ResourceID=54>). It has also released a Reconciliation Action Plan ([https://www.speechpathologyaustralia.org.au/Public/Public/About-Us/Reconciliation/Reconciliation Action Plan.aspx](https://www.speechpathologyaustralia.org.au/Public/Public/About-Us/Reconciliation/Reconciliation%20Action%20Plan.aspx)), as well as a Culturally Responsive Capabilities Framework for working with Aboriginal and Torres Strait Islander People (<https://www.speechpathologyaustralia.org.au/public/libraryviewer?ResourceID=884>)

- Western Australia Centre for Rural Health eLearning (<https://lms.wacrh.uwa.edu.au/login/index.php>), which offers an eLearning module on Clinical Yarning.
- Federation of Ethnic Communities’ Councils of Australia (<https://fecca.org.au/resources/fact-sheets/>) for guidance on working with people from CALD backgrounds.
- Centre for Cultural Diversity and Aging (<https://www.culturaldiversity.com.au/>) for training/development, multilingual resources, practice guides and more.

## **ONLINE, COMPREHENSIVE AND CONCISE FORMS OF THE BEST PRACTICE STATEMENTS**

The Australian Aphasia Rehabilitation Pathway best practice statements are available in three different forms:

- 1. The Australian Aphasia Rehabilitation Pathway website [www.aphasiapathway.com.au](http://www.aphasiapathway.com.au)** The website contains a detailed introduction to the best practice statements, the 86 statements and their rationales, references, and level of evidence for each statement. It also provides a variety of additional literature, links and practical resources for clinicians.
- 2. The Australian Aphasia Rehabilitation Pathway Comprehensive Supplement.** The comprehensive supplement contains a detailed introduction to the best practice statements, the 86 statements and their rationales, references, and level of evidence for each statement. It also contains a full reference list of studies cited in the supplement.



**3. The Australian Aphasia Rehabilitation Pathway Concise Supplement.** The concise supplement contains the list of 86 best practice statements presented in a table format within a Microsoft Word document. This format may support audit or implementation of the best practice statements.

Both the comprehensive and concise supplements can be downloaded from the Australian Aphasia Rehabilitation Pathway website: [www.aphasiapathway.com.au](http://www.aphasiapathway.com.au)

## DISCLAIMER

The best practice statements are provided as a guide to appropriate practice, subject to the clinician's judgement and the client's preference in each individual case. The statements are designed to provide information to assist decision-making and are based on the best evidence available at the time of their development.

## MANAGING CONFLICT OF INTEREST

Members of the AARP committee acknowledge that they had potential conflict of interest with specific BPS where their work was cited as rationale for statements. To minimise conflict of interest throughout the statement review process we asked project team members without conflict of interest to review and make recommendations about specific statements.

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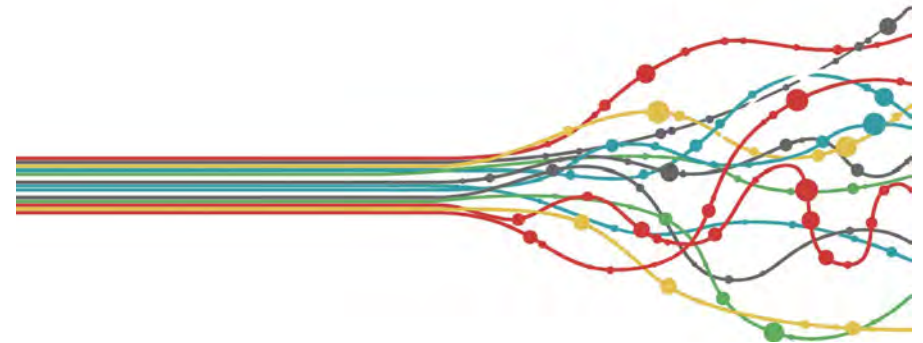
We would like to acknowledge:

- **The 2014 AARP working group** who developed and synthesised the initial 2014 best practice statements including Dr Emma Thomas, Professor Linda Worrall, Professor Miranda Rose, Professor Leanne Togher and Professor Emma Power. Ms Justine Robins and Ms Emma Leach who provided administrative support for the development of the CCRE Aphasia Best Practice Statements.

- **RAND/UCLA panel members for the 2014 AARP:** Professor Emma Power (lead), Professor Linda Worrall, Professor Miranda Rose, Professor Leanne Togher, Professor Lindsay Nickels, Professor Deborah Hersh, Associate Professor Erin Godecke, Ms Claire O'Connor, Ms Sue Lamont and Ms Kim Clarke.
- **The 2024 AARP project officers:** Dr Sam Harvey and Dr Pauline Cuperus
- **The 2024 AARP committee:** Professor Miranda Rose (Chair), Dr Caroline Baker, Associate Professor Erin Godecke, Dr Sam Harvey, Mr Kelvin Hill, Associate Professor Robyn O'Halloran, Dr John Pierce, Professor Emma Power, Dr Kirstine Shrubsole, Associate Professor Sarah J. Wallace, Ms Cassie Wilcox.
- **Specialist input to statement development (alphabetical):** Dr Lisa Anemaat, Dr Caroline Baker, Dr Nicholas Behn, Dr Emily Brogan, Dr Sonia Brownsett, Dr Marcella Carragher, Professor Lucy Dipper, Dr Sarah D'Souza, Dr Emma Finch, Ms Amy Ford, Dr Abby Foster, Associate Professor Erin Godecke, Dr Solène Hameau, Dr Sam Harvey, Professor Deborah Hersh, Associate Professor Annie Hill, Professor Ian Kneebone, Dr Lucie Lanyon, Ms Chelsea Larkman, Dr Karen McLellan, Ms Kathleen Mellahn, Dr Maya Menahemi-Falkov, Dr Zaneta Mok, Dr Leana Nichol, Professor Lyndsey Nickels, Dr Sarah Northcott, Dr Denise O'Connor, Associate Professor Robyn O'Halloran, Ms Simone Owen, Ms Kathryn Pettigrove, Dr John Pierce, Professor Emma Power, Dr Alexia Rhodes, Dr Rachael Rietdijk, Professor Miranda Rose, Dr Brooke Ryan, Dr Samantha Siyambalapitiya, Dr Kirstine Shrubsole, Dr Gillian Steel, Professor Leanne Togher, Ms Genevieve Vuong, Dr Sarah E. Wallace, Associate

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- **The AARP editor:** Ms Kathryn Pettigrove



# PART 2 - APHASIA REHABILITATION BEST PRACTICE STATEMENTS

## SECTION 1: RECEIVING THE RIGHT REFERRALS

BEST PRACTICE STATEMENTS 1: RECEIVING THE RIGHT REFERRALS	REFERENCES	EVIDENCE LEVEL
<b>Community awareness of aphasia</b>		
<p><b>1.1 Community awareness of aphasia should be raised.</b></p> <p><b>Rationale:</b> It is well recognised that aphasia is largely unknown to the public (Code et al., 2001; Elman et al., 2000; Mavis, 2007; Simmons-Mackie et al., 2002). A lack of public awareness of aphasia has resulting economic, psychosocial, and political consequences (Elman et al., 2000). Various phone and face-to-face surveys across multiple English-speaking countries show that while 9.25% to 18% of people have heard about aphasia, only 1.54% to 11.53% have some basic knowledge of aphasia (Code et al., 2001; Mavis, 2007; Simmons-Mackie et al., 2002).</p> <p>Internationally, members of the aphasia community (people with aphasia, family members, friends, carers, clinicians, researchers, volunteers, and consumer organisation representatives) agree that raising community awareness and understanding of aphasia is essential (Bennington et al., 2024). Public awareness needs to be raised by as many people affected by aphasia as possible, including speech pathologists. This can occur in both small and large ways across levels of care and service planning.</p>	<ul style="list-style-type: none"> <li>• Code et al., 2001: Qualitative study</li> <li>• Bennington et al., 2024: Survey</li> <li>• Elman et al., 2000: Discussion paper</li> <li>• Mavis, 2007: Qualitative study</li> <li>• Simmons-Mackie et al., 2002: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>



<p><b>1.2 In awareness campaigns, it should be highlighted that aphasia can be an early and persisting symptom of stroke.</b></p> <p><b>Rationale:</b> Recognition of stroke symptoms and subsequent activation of emergency services are critical to ensuring optimal outcomes (SF, 2024). ‘Speech problems’ are commonly reported during ambulance calls for stroke events but are often not associated with recognition of stroke (Mosley et al., 2007). Increased recognition of aphasia as a stroke symptom by the community and emergency services, including emergency call operators, may facilitate appropriate, timely stroke care during the hyper-acute phase of care.</p>	<ul style="list-style-type: none"> <li>• Mosley et al., 2007: Non-randomised observational study</li> <li>• SF, 2024: Clinical guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>1.3 Appropriate aphasia-friendly stroke information should be given to people with aphasia and their family, friends and carers.</b></p> <p><b>Rationale:</b> Research shows that stroke patients (including those with aphasia) and their families are dissatisfied with the stroke information provided to them and have a poor understanding of stroke and associated issues (Forster et al., 2012). There is evidence that provision of stroke information can improve patient and carer knowledge of stroke, increase aspects of patient satisfaction, and may reduce patient depression scores (Forster et al., 2012). However, the provision of printed health education materials to people with aphasia does not routinely take into consideration their language and associated reading difficulties (Rose et al., 2003). Aphasia-friendly materials have been shown to assist people with aphasia to comprehend health information (Rose et al., 2003). Additionally, providing information in a way that actively involves patients and families, such as offering repeated opportunities to ask questions, has been shown to be more effective than providing information on one occasion only (Forster et al., 2012).</p> <p>Some examples of useful stroke and aphasia resources include <i>the Aphasia Handbook</i> (SF/AAA, 2023), <i>My Stroke Journey</i> (SF, 2023 – also available in other languages), and <i>Our Stroke Journey</i> (SF, 2021).</p>	<ul style="list-style-type: none"> <li>• Forster et al., 2012: Cochrane review</li> <li>• Rose et al., 2003: Pre and post experimental design</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>





## Communication training of health professionals

### 1.4 Speech pathologists should provide education about the characteristics of aphasia and training on supported communication techniques to all people involved in the care of people with aphasia.

**Rationale:** Health professionals, especially those in a community setting, may have a lack of knowledge about aphasia and find it difficult to communicate well with people with language impairments to maximise health outcomes (Burns et al., 2015; Casey et al., 2023). For some professionals such as emergency medical services providers (paramedics) and emergency department nurses, a knowledge of aphasia is important to facilitate diagnosis of stroke through screening protocols (Patel et al., 2022). Understanding the characteristics of aphasia and how to communicate well with the person with aphasia may enhance health professionals' communication with their clients and ensure appropriate referrals to a speech pathologist.

Communication partner training can improve the knowledge, skills, and attitudes of communication partners of people with aphasia. For some communication partners, such as health professionals, students and volunteers, CPT can result in (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016):

- increased communication partner knowledge of the characteristics of aphasia,
- increased use of effective communication strategies,
- decreased use of non-supportive strategies,
- increased ability to obtain accurate information,
- increased ability to establish rapport, and
- increased self-confidence and positivity towards communication, all of which may enhance timely and appropriate referrals for people with aphasia.

Research has confirmed the CPT outcomes for unfamiliar partners are similar across varied modes of delivery including face-to-face, tele-delivery or online training formats (Cameron et al., 2019, Finch et al., 2020; Heard et al., 2017; Power et al., 2020).

- Burns et al., 2015: Qualitative study
- Cameron et al., 2019: RCT
- Casey et al., 2023: Qualitative study
- Finch et al., 2020: Qualitative study
- Heard et al., 2017: Parallel randomised trial
- Patel et al., 2022: Retrospective chart review
- Power et al., 2020: RCT
- **Simmons-Mackie et al., 2010: Systematic review of 31 studies (11 group designs, 8 case studies, 7 SCED, 5 qualitative studies)**
- **Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group design, 11 case studies, 2 qualitative studies, 1 SCED)**

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<b>Referral process</b>		
<p><b>1.5 People with acute onset of aphasia should be suspected of having a stroke and transferred directly to a hospital with dedicated acute stroke services.</b></p> <p><b>Rationale:</b> Acute onset aphasia is a common sign of stroke, and prompt recognition of this may facilitate appropriate, timely stroke care during the hyper-acute phase of care. There is strong evidence that patients who receive timely and organised stroke unit care are more likely to survive their stroke, return home and make a good recovery (Langhorne &amp; Ramachandra, 2020).</p>	<ul style="list-style-type: none"> <li>● Langhorne &amp; Ramachandra, 2020: Cochrane review</li> </ul>	<ul style="list-style-type: none"> <li>● I</li> </ul>
<p><b>1.6 All stroke patients should be screened using a valid and reliable tool that is sensitive to the presence of aphasia.</b></p> <p><b>Rationale:</b> Prompt, accurate identification of aphasia in stroke patients is an essential component of stroke care. Efficient and effective screening procedures enable all patients with aphasia to receive appropriate education, support, and intervention, and promote the optimisation of rehabilitation outcomes. Inadequate screening procedures risk missed diagnoses, inappropriate patient management and resultant unnecessary healthcare burden. Aphasia is a common consequence of stroke; therefore, all stroke patients should be screened for language deficits in the acute post-recovery phase of care.</p>	<ul style="list-style-type: none"> <li>● N/A</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>
<p><b>1.7 Any person with suspected aphasia should be referred to a speech pathologist.</b></p> <p><b>Rationale:</b> There is a paucity of information on the best procedure (e.g., blanket referral) for referring people with aphasia to speech pathology services. However, it has been suggested that the multidisciplinary team should assess stroke patients and formulate a management plan within 24-48 hours of admission (The Canadian Stroke Strategy, 2010). Organised systems and protocols are required to enable the rapid transfer of stroke patients from the emergency department to a stroke unit and referral to all multidisciplinary members of the team, including speech pathology.</p>	<ul style="list-style-type: none"> <li>● The Canadian Stroke Strategy, 2010: Clinical guidelines</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>



<p><b>1.8 Speech pathology services for people with aphasia, including those in the community, should be promoted to all potential referral agencies to ensure appropriate access to services.</b></p> <p><b>Rationale:</b> It is recognised that some people with aphasia post-stroke may not present to a hospital or be referred to the speech pathology service before they are discharged. It is therefore important that potential referring services (e.g., general practitioners, community-based health professionals, aged-care facilities) are aware of aphasia and its impacts, and how to refer to speech pathology services.</p>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
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## SECTION 2: OPTIMISING INITIAL CONTACT

BEST PRACTICE STATEMENTS 2: OPTIMISING INITIAL CONTACT	REFERENCES	EVIDENCE LEVEL
<b>Initial assessment</b>		
<p><b>2.1 People with suspected aphasia should receive assessment by a speech pathologist to determine the presence and severity of aphasia.</b></p> <p><b>Rationale:</b> The Australian Clinical Guidelines for Stroke Management (SF, 2024) aphasia guidelines recommend that patients with suspected communication difficulties undergo comprehensive evaluation by a specialist clinician. In many healthcare institutions this evaluation is conducted by the speech pathologist. A comprehensive clinical examination enables early identification and diagnosis of patients who, if unattended, could be left with avoidable disability and resultant healthcare burden (Sackett, 1992). Expedient and accurate diagnosis results in treatment that is appropriate and cost-effective (Aliu &amp; Chung, 2012). Severity of aphasia has been demonstrated to be a predictor of patient prognosis and outcome (Kertesz &amp; McCabe, 1977; Lazar et al., 2010; Pedersen et al., 2004). Accurate determination of patient status is therefore paramount in planning treatment options and guiding management plans. Early identification of the presence and severity of aphasia by a speech pathologist is therefore a vital step in ensuring the implementation of appropriate intervention plans and optimisation of service delivery options.</p>	<ul style="list-style-type: none"> <li>• Aliu &amp; Chung, 2012: Discussion paper</li> <li>• Kertesz &amp; McCabe, 1977: Non-randomised observational study</li> <li>• Lazar et al., 2010: Non-randomised observational study</li> <li>• Pedersen et al., 2004: Non-randomised observational study</li> <li>• Sackett, 1992: Background paper</li> <li>• SF, 2024: Clinical guidelines</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>2.2 Stroke patients with suspected aphasia should receive assessment by a speech pathologist to determine the patient’s ability to communicate their healthcare needs.</b></p> <p><b>Rationale:</b> Approximately 50% of stroke inpatients have difficulty communicating their healthcare needs in hospital (O’Halloran et al., 2012). The incorporation of patient needs and values in healthcare decision-making is a key component in the delivery of evidence-based care (Hoffman et al., 2024). Patients who are unable to communicate their healthcare needs are therefore at risk of not</p>	<ul style="list-style-type: none"> <li>• Bartlett et al., 2008: Retrospective chart review</li> <li>• Carragher et al., 2024: Qualitative study</li> <li>• Clancy et al., 2020: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• IV</li> </ul>



<p>receiving evidence-based healthcare. Patients with aphasia who are unable to communicate effectively with healthcare providers may receive inadequate and inappropriate health care in hospital and experience feelings of distress and anger (Carragher et al., 2024; Clancy et al., 2018; Heard, et al., 2020; Hemsley et al., 2013; Parr et al., 1997). Additionally, people with communication difficulties, including people with aphasia, are three times more likely to experience an adverse event in hospital (Bartlett et al., 2008), have poorer patient experience (Hoffman et al., 2005), and poorer clinical outcomes (Stransky et al., 2018). Adequate assessment of the functional communication abilities of each person with suspected aphasia is therefore imperative in ensuring adequate support for all stroke patients.</p>	<ul style="list-style-type: none"> <li>• Heard et al., 2022: Qualitative study</li> <li>• Hemsley et al., 2013: Qualitative study</li> <li>• Hoffman et al., 2005: Survey</li> <li>• Hoffmann et al., 2024: Textbook</li> <li>• O’Halloran et al., 2012: Non-randomised observational study</li> <li>• Parr et al., 1997: Qualitative study</li> <li>• <b>Stransky et al., 2018: retrospective chart review</b></li> </ul>	
<p><b>Initial prognosis</b></p>		
<p><b>2.3 Individual language recovery cannot be accurately predicted immediately post stroke, therefore all individuals with post-stroke aphasia should be offered aphasia rehabilitation services.</b></p> <p><b>Rationale:</b> The Australian Stroke Coalition (ASC) report that the current literature fails to identify any clear indicators (clinical or otherwise) that could be used to definitively confirm someone as ineligible for or unlikely to benefit from rehabilitation. Based on this, the ASC Assessment for Rehabilitation: Pathway and Decision-Making Tool (ASC Working Group, 2012) recommends that all patients (including people with aphasia) be considered for rehabilitation unless they meet one of four exceptions: (i) return to pre-morbid function, (ii) palliation, (iii) coma and/or unresponsive, not simply drowsy and (iv) declined rehabilitation.</p>	<ul style="list-style-type: none"> <li>• ASC Rehabilitation Working Group, 2012: Pathway &amp; decision-making tool</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>Initial management</b></p>		
<p><b>2.4 Speech pathologists should talk with the person with aphasia and their family, friends and carers about the roles the client has in their family and community.</b></p> <p><b>Rationale:</b> Apart from helping to build a relationship, such conversations may reveal important information that can guide a speech pathologist’s interactions and management. For example, it may</p>	<ul style="list-style-type: none"> <li>• Coffin et al, 2004: Qual.</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p>become apparent that the client is an Aboriginal Elder in which case a particular level of respect is appropriate (Coffin et al., 2004), or the client may have a strong community role involving public speaking which may influence goal setting and selection of intervention strategies.</p>		
<p><b>2.5 People with aphasia and their family, friends and carers should be offered information about stroke and aphasia tailored to meet their changing needs using relevant language and communication formats.</b></p> <p><b>Rationale:</b> Education is a key component of aphasia rehabilitation which supports access to services and participation in healthcare decision-making (Rose et al., 2018). This can improve the way people with aphasia and their carers engage with rehabilitation, and their levels of self-efficacy (Eames et al., 2013). People with aphasia report the need for information about the causes and consequences of aphasia, their prognosis, and what to expect at different stages of recovery (Worrall et al., 2011).</p> <p>This information should also be provided to families, carers, and friends of people with aphasia (Rose et al., 2018; Simmons-Mackie et al., 2017) so they can become more effective communication partners and advocates and ensure ongoing inclusion of the person with aphasia. Information should be tailored to meet individual needs using relevant language and communication formats (Worrall et al., 2011), including aphasia-friendly materials for people with aphasia (Rose et al., 2003). Information should be provided at different stages in the recovery process with opportunities for follow-up, clarification, and reinforcement of information (Crocker et al., 2021).</p> <p>Some examples of useful stroke and aphasia resources include <i>the Aphasia Handbook</i> (SF/AAA, 2023), <i>My Stroke Journey</i> (SF, 2023 – also available in other languages), and <i>Our Stroke Journey</i> (SF, 2021).</p>	<ul style="list-style-type: none"> <li>● Crocker et al., 2021: Cochrane review (not restricted to aphasia)</li> <li>● Eames et al., 2013: RCT</li> <li>● Rose et al., 2003: Pre and post experimental design</li> <li>● Rose et al., 2018: Qualitative study</li> <li>● Simmons-Mackie et al., 2017: Qualitative study</li> <li>● Worrall et al., 2011: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>● I</li> </ul>
<p><b>2.6 Speech pathologists can offer education and training to support families, friends and carers of people with aphasia to become skilled conversational partners.</b></p> <p><b>Rationale:</b> People with aphasia may rely heavily on close communication partners such as family members in the early stages after stroke (Ford et al., 2024). However, communication partners such as family members report that communication can be challenging with people with aphasia after</p>	<ul style="list-style-type: none"> <li>● Croteau et al., 2020: Qualitative study</li> <li>● Ford et al., 2024: Qualitative study</li> <li>● Howe et al., 2012: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>● III-2</li> </ul>



<p>stroke (Croteau et al., 2020; Howe et al., 2012) and many express a need for communication training (Howe et al., 2012).</p> <p>Communication partner training can improve the knowledge, skills, and attitudes of communication partners of people with aphasia. While the level of evidence for partner training efficacy is higher for health professionals, there is still developing evidence for training family, friends and carers. Therefore, for any family, friends and carers who are ready (e.g., in terms of availability, motivation, level of carer burden: Shrubsole et al., 2023), CPT can be provided. Research suggests that people with aphasia may be more able to participate in conversation with a skilled, supportive communication partner (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016).</p>	<ul style="list-style-type: none"> <li>● <b>Simmons-Mackie et al., 2010: Systematic review of 31 studies (11 group designs, 8 case studies, 7 SCEDs, 5 qualitative studies)</b></li> <li>● Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group designs, 11 case studies, 2 qualitative studies, 1 SCED)</li> <li>● Shrubsole et al., 2023: Systematic review of 17 studies (5 qualitative, 4 quantitative, 8 mixed methods)</li> </ul>	
<p><b>2.7 Speech pathologists should provide hospital staff with individualised communication strategies that are tailored to enhance both care-related and social and emotional communication with each patient with aphasia.</b></p> <p><b>Rationale:</b> People with communication difficulty are three times more likely to experience preventable adverse events in hospital (Bartlett et al., 2008). Adverse events for people with aphasia have been reported to be associated with specific difficulties communicating their needs to staff (Hemsley et al., 2013; Sullivan et al., 2023). However, effective and positive healthcare communication can improve patient experience (Bright &amp; Reeves, 2022; Clancy et al., 2018; D’Souza et al., 2021a; Heard et al., 2022) for people with communication disability in hospital settings. Individually tailored communication strategies can help facilitate healthcare communication (Carragher et al., 2021; Carragher et al., 2024; Clancy et al., 2018; D’Souza et al., 2021a; Heard et al., 2022; Shand et al., 2024).</p> <p>Each patient should be assessed by a speech pathologist to identify the patient’s communication needs and the tailored strategies that are effective in meeting these needs (Shand et al., 2024). Speech pathologists should recommend individually tailored communication support strategies to health staff. The successful implementation of communication strategies requires that recommendations are clearly communicated to health staff (Heard et al., 2022) who have knowledge of aphasia and positive attitudes towards communicating with people with a communication disability (O’Halloran et al., 2012).</p>	<ul style="list-style-type: none"> <li>● Bartlett et al., 2008: Retrospective chart review</li> <li>● <b>Bright &amp; Reeves, 2022: Qualitative meta-synthesis</b></li> <li>● <b>Carragher et al., 2021: Qualitative study</b></li> <li>● <b>Carragher et al., 2024: Qualitative study</b></li> <li>● <b>Clancy et al., 2020: Qualitative study</b></li> <li>● <b>D’Souza et al., 2021a: Qualitative study</b></li> <li>● <b>D’Souza et al., 2021d: Qualitative study</b></li> <li>● <b>Heard et al., 2022: Qualitative study</b></li> <li>● <b>Hemsley et al., 2013: Qualitative study</b></li> <li>● <b>O’Halloran et al., 2012: Qualitative meta-synthesis</b></li> <li>● <b>Shand et al., 2024: mixed methods study</b></li> </ul>	<ul style="list-style-type: none"> <li>● Qual</li> </ul>



<p>By providing strategies that target both transaction (i.e., the exchange of information) and interaction (i.e., the relational element of communication), therapeutic relationships can be fostered (Bright &amp; Reeves, 2022). This may in turn result in improved engagement in the rehabilitative process, a sense of safety, and promotion of wellbeing and adjustment to stroke during early recovery for people with aphasia (Bright &amp; Reeves, 2022; Clancy et al., 2020).</p>	<ul style="list-style-type: none"> <li>● <b>Sullivan et al., 2023: Qualitative study</b></li> </ul>	
<p><b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b></p>		
<p><b>7.5 Speech pathologists should routinely check Aboriginal and Torres Strait Islander status in clients' health records and with the clients themselves.</b></p>	<p>See section 7 for rationale and evidence</p>	
<p><b>7.6 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and family.</b></p>	<p>See section 7 for rationale and evidence</p>	
<p><b>7.8 Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.</b></p>	<p>See section 7 for rationale and evidence</p>	
<p><b>Additional considerations when working with clients with a CALD background</b></p>		
<p><b>7.15 Where a patient reports having used more than one language premorbidly, comprehensive information about the patient's language history should be obtained.</b></p>	<p>See section 7 for rationale and evidence</p>	





## SECTION 3: SETTING GOALS AND MEASURING OUTCOMES

BEST PRACTICE STATEMENTS 3: SETTING GOALS AND MEASURING OUTCOMES	REFERENCES	EVIDENCE LEVEL
<b>Goal setting</b>		
<p><b>3.1 Goal setting should be a dynamic process that is reviewed across the continuum of care in order to reflect the client and family context, wishes and language recovery.</b></p> <p><b>Rationale:</b> Goals change with time - as language recovery occurs, as people become familiar with the realities of rehabilitation, and as they encounter the challenges of living life with aphasia (Hersh et al., 2012). In order for the goals of aphasia management to remain suitable, relevant and motivating, goal setting should therefore be a continual process that is reviewed periodically across the continuum of care.</p>	<ul style="list-style-type: none"> <li>Hersh et al., 2012: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>Qual.</li> </ul>
<p><b>3.2 Therapists should explain the goal setting process to the person with aphasia and their family and carers in an accessible way.</b></p> <p><b>Rationale:</b> ‘Person-centred’ goal setting actively involves the person with aphasia and their family and includes education about the goal setting process. This includes education about realistic goal achievement with consideration of the environment and stage of rehabilitation. It may also involve explanations of terminology and discussions to establish a common understanding of what goals mean for each person involved in the process. The outcomes of goal-setting discussions should be made available in written, aphasia-friendly formats to the person with aphasia and their family.</p>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>GPP</li> </ul>



<p><b>3.3 Collaborative goal setting between the speech pathologist, person with aphasia, their family and other team members should primarily focus on the goals identified by the person with aphasia and their family with consideration of assessment findings.</b></p> <p><b>Rationale:</b> Patient-focused goal setting should centre on the goals and preferences identified by the person with aphasia and their family with consideration to assessment results. Discussing goals and the goal setting process prior to formal assessment can facilitate the development of patient-focused goals, as well as the appropriate selection of formal and informal assessment processes. Establishing goals that are meaningful to the person with aphasia and their family may enhance motivation and engagement in the rehabilitation process.</p>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>3.4 Systems should be established to ensure involvement of people with aphasia and their family as part of the rehabilitation team.</b></p> <p><b>Rationale:</b> It is important that people with aphasia and their family, friends and carers are involved in goal setting discussions with the multidisciplinary team. The literature proposes that a multidisciplinary team approach involving the client along with specialists such as speech pathologists, improves discussion and documentation of client goals (Rosewilliam et al., 2011). Developing multidisciplinary goals at the client’s bedside and/or holding regular family meetings to discuss goal setting and progress can be an effective way of including clients and their families in the goal setting and broader rehabilitative process.</p>	<ul style="list-style-type: none"> <li>• <b>Rosewilliam et al., 2011: Systematic review of 27 studies</b> (18 qualitative, 8 quantitative, and 1 mixed-method studies)</li> </ul>	<ul style="list-style-type: none"> <li>• III-2</li> </ul>
<p><b>3.5 The ‘SMARTER’ framework can be used to help ensure that goal setting is truly collaborative and client-centred.</b></p> <p><b>Rationale:</b> It is recommended that the SMARTER framework is used alongside SMART goals. This can encourage greater collaboration within the goal setting process, additionally emphasising potential areas of improvement. The SMARTER goal setting framework states that goals should be: Shared, Monitored, Accessible, Relevant, Transparent, Evolving and Relationship-centred (Hersh et al., 2012).</p>	<ul style="list-style-type: none"> <li>• Hersh et al., 2012: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>



<p><b>3.6 Maintaining or improving mental health and psychological wellbeing should be an explicit target of intervention for people with aphasia, therefore requiring attention during goal setting.</b></p> <p><b>Rationale:</b> Mood disorders occur frequently among stroke survivors (Campbell-Burton et al., 2012; Hackett &amp; Pickles, 2014; Knapp et al., 2020), and those with aphasia are at particularly high risk (Hilari et al., 2009; Kauhanen et al., 2000; Mitchell et al., 2017; Thomas &amp; Lincoln, 2008; Zanella et al., 2023).</p> <p>Given the significant negative and potentially long-term effects of depression on stroke survivors (Bartoli et al., 2018; Donnellan et al., 2010; House et al., 2001), maintaining or improving psychological wellbeing should be an explicit treatment target as negotiated and agreed upon with the person with aphasia. As such, goals relating to mental health and wellbeing should be included in goal-setting discussions.</p>	<ul style="list-style-type: none"> <li>• Bartoli et al., 2018: Systematic review and meta-analysis of 7 studies</li> <li>• Donnellan et al., 2010: Non-randomised observational study</li> <li>• Hilari et al., 2009: Qualitative study</li> <li>• House et al., 2001: Non-randomised observational study</li> <li>• Mitchell et al., 2017: Meta-analyses of 108 studies</li> <li>• Kauhanen et al., 2000: non-randomised observational study</li> <li>• Thomas &amp; Lincoln, 2008: Non-randomised observational study</li> <li>• Zanella et al., 2023: Non-randomised observational study</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>Measuring outcomes</b></p>		
<p><b>3.7 Outcome measures for people with aphasia should be relevant, meaningful, and important to stakeholders.</b></p> <p><b>Rationale:</b> People with aphasia, speech pathologists and funding agencies desire evidence of therapy outcomes that improve communication and enhance quality of life for people with aphasia (Simmons-Mackie et al., 2005). The ICF (WHO, 2001) provides one framework for organising and systematically documenting rehabilitation outcomes. The ICF is based on the assumption that the ultimate desired outcome of rehabilitation is improvement in the ability to participate in the areas of life most important to that person (Simmons-Mackie et al., 2005).</p>	<ul style="list-style-type: none"> <li>• Simmons-Mackie et al., 2005: Qualitative study</li> <li>• WHO, 2001: WHO framework</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>



<p><b>3.8 Outcome measures for people with aphasia should be suitable to the construct being measured and psychometrically robust (reliable, valid and sensitive).</b></p> <p><b>Rationale:</b> Measuring changes in aphasia requires testing that is “reliable enough to give consistent measures; sensitive enough to measure the improvement that the particular therapy involved is intended to produce; and valid so that it measures changes that are of real consequence in the patients’ lives” (Howard &amp; Hatfield, 1987, p.113). Reliability, validity and responsiveness have widespread usage and are discussed as being essential to the evaluation of outcome measures (Salter, Teasell, Bhogal, Zettler, &amp; Foley, 2012). Many outcome measures used within stroke rehabilitation have been assessed across these domains in the Evidence-Based Review of Stroke Rehabilitation (EBRSRS) relating to outcome measures (<a href="http://ebrsr.com/uploads/Chapter-21-outcomeassessment-SREBR-15_1.pdf">http://ebrsr.com/uploads/Chapter-21-outcomeassessment-SREBR-15_1.pdf</a>).</p>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>3.9 Outcome data for people with aphasia should be reported in a full and unbiased manner to people with aphasia and their families.</b></p> <p><b>Rationale:</b> Providing outcome data ensures that people with aphasia and their families have a clear understanding of what has been done in aphasia rehabilitation and how effective or ineffective it has been. It will provide them with the best basis to make informed choices regarding future engagement in intervention. Progress updates and outcome data should be provided in aphasia-friendly formats for people with aphasia, to promote their understanding (Rose et al., 2003).</p>	<ul style="list-style-type: none"> <li>• Rose et al., 2003: Pre and post experimental design</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b></p>		
<p><b>7.6 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and family.</b></p>	<p>See section 7 for rationale and evidence</p>	



<b>7.8 Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.</b>	See section 7 for rationale and evidence
<b>7.9 Goal setting and aphasia management should be person-centred and strength-based and should be considerate of Aboriginal and Torres Strait Islander models of health and wellbeing.</b>	See section 7 for rationale and evidence



## SECTION 4: ASSESSING

BEST PRACTICE STATEMENTS 4: ASSESSING	REFERENCES	EVIDENCE LEVEL
<p><b>4.1 The assessment process should be iterative and dynamic.</b></p> <p><b>Rationale:</b> Therapy, assessment and goal setting should continuously inform each other producing a responsive and tailored intervention sequence. The speech pathologist may start this process by talking to the person with aphasia, using supported conversation, to find out what is concerning and motivating the client. This will help to inform a collaborative goal setting process. The resulting goals should guide a tailored assessment strategy, which may involve a choice of formal and/or informal assessments, functional assessment, discourse analysis, assessment of mood and self-esteem, goal attainment scaling etc. The choice of treatment, following from the goal setting discussion and assessment results, should then be made with further collaborative discussion with the person with aphasia and their family. Ongoing assessment should also be woven into therapy as part of a dynamic process (Hersh et al., 2013).</p>	<ul style="list-style-type: none"> <li>Hersh et al., 2013: Background paper</li> </ul>	<ul style="list-style-type: none"> <li>GPP</li> </ul>
<p><b>4.2 Assessment should be therapeutic.</b></p> <p><b>Rationale:</b> The process of assessment should be a learning opportunity, not only for the speech pathologist, but also for the person with aphasia. The client should find the actual assessment to be therapeutic in that it provides information on which they can build and progress. The speech pathologist should make this process accessible by explaining clearly what the assessment is for and why it is worth doing. The results can be discussed afterwards, integrated into further discussion and clearly linked to the subsequent choices of therapy tasks. The links between assessment, goals and therapy should be transparent and part of an evolving and dynamic progression through the period of treatment (Hersh et al., 2013).</p>	<ul style="list-style-type: none"> <li>Hersh et al., 2013: Background paper</li> </ul>	<ul style="list-style-type: none"> <li>GPP</li> </ul>



<p><b>4.3 All domains of functioning and disability should be considered for assessment.</b></p> <p><b>Rationale:</b> The assessment process should be flexible and holistic and should consider whatever aspects are important or relevant to the person with aphasia and their family. For assessment that aims to guide treatment planning, assessment tasks should be designed accordingly, keeping in mind individual and family-centred needs. People with aphasia and their family, friends and carers identify a range of treatment outcome priorities for which assessment might be considered (Baker et al., 2022; Wallace et al., 2016; Wallace et al., 2017), including language, communication, emotional and physical wellbeing, life participation, quality of life and patient-reported impact of treatment and satisfaction with treatment (Baker et al., 2022; Wallace et al., 2017; Wallace et al., 2019). The ICF (WHO, 2001) can also be used as a framework to ensure all key aspects of health have been considered in the assessment process.</p>	<ul style="list-style-type: none"> <li>• Baker et al., 2022: Scoping review of 91 studies (39 RCTs, 22 cohort studies, 22 qualitative studies, 8 case series)</li> <li>• Wallace et al., 2016: Qualitative study</li> <li>• Wallace et al., 2017: Synthesis of 3 consensus studies</li> <li>• Wallace et al., 2019: Consensus statement</li> <li>• WHO, 2001: WHO framework</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>
<p><b>4.4 The person with aphasia and key conversation partners should be invited to contribute to the assessment.</b></p> <p><b>Rationale:</b> During assessment, the speech pathologist and client may learn a great deal from the opinions of key communication partners of the person with aphasia. These may include not only family members, but also friends, carers and other health professionals who communicate with the person with aphasia. It may also be useful to assess how these people act as conversation partners during this process.</p> <p>Just as aphasia is considered a family problem, intervention may involve family solutions, but this requires assessments to be dynamic, transparent and relevant to all those affected by the aphasia. Keeping key conversation partners involved and informed throughout the assessment process can be helpful in building a holistic approach to intervention. Family, friends and carers can also provide important background information relating to the person with aphasia’s medical history and premorbid status.</p>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p><b>4.5 All assessment results should be documented and reported in an accessible format to people with aphasia and their families.</b></p> <p><b>Rationale:</b> As with the results of goal setting discussions, the results of assessments should be presented in written, aphasia-friendly formats, so that clients and their families can take results away with them, learn from them, and keep them as part of a record of change over time. Clients should be encouraged to keep all their aphasia assessment results in one folder so that transferring to new speech pathologists results in a smooth transition. Having an accessible record of assessment results contributes to the idea that assessment can itself be a learning opportunity. This sharing of information can also equalise the relationship between the client and the speech pathologist, and increase the transparency of the rehabilitation process.</p>	<ul style="list-style-type: none"> <li>● N/A</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>
<p><b>4.6 Tele-assessment is an evidence-based alternative to in-person assessment.</b></p> <p><b>Rationale:</b> Several (systematic) reviews have concluded that tele-assessment is a valid and feasible alternative to in-person assessment (Hall et al., 2013; Teti et al., 2023). Tele-assessment may be particularly useful with clients living in remote areas and/or with severe mobility issues when travelling is not an option. While tele-assessment may be more challenging to administer in the case of more severe aphasia, accuracy of the assessment has been found to be high regardless of aphasia severity (Hill et al., 2009).</p> <p>Some factors that speech pathologists may want to be mindful of when considering tele-assessment are: 1) quality of the internet connection; 2) suitability of the particular assessment to be conducted remotely (e.g., assessments with pictures may need to be scanned prior to assessment); 3) suitability of the technology and its features to administer the assessment with high fidelity/validity; 4) the speech pathologist's need for training and support in administration of tele-assessment in order to ensure assessment fidelity; 5) the availability of family/carer assistance (particularly with setting up the technology required for assessment); and 6) the presence of other impairments (e.g., hemiparesis, hearing/vision problems) (Dekhtyar et al., 2020; Hall et al., 2013; Hilari et al., 2023; Hill et al., 2009).</p>	<ul style="list-style-type: none"> <li>● <b>Dekhtyar et al., 2020:</b> Non-randomised observational study</li> <li>● Hall et al., 2013: Systematic review of 4 assessment studies</li> <li>● Hilari et al., 2023: Qualitative study</li> <li>● Theodoros et al., 2009; Hill et al., 2009: randomised double-crossover agreement design,</li> <li>● Teti et al., 2023: Scoping review of 25 studies of which 2 involved assessment</li> </ul>	<ul style="list-style-type: none"> <li>● III-2</li> </ul>





<p><b>4.7 People with aphasia should be screened by health professionals, including speech pathologists, for mood problems (depression and/or anxiety).</b></p> <p><b>Rationale:</b> Mood disorders occur frequently after stroke (Campbell-Burton et al., 2012; Hackett &amp; Pickles, 2014; Knapp et al., 2020), with people with aphasia at particularly high risk of depression and anxiety (Hilari, 2011; Mitchell et al., 2017; Morris, et al., 2017; Kauhanen et al., 2000; Thomas &amp; Lincoln, 2008; Zanella et al., 2023).</p> <p>For these reasons, people with aphasia should be routinely screened for mood problems using supported communication techniques to enable self-report (e.g., Depression Intensity Scale Circles – Turner-Stokes et al., 2005) and/or validated observational tools (e.g., The Stroke Aphasia Depression Questionnaire – Sutcliffe &amp; Lincoln, 1998; The Behavioural Outcomes of Anxiety – Linley-Adams et al., 2014; Eccles et al., 2017) (see Van Dijk et al., 2016).</p>	<ul style="list-style-type: none"> <li>● Campbell-Burton et al., 2012: Systematic review and meta-analysis of 44 studies</li> <li>● Eccles et al., 2017: Phase 1: a cross-sectional questionnaire. Phase 2: a randomised longitudinal design</li> <li>● Hackett &amp; Pickles, 2014: Systematic review and meta-analysis of 61 studies</li> <li>● Hilari, 2011: Non-randomised observational study</li> <li>● Kauhanen et al., 2000: non-randomised observational study</li> <li>● Knapp et al., 2020: Systematic review and meta-analysis of 97 studies</li> <li>● Mitchell et al. 2017: Meta-analysis of 108 studies</li> <li>● Morris et al., 2017: Non-randomised observational study</li> <li>● Thomas &amp; Lincoln, 2008: Non-randomised observational study</li> <li>● Van Dijk et al., 2016: Systematic review of 15 quantitative studies</li> <li>● Zanella et al., 2023: Non-randomised observational study</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>
<p><b>4.8 People with suspected clinical depression or anxiety following mood screening should receive further mood assessment using a clinical interview by a medical practitioner and/or psychologist who is competent in communicating with people with aphasia.</b></p> <p><b>Rationale:</b> Mood disorders occur frequently among stroke survivors (Campbell-Burton et al., 2012; Hackett &amp; Pickles, 2014; Knapp et al., 2020), and the long-term negative impacts of this can be</p>	<ul style="list-style-type: none"> <li>● Baker et al., 2021: Qualitative study</li> <li>● Bartoli et al., 2018: Systematic review and meta-analysis of 7 studies</li> <li>● Donnellan et al., 2010: Non-randomised observational study</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>



<p>significant (Bartoli et al., 2018; Donnellan et al., 2010; House et al., 2001).</p> <p>Stroke survivors with aphasia are at particularly high risk of anxiety and depression (Hilari, 2011; Kauhanen et al., 2000; Mitchell et al., 2017; Morris et al., 2017; Thomas &amp; Lincoln, 2008; Zanella et al., 2023), while also being potentially harder to diagnose due to communication difficulties. For these reasons, after mood screening (see statement 4.7), people with aphasia who are suspected of having clinical depression or anxiety should receive further mood assessment from an appropriately qualified mental health professional (Kneebone, 2016).</p> <p>Communication difficulties can impact the provision of healthcare, particularly in managing mood problems (Baker et al., 2021; Carragher et al., 2021; Kagan, 1995). It is therefore important that the assessing professional is familiar with aphasia. Aphasia-friendly information and supported communication strategies should be used in the clinical interview.</p>	<ul style="list-style-type: none"> <li>● Campbell-Burton et al., 2012: Systematic review and meta-analysis of 44 studies</li> <li>● Carragher et al., 2021: Qualitative study</li> <li>● Hackett &amp; Pickles, 2014: Systematic review and meta-analysis of 61 studies</li> <li>● Hilari, 2011: Non-randomised observational study</li> <li>● House et al., 2001: Non-randomised observational study</li> <li>● Kagan et al., 1995: Theoretical review</li> <li>● Kauhanen et al., 2000: non-randomised observational study</li> <li>● Knapp et al., 2020: Systematic review and meta-analysis of 97 studies</li> <li>● Mitchell et al. 2017: Meta-analysis of 108 studies</li> <li>● Morris et al., 2017: Non-randomised observational study</li> <li>● Thomas &amp; Lincoln, 2008: Non-randomised observational study</li> <li>● Zanella et al., 2023: Non-randomised observational study</li> </ul>	
<p><b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b></p>		
<p><b>7.6 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and family.</b></p>	<p>See section 7 for rationale and evidence</p>	



<p><b>7.8 Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.</b></p>	<p>See section 7 for rationale and evidence</p>
<p><b>7.10 When considering assessment of aphasia in Aboriginal and Torres Strait Islander clients, Speech Pathologists should be mindful of the significant limitations of and potential harms in using formal assessment tools.</b></p>	<p>See section 7 for rationale and evidence</p>
<p><b>Additional considerations when working with clients with a CALD background</b></p>	
<p><b>7.16 Where possible, assessments should be used that are appropriate to the languages/dialects and cultural backgrounds of each client.</b></p>	<p>See section 7 for rationale and evidence</p>
<p><b>7.18 Language behaviours unique to the bi/multilingual person with aphasia such as translation, language mixing and code-switching should be considered in both assessment and intervention planning.</b></p>	<p>See section 7 for rationale and evidence</p>



## SECTION 5: PROVIDING INTERVENTION

BEST PRACTICE STATEMENTS 5: PROVIDING INTERVENTION	REFERENCES	EVIDENCE LEVEL
<p><b>5.1 Speech and language therapy should be provided to people with aphasia – this can target functional communication, reading comprehension, auditory comprehension, general expressive language and/or written language.</b></p> <p><b>Rationale:</b> The results of a Cochrane review (Brady et al., 2016) and a meta-analysis (the RELEASE collaborators, 2022a) showed that aphasia therapy was more effective than no aphasia therapy for all language modalities and for generalisation into everyday communicative activities. See <b>Treating different language modalities</b> (statements 5.9 to 5.14) for detailed recommendations relating to different language and communication domains.</p>	<ul style="list-style-type: none"> <li>• Brady et al., 2016: Cochrane review</li> <li>• The RELEASE collaborators, 2022a: Meta-analysis of 25 RCTs (959 IPD)</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>
<b>Therapy timing</b>		
<p><b>5.2 People with aphasia should be offered therapy commencing within the first month post stroke onset to gain benefits in receptive and expressive language and communication in everyday environments.</b></p> <p><b>Rationale:</b> A meta-analysis of individual participant data from 174 studies (47 RCTs, 18 non-RCTs, 5 registries and 104 case-series/cohort studies) investigated predictors of language recovery by modality (auditory comprehension, naming and functional communication), and overall language recovery (The RELEASE collaborators, 2021). The effects of age, aphasia chronicity and sex were included in the analyses.</p> <p>Treatment provided within one month of stroke onset was associated with the greatest mean absolute change in overall language ability, more correct responses in auditory comprehension and naming tasks, and greatest absolute gain in functional communication. The meta-analysis results were unable</p>	<ul style="list-style-type: none"> <li>• The RELEASE collaborators, 2021: Meta-analysis of 174 studies (5,928 IPD)</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>



<p>to account for the role of spontaneous recovery and this needs to be taken into consideration when interpreting these data.</p>		
<p><b>5.3 People with aphasia more than three months post onset of stroke should be offered intensive/high dose speech and language therapy if they can tolerate it.</b></p> <p><b>Rationale:</b> The results of a Cochrane review (Brady et al., 2016) suggested a benefit of intensive/high dose over non-intensive/low dose speech and language therapy on measures of functional communication. However, there was a significantly higher dropout rate from high dose/high intensity intervention, particularly in studies recruiting participants within 3 months of aphasia onset.</p> <p>In The RELEASE group meta-synthesis of individual participant data (n= 959 IPD; 25 RCTs; The RELEASE collaborators, 2022b) subgroup analyses revealed that study participants who were less than or equal to 3 months after stroke onset showed their best language gains from therapy provided less than or equal to 2 hours per week (n=62 IPD; 2 RCTs), 3-5 days per week (n=3 IPD; 1 RCT), and from 20 to 50 hours total (n=27 IPD; 3 RCTs). For participants more than 3 months after stroke onset greatest gains followed 3-4 hours per week (n=25 IPD; 2 RCTs), 5 days per week (n= 44 IPD; 1 RCT), for equal to or more than 50 hours of therapy) n=15 IPD; 1 RCT). However, caution is required in interpreting this finding given the low numbers of IPD/RCTs in these specific subgroup analyses.</p>	<ul style="list-style-type: none"> <li>● Brady et al., 2016: Cochrane review</li> <li>● The RELEASE collaborators, 2022b: Meta-analysis 25 RCTs (959 IPD)</li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>
<p><b>5.4 People with chronic aphasia should be offered speech and language therapy to gain benefits in receptive and expressive language, and communication in everyday environments.</b></p> <p><b>Rationale:</b> For people with chronic aphasia (more than 6 months post stroke onset), there is evidence to support the use of a number of behavioural treatments (Brady et al., 2016; The RELEASE collaborators, 2022a; 2022b). Treatments with high-level evidence of efficacy include constraint-induced language therapy (Zhang et al., 2017), multimodality aphasia therapy (Rose et al., 2022), semantic and phonological lexical retrieval treatments (e.g., Kristinsson et al., 2021), auditory comprehension treatment (Fleming et al., 2021), self-managed computer-delivered therapy (Palmer et al., 2019), mixed linguistic and pragmatic therapy (Breitenstein et al., 2017), and training of conversation/communication partners (Simmons-Mackie et al., 2016).</p>	<ul style="list-style-type: none"> <li>● Brady et al., 2016: Cochrane review</li> <li>● Breitenstein et al., 2017: RCT</li> <li>● Fleming et al., 2021: RCT</li> <li>● Kristinsson et al., 2021: RCT</li> <li>● Palmer et al., 2019: RCT</li> <li>● Rose et al., 2022: RCT</li> <li>● Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group studies, 11 case studies, 2 qualitative studies and 1 SCED)</li> <li>● The RELEASE collaborators, 2021:</li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>



<p>There is emerging evidence regarding personal characteristics (e.g., age, sex, initial stroke severity, aphasia severity) and treatment-related factors (e.g., dose, and schedule) that might affect aphasia outcomes in the chronic phase of recovery (the RELEASE Collaborators, 2021). Specifically, best response to therapy has been observed with 20 to 50 hours of treatment, provided 3-4 hours per week, 3-5 days per week. Limited gains in overall language abilities have been observed with fewer than 20 hours of treatment, fewer than 3 hours of treatment per week, or fewer than 3 sessions per week (the RELEASE collaborators, 2022a).</p> <p>Functionally tailored and relevant home practice should be provided (the RELEASE collaborators, 2022a). There is limited evidence of generalisation from a single episode of task-specific treatment to everyday communication.</p>	<p><b>Meta-analysis of 174 studies (5928 IPD)</b></p> <ul style="list-style-type: none"> <li>• <b>The RELEASE collaborators, 2022a: Meta-analysis of 25 RCTs (959 IPD)</b></li> <li>• <b>The RELEASE collaborators, 2022b: Meta-analysis 25 RCTs (959 IPD)</b></li> <li>• Zhang et al., 2017: Systematic review of 8 RCTs</li> </ul>	
<p><b>Therapy principles</b></p>		
<p><b>5.5 Aphasia rehabilitation should address the consequences of aphasia on functional everyday activities, participation, social connectedness, and quality of life. Speech pathologists should consider targeting interventions on the impact of aphasia on relationships, vocation, and leisure in all phases of care.</b></p> <p><b>Rationale:</b> People with aphasia report significantly worse health-related quality of life than stroke survivors without aphasia, and worse quality of life than peers without stroke (Hilari, 2011). Quality of life is particularly impacted in the areas of independence and social relationships, with social networks reported as shrinking, and remaining relationships changing in quality and closeness (Ford, 2022), and aspects of poor access to the environment (Hilari et al., 2012).</p> <p>While people with aphasia report prioritising communication goals in their overall rehabilitation process, they also emphasise addressing leisure, work, social, and relationship goals, as well as the need for information tailored to their needs (Worrall et al., 2011). People with aphasia want access to flexible, life-relevant services tailored to their personal experience of aphasia that focus on support to find autonomy and purpose post-stroke, and to develop the skills to cope with the negative consequences for interpersonal relationships and roles that unfold over time.</p>	<ul style="list-style-type: none"> <li>• Ford et al., 2022: Scoping review of 53 qualitative studies</li> <li>• Hilari, 2011: Non-randomised observational study</li> <li>• Hilari et al., 2012: Systematic review of 14 studies (6 cross-sectional, 3 case-control studies, 3 qualitative, 1 cohort study, 1 retrospective study)</li> <li>• Worrall et al., 2011: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>



<p><b>5.6 Aphasia rehabilitation should address the needs of family, friends and carers.</b></p> <p><b>Rationale:</b> Family and friends of people with aphasia frequently report negative stroke-related outcomes (Grawburg et al., 2012) – more so than people who care for stroke survivors without aphasia (Bakas et al., 2006). Family and friends of people with aphasia also find their relationships changed following stroke and identify needs and rehabilitation goals for themselves (Grawburg et al., 2012; Howe et al., 2012; Wallace et al., 2017). These goals include being provided with hope and positivity, information, support (e.g., psychosocial and financial), being included in the rehabilitation process, communicating with and maintaining their relationship with the person with aphasia, looking after their own wellbeing, and coping with new responsibilities (Howe et al., 2012). Speech pathologists should view family, friends and carers as direct recipients of aphasia intervention, alongside people with aphasia (Rose, 2023).</p> <p>CPT (see statements 1.4, 2.5 and 5.23) is one intervention that may contribute to positive outcomes for communication partners including increased knowledge of aphasia, use of effective communication strategies, and increased self-confidence and positivity towards communication activities and participation for people with chronic aphasia (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016).</p>	<ul style="list-style-type: none"> <li>● Bakas et al., 2006: Non-randomised observational study</li> <li>● <b>Grawburg et al., 2012: Systematic review of 27 studies (13 qualitative, 12 quantitative, and 2 mixed-method studies)</b></li> <li>● Howe et al., 2012: Qualitative study</li> <li>● Rose, 2023: Discussion paper</li> <li>● Simmons-Mackie et al., 2010: Systematic review of 31 studies (11 group designs, 8 case studies, 7 SCEDs, 5 qualitative studies)</li> <li>● Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group studies, 11 case studies, 2 qualitative studies and 1 SCED)</li> <li>● <b>Wallace et al., 2017: Synthesis of 3 consensus studies</b></li> </ul>	<ul style="list-style-type: none"> <li>● Qual</li> </ul>
<p><b>5.7 Aphasia rehabilitation should include the provision of information tailored to meet the needs of people with aphasia and their family, friends and carers, using relevant language and communication formats.</b></p> <p><b>Rationale:</b> Education is a key component of aphasia rehabilitation which supports access to services and participation in healthcare decision-making (Rose et al., 2018). Education can also improve the way people with aphasia and their carers engage with rehabilitation and their levels of self-efficacy (Eames et al., 2013). People with aphasia report the need for information about the causes and consequences of aphasia, their prognosis, and what to expect at different stages of recovery (Worrall et al., 2011).</p> <p>This information should also be provided to families, friends and carers of people with aphasia (Rose et al., 2018; Simmons-Mackie et al., 2017) so they can become more effective communication partners and advocates, ensuring the ongoing inclusion of the person with aphasia. Information should be</p>	<ul style="list-style-type: none"> <li>● Crocker et al., 2021: Cochrane review</li> <li>● <b>Eames et al., 2013: RCT</b></li> <li>● Rose et al., 2003: Pre and post experimental design</li> <li>● Rose et al., 2018: Qualitative study</li> <li>● Simmons-Mackie et al., 2017: Qualitative study</li> <li>● Worrall et al., 2011): Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>● II</li> </ul>



<p>tailored to meet individual needs using relevant language and communication formats (Worrall et al., 2011), including aphasia-friendly materials for people with aphasia (Rose et al., 2003). Information should be provided at different stages in the recovery process with opportunities for follow-up, clarification, and reinforcement of information (Crocker et al., 2021).</p>		
<p><b>5.8 Aphasia rehabilitation can focus on strategies to promote long-term maintenance of gains, including promoting independent communication practice and use, and maximising communication opportunities.</b></p> <p><b>Rationale:</b> It has been found that many people with aphasia (~80%) who undergo intensive language interventions do not maintain gains in the long-term without ongoing treatment or communication use (Menahemi-Falkov et al., 2022). In light of these findings, speech pathologists should be aware, realistic, and transparent about the potential long-term benefits of high intensity intervention for their clients. Focusing on raising awareness and embedding proactive, long-term strategies (e.g., how to integrate real life communication practice in daily settings, maximising usage opportunities in the long term) may be considered as an explicit target in speech and language therapy (Menahemi-Falkov et al., 2022). If possible, tapering of treatment through ongoing, more distributed practice can be considered after the initial, more intensive phase of therapy, which may help to maintain treatment effects (Menahemi-Falkov et al., 2022). Less evidence is available on maintenance of gains following lower intensity interventions, but the same strategies are likely to be necessary to maintain therapy gains for the long-term.</p>	<ul style="list-style-type: none"> <li>● <b>Menahemi-Falkov et al., 2022: Systematic review of 44 studies</b> (6 RCTs, 4 pseudo-RCTs, 3 non-RCTs, 11 SCEDs, 12 case series, 7 pre-post single case, 1 interrupted time series with a control group)</li> </ul>	<ul style="list-style-type: none"> <li>● I</li> </ul>
<p><b>Treating different language modalities</b></p>		
<p><b>5.9 Aphasia rehabilitation:</b></p> <ul style="list-style-type: none"> <li>● should target spoken production at the word level</li> <li>● can target spoken production at the sentence level (e.g., syntactic, thematic roles).</li> </ul> <p><b>Rationale:</b> Word finding therapies have been found to be effective for people with aphasia in the short and longer term (De Aguiar et al., 2016; Hickin et al., 2020; Sze et al., 2021; Wisenburn &amp; Mahoney,</p>	<ul style="list-style-type: none"> <li>● <b>Brady et al., 2016: Cochrane review</b></li> <li>● Breitenstein et al., 2017: RCT</li> <li>● De Aguiar et al., 2016: Meta-analysis of 30 studies</li> </ul>	<ul style="list-style-type: none"> <li>● Word level: I</li> <li>● Sentence level: IV</li> </ul>





<p>2009; and in two high quality RCTs by Breitenstein et al., 2017 and Rose et al., 2022), although this is not always the case (Brady et al., 2016). Semantic, phonological, and mixed approaches have all shown benefits (Wisnburn &amp; Mahoney, 2009), with research suggesting that word-form focused treatments (e.g., orthography or phonology) result in more treatment-specific effects, whereas semantic approaches result in higher degrees of generalisation to untreated items (Nickels &amp; Best, 1996; Sze et al., 2021). Provision of the written word form facilitates rehabilitation of treated and untreated items (Sze et al., 2021). Combined gesture and verbal treatment and multimodality aphasia treatment for noun and verb production is beneficial for some people with aphasia (Rose et al., 2013; Rose et al., 2022).</p> <p>Different components (including demographic, clinical, and treatment-related factors; De Aguiar et al., 2016) of word retrieval therapy may affect the outcome of this type of therapy, which may explain individually varying treatment outcomes reported across the literature. Participant baseline naming performance has not been found to be a strong predictor of treatment success for treated and untreated items, indicating that word retrieval therapy can benefit many people with aphasia with varying naming abilities (Sze et al., 2021). As generalisation to untreated items is generally limited (particularly for verbs; De Aguiar et al., 2016; Hickin et al., 2020; Webster &amp; Whitworth, 2012), it is important to focus on personally relevant words when providing word finding therapy (Hickin et al., 2020; Webster &amp; Whitworth, 2012).</p> <p>There is evidence in favour of the efficacy of therapy focusing on spoken production of sentences, with frequent reporting of treatment gains generalising to untrained items (Hickin et al., 2022; Poirier et al., 2023) and to sentence comprehension (Poirier et al., 2023). A systematic review (Poirier et al., 2023) that included single- and multiple-case studies found the evidence for a range of treatments, including Verb Network Strengthening Treatment (VNeST - Edmonds et al., 2009), Treatment of Underlying Forms (TUF – Thomson, 2001), and mapping therapies. The exact content of therapy will depend on the underlying cause of the sentence production impairment, which therefore needs to be assessed (Hickin et al., 2022; Poirier et al., 2023).</p>	<ul style="list-style-type: none"> <li>● Hickin et al., 2020: Scoping review of 37 studies (22 case studies, 7 case series that also reported group results, 6 single-case studies, 1 group study, and 1 pilot RCT).</li> <li>● Hickin et al., 2022: Systematic review of 33 studies (14 case series, 12 single-case studies, 5 case series with group results reported, 2 group studies)</li> <li>● Nickels &amp; Best, 1996: Narrative review</li> <li>● <b>Poirier et al., 2023: Systematic review of 25 studies</b> (all single- or multiple-case studies using SCED)</li> <li>● Rose et al., 2013: Systematic review of 23 studies (4 group design, 19 SCED)</li> <li>● Rose et al., 2022: RCT</li> <li>● Sze et al., 2021: Meta-analysis of 32 studies</li> <li>● Webster &amp; Whitworth, 2012: Review of 26 studies</li> <li>● Wisnburn &amp; Mahoney, 2009: Meta-analysis of 44 studies</li> </ul>	
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<p><b>5.10 Aphasia rehabilitation can target auditory comprehension at the:</b></p> <ul style="list-style-type: none"> <li>● <b>word level (e.g., auditory discrimination, lexical access, semantic access)</b></li> <li>● <b>sentence level</b></li> <li>● <b>above-sentence level.</b></li> </ul> <p><b>Rationale:</b> While the relative paucity of research on this topic should be noted (see e.g., Wallace et al., 2022), a meta-analysis shows evidence of benefit of speech and language therapy targeting auditory comprehension (the RELEASE collaborators, 2022a). This extends the findings of a previous Cochrane review which found no evidence of harm of such therapy (Brady et al., 2016). High dosage (20-50 hours), intensity (&gt;9 hours/week), and frequency (4-5 days/week) are associated with the greatest gains (the RELEASE collaborators, 2022a). Based on the available evidence, there is not a specific treatment approach that is recommended for treating people with aphasia with auditory comprehension impairments (Wallace et al., 2022), however tailoring of difficulty (the RELEASE collaborators, 2022a) and treatment items, along with a higher dose of intervention (approximately 100 hours; Fleming et al., 2021) may be required.</p> <p>Compensatory strategies for auditory comprehension (e.g., augmentative and alternative communication) may also be considered (see statement 5.14).</p>	<ul style="list-style-type: none"> <li>● <b>Brady et al., 2016: Cochrane review</b></li> <li>● Fleming et al., 2021: RCT</li> <li>● <b>The RELEASE collaborators, 2022a: Meta-analysis of 25 RCTs (959 IPD)</b></li> <li>● Wallace et al., 2022: Scoping review of 28 studies (12 group studies, 11 SCEDs, 5 case studies)</li> </ul>	<ul style="list-style-type: none"> <li>● I</li> </ul>
<p><b>5.11 Aphasia rehabilitation can target writing at the:</b></p> <ul style="list-style-type: none"> <li>● <b>word level</b></li> <li>● <b>sentence level</b></li> <li>● <b>above-sentence level.</b></li> </ul> <p><b>Rationale:</b> Aphasia therapy for spelling and/or writing has been found to be effective (Brady et al., 2016).</p> <p>Research has mostly focused on treating writing at the word level. Treatment at this level usually consists of (a combination of) therapy that (Krajenbrink et al., 2015):</p> <ul style="list-style-type: none"> <li>● focuses on whole-word spelling (e.g., (delayed) copying of the target word), and</li> <li>● aims to strengthen/reteach phoneme-grapheme conversion (sublexical therapy).</li> </ul>	<ul style="list-style-type: none"> <li>● <b>Biddau et al., 2023: Systematic review of 11 SCEDs</b></li> <li>● <b>Brady et al., 2016: Cochrane review</b></li> <li>● <b>Krajenbrink et al., 2015: Review of 40 studies)</b></li> <li>● <b>Thiel et al., 2015: Systematic review of 62 studies (31 single-case studies, 28 multiple case studies, 3 group studies)</b></li> </ul>	<ul style="list-style-type: none"> <li>● Word level: I</li> <li>● Sentence/above: IV</li> </ul>



<p>There is evidence supporting these therapies from mostly single/multiple case studies. Both types of therapy have been shown to be beneficial for people with aphasia, with improvement of treated items frequently reported and, for the sublexical treatment in particular, some evidence of generalisation to untreated items (Biddau et al., 2023; Krajenbrink et al., 2015). Both types of writing therapy may therefore be considered and/or combined, with treatment tailored according to the nature of the impairment and the individual’s specific needs (Biddau et al., 2023).</p> <p>Although very few studies have investigated writing therapy at the sentence level, the little available research provides some evidence that such therapy can lead to improved written sentence construction (Thiel et al., 2015).</p> <p>Research on therapies targeting writing above sentence level (e.g., writing of paragraphs, stories) and functional writing (i.e. writing for everyday purposes) is scarce, although there are some signs that treatment at the single word level may lead to improvements in these areas as well (Biddau et al., 2023; Thiel et al., 2015).</p> <p>Assistive technologies have been found to be effective in improving functional writing for some people with aphasia (Thiel et al., 2015). Some technologies (e.g., spell check, predictive text) are readily available on common devices (e.g., smartphones, tablets, laptops) and may therefore be particularly useful for everyday writing. Assistive technologies may be considered as alternatives (e.g., voice recognition software, picture-based alternative communication) or facilitators (e.g., speech synthesiser software, word prediction software) to writing (Thiel et al., 2015). The effective use of such software may require training provided by a speech pathologist.</p>		
<p><b>5.12 Aphasia rehabilitation can target reading at the:</b></p> <ul style="list-style-type: none"> <li>• <b>word level</b></li> <li>• <b>sentence level</b></li> <li>• <b>above-sentence level.</b></li> </ul> <p><b>Rationale:</b> Speech and language therapy has been found to lead to positive reading comprehension outcomes compared to no therapy (Brady et al., 2016). An RCT found similarly positive effects of treatment on reading aloud at the word level, both in terms of accuracy and reading speed (e.g.,</p>	<ul style="list-style-type: none"> <li>• <b>Brady et al., 2016: Cochrane review</b></li> <li>• <b>Cherney, 2004: Narrative review</b></li> <li>• <b>Cistola et al., 2021: Systematic review of 13 studies (7 quantitative and 6 qualitative)</b></li> <li>• <b>Purdy et al., 2019: Systematic review of 15 studies (10 single-case studies and 5 RCTs or group studies)</b></li> </ul>	<ul style="list-style-type: none"> <li>•  </li> </ul>



<p>Woodhead et al., 2018). Reading treatment may focus on reading aloud and/or reading comprehension at the word level (which may have a lexical or sublexical focus depending on the nature of the impairment; see Cherney, 2004), sentence level, and above-sentence level (e.g., discourse level text comprehension).</p> <p>Reading is a complex process that involves visual, perceptual, cognitive, and linguistic skills. Speech pathologists may therefore want to consider assessment of both cognitive and linguistic features of reading in order to select appropriate treatment (Watter et al., 2017). Because of this complexity, there is no one treatment that is considered the “gold standard” (Watter et al., 2017). Individual client characteristics (e.g., impairment, reading habits, availability of carer support) can be considered when deciding on a treatment plan (Purdy et al., 2019).</p> <p>Treatment at each of the aforementioned levels may include a combination of the below treatments:</p> <ul style="list-style-type: none"> <li>● Hierarchical reading treatment containing reading tasks of increasing difficulty (e.g., starting with matching tasks and gradually moving on to more complex tasks, such as text comprehension),</li> <li>● Oral reading treatments (e.g., Oral Reading for Language in Aphasia (ORLA) – Cherney, 2004; Multiple Oral Rereading (MOR) – Beeson, 1998; and Modified Multiple Oral Rereading (MMOR) – e.g., Kim &amp; Russo, 2010),</li> <li>● Strategy-based interventions for reading comprehension (e.g., visual, content-based, meta-cognitive strategies), and</li> <li>● Cognitive treatments with a reading focus (e.g., visual perception, scanning, attention, memory)</li> </ul> <p>Efficacy of these treatments has been shown to varying degrees, mostly through single case studies (see Purdy et al., 2019; Watter et al., 2017)</p> <p>Compensatory/facilitative interventions may involve reading aids (including technology designed for other target populations such as e.g., developmental dyslexia) or technologies embedded in mainstream devices (e.g., screen readers; Cistola et al., 2021).</p>	<ul style="list-style-type: none"> <li>● Watter et al., 2017: Systematic review of 23 studies (3 RCTs, 8 cohort studies, and 12 case studies)</li> <li>● Woodhead et al., 2018: RCT</li> </ul>	
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<p><b>5.13 Aphasia rehabilitation can target discourse at the:</b></p> <ul style="list-style-type: none"> <li>● monologue level</li> <li>● interactional discourse (conversation) level.</li> </ul> <p><b>Rationale:</b> Aphasia treatment may target discourse (i.e. language beyond the sentence level) specifically. Such therapies may vary in their underlying models, settings (e.g., individual versus group), therapeutic emphasis (e.g., generic versus individualised, compensatory), involvement of communication partners, and types of activities (Simmons-Mackie et al., 2014), as well as the purpose of the discourse interaction.</p> <p>There is no consensus on the most suitable measure for assessing discourse in aphasia, which complicates the interpretation of research findings (Azios et al., 2022). A systematic review found, however, that discourse treatment is efficacious, with benefits reported most commonly for the production of words in discourse, and some indication of improvements at the sentence production and discourse macrostructure level (Dipper et al., 2021) when those levels are intentionally treated. The most promising outcomes are from multilevel discourse treatment approaches (Dipper et al., 2021). An RCT also found that conversation therapy was more likely to lead to discourse-level improvements when delivered in groups than in dyads (Dede, et al., 2019).</p> <p>Discourse and functional communication may also improve as a result of treatments targeting other domains, such as verb naming, sentence production, or gesture treatments (De Kleine et al., 2023; Hickin et al., 2022; Poirier et al., 2023).</p> <p>Two discourse interventions that have specifically shown promise are:</p> <ul style="list-style-type: none"> <li>● Novel Approach to Real-life communication: Narrative Intervention in Aphasia (NARNIA; Whitworth et al., 2015), and</li> <li>● Language Underpins Narrative in Aphasia (LUNA; Dipper et al., 2024).</li> </ul>	<ul style="list-style-type: none"> <li>● Azios et al., 2022: Scoping review of 64 studies (26 case studies, 18 single-subject design studies, 8 group studies, 1 qualitative study, 11 studies that examined tool / process)</li> <li>● Dede et al., 2019: RCT</li> <li>● De Kleine et al., 2023: Systematic review of 7 studies (1 single case observational study, 6 post-observational experimental designs)</li> <li>● Dipper et al., 2021: Systematic review of 25 studies (7 RCTs, 7 single-case reports with no control, 6 case series, 3 group studies without control, 2 non-randomised group studies with control)</li> <li>● Hickin et al., 2022: Systematic review of 33 studies (14 case series, 12 single-case studies, 5 case series with group results reported, 2 group studies)</li> <li>● Poirier et al., 2023: Systematic review of 25 studies (all single- or multiple-case studies using SCED)</li> <li>● Simmons-Mackie et al., 2014: Narrative review</li> <li>● Whitworth et al., 2015: RCT</li> </ul>	<ul style="list-style-type: none"> <li>● II</li> </ul>
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<p><b>5.14 Aphasia rehabilitation can target augmentative and alternative communication, including:</b></p> <ul style="list-style-type: none"> <li>• <b>No-technology/low-technology AAC</b></li> <li>• <b>High-technology AAC.</b></li> </ul> <p><b>Rationale:</b> There is lower-level evidence supporting the use of some no/low-technology AAC strategies (Baxter et al., 2012; Garrett et al., 1989; Ho et al., 2005; Purdy &amp; Wallace, 2016). Gesture treatments have the most and the highest levels of evidence (Rose et al., 2013). There is, however, no consensus on the use of no/low AAC in clinical practice.</p> <p>High-technology AAC is a continuously developing field of research. There is some low-level evidence that high-technology AAC can enhance communicative abilities for some people with aphasia (Rayer et al., 2023; Russo et al., 2017). It is important to note that treatment success is variable, with AAC acceptance and effects on functional communication largely unclear (Rayer et al., 2023). AAC interventions therefore need to be individually tailored. Some factors that have been suggested as influencing AAC acceptance/use are cognitive factors (e.g., language impairment type and severity), personal factors (e.g., age, expectations of AAC), and environmental factors (e.g., availability of social support, clinician attitudes; Rayer et al., 2023; Taylor et al., 2019). More research is needed to clarify the role of each of these factors and how they might influence clinical decision-making (Taylor et al., 2019).</p>	<ul style="list-style-type: none"> <li>• Baxter et al., 2012: Systematic review of 65 studies (14 studies focused on aphasia)</li> <li>• Garrett et al., 1989: Case study</li> <li>• Ho et al., 2005: Case series</li> <li>• Purdy &amp; Wallace, 2016: Case series</li> <li>• Rayer et al., 2023: Scoping review of 16 studies (7 case studies, 4 single-subject design studies, 5 group design).</li> <li>• Rose et al., 2013: Systematic review of 23 studies (4 group design, 19 SCED)</li> <li>• Russo et al., 2017: Systematic review of 30 studies (22 observational studies, 8 case reports))</li> <li>• Taylor et al., 2019: Narrative review</li> </ul>	<ul style="list-style-type: none"> <li>• No/low tech: IV</li> <li>• High tech: IV</li> </ul>
<p><b>Alternative/additional modes of therapy</b></p>		
<p><b>5.15 In addition to individual therapy delivered by speech pathologists, aphasia rehabilitation can include the use of aphasia therapy software.</b></p> <p><b>Rationale:</b> Aphasia therapy software has the potential to provide a cost-effective and accessible way of increasing treatment frequency and dose and to vary the nature of language treatments.</p> <p>The use of computer and/or tablet-based aphasia therapy is supported by previous research, which has generally found such therapy to be effective compared to no therapy and equally effective as clinician-led therapy, while noting that technology cannot completely replace therapists (Brady et al., 2016;</p>	<ul style="list-style-type: none"> <li>• Brady et al., 2016: Cochrane review</li> <li>• Devane et al., 2022: Systematic review of 14 studies (7 RCTs, 5 single-case studies, 2 before-after studies with no control group)</li> <li>• Lavoie et al., 2017: Systematic review of 23 studies (2 RCTs, 1 group study, 20 single-subject studies)</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>



<p>Lavoie et al., 2017; Repetto et al., 2021; Zheng et al., 2016). Although more research is needed, speech pathologists may choose to use computer-/ tablet-based therapy in addition to conventional therapy for specific clients (e.g., based on personal interest, availability of suitable programmes/apps, etc.).</p> <p>The use of virtual reality (VR) in the context of aphasia rehabilitation is in an exploratory phase of research. Although there is some preliminary evidence that VR-based treatment can lead to positive language outcomes similar to conventional therapy, there is currently not sufficient evidence to recommend its routine use in clinical practice (Devane et al., 2022).</p>	<ul style="list-style-type: none"> <li>● <b>Repetto et al., 2021: Systematic review of 13 studies</b></li> <li>● Zheng et al., 2016: Systematic review of 7 studies (5 RCTs, 1 non-randomised comparison trial, 1 within-subjects design)</li> </ul>	
<p><b>5.16 In addition to individual therapy delivered by speech pathologists, aphasia rehabilitation can include group therapy.</b></p> <p><b>Rationale:</b> Previous research has found group-based speech and language therapy to be effective, with outcomes similar to one-on-one therapy on measures of receptive (e.g., auditory comprehension) and expressive language (including spoken and written language), functional communication, and quality of life (Brady et al., 2016).</p> <p>An RCT of conversation therapy found group size may be associated with effects on different types of outcome measures, with dyads showing the most changes on measures of language impairment, and group treatment resulting in more changes to discourse production and self-rated functional communication (Dede et al., 2019).</p> <p>There is evidence that aphasia group therapy may also lead to improved health-related quality of life, confidence, and interaction with peers (Wilson et al., 2023), although it is unclear how benefits of this type of therapy can be maximised.</p>	<ul style="list-style-type: none"> <li>● <b>Brady et al., 2016: Cochrane review</b></li> <li>● Dede et al., 2019: RCT</li> <li>● Wilson et al., 2023: Scoping review of 13 studies (2 RCTs, 8 case studies (8), and 3 qualitative studies)</li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>
<p><b>5.17 Aphasia rehabilitation can include telerehabilitation.</b></p> <p><b>Rationale:</b> There is an emerging evidence base for using telerehabilitation in aphasia rehabilitation. This may improve service access for people in both rural/remote areas as well as those with difficulties accessing services in metropolitan areas (e.g., people with transport or mobility difficulties).</p>	<ul style="list-style-type: none"> <li>● <b>Cacciante et al., 2021: Systematic review and meta-analysis</b> of 5 studies</li> <li>● Cetinkaya et al., 2023: Systematic review of 31 studies (11 group</li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>



<p>Several systematic reviews and a meta-analysis of previous research (reporting on a range of study types, including randomised controlled trials and single-case studies) have concluded that telerehabilitation is feasible and effective for people with aphasia and can therefore be a suitable addition or alternative to conventional in-person therapy (Cacciante et al., 2021; Cetinkaya et al., 2023; Hall et al., 2013; Weidner &amp; Lowman, 2020). RCT-level research has found that telerehabilitation intervention is as effective as in-person interventions for a range of language domains, including auditory comprehension, word naming, and functional communication (Cacciante et al., 2021).</p> <p>While telerehabilitation is generally feasible (Hall et al., 2013), it may be less suitable for some people, e.g., due to vision/hearing loss, or fine motor difficulties (Cetinkaya et al., 2023) and is dependent on adequate equipment (e.g., laptop, tablet) and sufficient quality of internet connection (Hall et al. 2013).</p>	<p>studies, 12 pre-post studies, 8 single-subject studies)</p> <ul style="list-style-type: none"> <li>● Hall et al., 2013: Systematic review of 4 studies (3 SCEDs, 1 multiple baseline experimental design)</li> <li>● Weidner &amp; Lowman, 2020: Systematic review of 13 studies (5 SCED, 4 pre-post group studies, 2 quasi-experimental research designs, 1 quasi randomised controlled feasibility study, 1 randomised clinical trial)</li> </ul>	
<p><b>5.18 In addition to individual therapy delivered by speech pathologists aphasia rehabilitation can include trained and supported/supervised volunteers.</b></p> <p><b>Rationale:</b> Studies that compared volunteer facilitated aphasia therapy (e.g., delivered by family members, friends, or people unknown to the person with aphasia) to therapy from speech pathologists have shown little to no difference on a range of language outcomes (e.g., auditory and reading comprehension, writing, spoken language, and functional communication; Brady et al., 2016).</p> <p>Brady et al. (2016) report that this result is not surprising because volunteers were trained, provided with information about the patient’s communication impairment, given access to relevant therapy materials, and supported or supervised by a speech pathologist. The therapy plan was developed by the speech pathologist in most studies. For these reasons, speech pathologists should ensure that volunteers (and other non-clinicians such as allied health assistants) involved in delivering aphasia rehabilitation receive adequate training, preparation, resources and support.</p>	<ul style="list-style-type: none"> <li>● <b>Brady et al., 2016: Cochrane review</b></li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>





Treatment beyond language modalities		
<p><b>5.19 For people with aphasia experiencing difficulties with coping and adjustment, suitable psychological therapies delivered with communication supports can be facilitated by a range of trained clinicians, including speech pathologists, to prevent the development of ongoing mood problems.</b></p> <p><b>Rationale:</b> The severity of depressive/anxiety symptoms after stroke varies and can impact the type of therapy that should be offered and by whom (Kneebone, 2016 – see also statement 5.20). For those without depressive symptoms, and/or with less severe mood concerns such as difficulties with coping and adjustment, a range of psychological therapies may be useful in preventing the development of more severe and/or ongoing mood problems for people with aphasia (Baker et al., 2018). Psychological therapies to prevent mood problems may include:</p> <ul style="list-style-type: none"> <li>• behavioural activation (Thomas et al., 2013; Thomas et al., 2019);</li> <li>• problem solving therapy (Visser et al. 2016);</li> <li>• relaxation therapy (Golding et al., 2018);</li> <li>• solution focused brief therapy (Northcott et al., 2021);</li> <li>• community aphasia groups (Attard et al., 2018); and</li> <li>• peer befriending (Hilari et al., 2021).</li> </ul> <p>In addition to mental health professionals, other appropriately trained clinicians including speech pathologists may deliver these treatments for people with aphasia (Baker et al., 2018; Kneebone, 2016). Aphasia-friendly information and supported communication strategies should be used to support delivery of treatments. Close monitoring of mood problems is required so that more severe problems are flagged at an early stage and higher-intensity treatment can be provided if needed (Kneebone, 2016).</p>	<ul style="list-style-type: none"> <li>• Attard et al., 2018: Pre-post study</li> <li>• Baker et al., 2018: Systematic review of 45 studies</li> <li>• Golding et al., 2018: RCT</li> <li>• Hilari et al., 2021: RCT</li> <li>• Kneebone, 2016: Narrative review</li> <li>• <b>Northcott et al., 2021: RCT</b></li> <li>• Thomas et al., 2013: RCT</li> <li>• Thomas et al., 2019: RCT</li> <li>• Visser et al., 2016: RCT</li> </ul>	<ul style="list-style-type: none"> <li>• II</li> </ul>
<p><b>5.20 People with aphasia and mood concerns with a clinical diagnosis of depression and/or anxiety should be offered psychological therapy with communication supports by a psychologist or other appropriately qualified mental health practitioner.</b></p> <p><b>Rationale:</b> The severity of depressive/anxiety symptoms after stroke varies and can impact the type of therapy that should be offered and by whom (Kneebone, 2016– see also statement 5.19). Those with</p>	<ul style="list-style-type: none"> <li>• Allida et al., 2020: Cochrane review (participants without aphasia only)</li> <li>• Baker et al., 2024 Qual</li> <li>• Kneebone et al., 2016: Narrative review</li> </ul>	<ul style="list-style-type: none"> <li>• IV</li> </ul>



<p>mild/moderate symptoms should be offered psychological therapy by an appropriately trained and qualified health professional, such as a psychologist or other health professional under the supervision of a psychologist (Kneebone, 2016). Therapies may include modified cognitive-behavioural therapy and behavioural activation (Allida et al., 2020; Baker et al., 2024; Ryan et al., 2021; Thomas et al., 2013; Thomas et al. 2019; Tjokrowijoto et al., 2023).</p> <p>For people with severe/persistent depressive and/or anxiety symptoms, health professionals including speech pathologists should identify problems, offer support to the client and their family, and triage the person to an appropriately trained and qualified health professional (i.e. (neuro)psychologist, psychiatrist, and/or medical practitioner - Kneebone, 2016).</p> <p>In all cases, the health professional should be competent in supporting communication for adults with aphasia. Aphasia-friendly information and supported communication strategies should be used when providing any interventions, including medication management. Ongoing support for people with severe/persistent symptoms may continue to be required once symptoms have subsided (Kneebone, 2016).</p>	<ul style="list-style-type: none"> <li>● Ryan et al., 2021: Systematic review of 10 studies (5 RCTs, 4 pre-post studies and 1 SCED)</li> <li>● Thomas et al., 2019: RCT</li> <li>● Thomas et al., 2013: RCT</li> <li>● <b>Tjokrowijoto et al., 2023 SCED</b></li> </ul>	
<p><b>5.21 Aphasia rehabilitation can include focus on enhancing social identity.</b></p> <p><b>Rationale:</b> Language is important for constructing and presenting one’s sense of self and identity when interacting with others (i.e. “who” and “what” are you in a social context – one’s roles, values, and beliefs; Shadden &amp; Agan, 2004; Shadden &amp; Koski, 2007). Aphasia reduces the ability to do this and risks the person with aphasia being viewed as having less agency or autonomy than their conversation partners (Shadden &amp; Koski, 2007), an experience that is very disempowering. This feeling of being “less competent” than conversation partners may also be present in clinical settings and is something that speech pathologists and other clinicians need to be aware of and try to take steps to prevent (Simmons-Mackie &amp; Elman, 2011).</p> <p>Aphasia may also leave people feeling a general “loss” of their previous identity due to their changed circumstances (Shadden, 2005). Many people with aphasia therefore need to reconstruct their identity and find a new sense of self in the face of living with a language disability (Shadden, 2005; Simmons-Mackie &amp; Elman, 2011), which is particularly challenging given that language is an important tool for identity construction (Brumfitt, 1993; Shadden, 2005; Taubner et al., 2020).</p>	<ul style="list-style-type: none"> <li>● Brumfitt, 1993: Theoretical review</li> <li>● <b>Corsten et al., 2014: Before and after design</b></li> <li>● <b>Corsten et al., 2015: Before and after design + qualitative study</b></li> <li>● Shadden, 2005: Theoretical review</li> <li>● Shadden &amp; Agan, 2004: Theoretical review</li> <li>● Shadden &amp; Koski, 2007: Theoretical review</li> <li>● Simmons-Mackie &amp; Elman, 2011: Qualitative study</li> <li>● Steffens et al., 2019: Systematic review and meta-analysis of 27 studies (not restricted to aphasia)</li> <li>● Taubner et al., 2020: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>● IV</li> <li>● Qual</li> </ul>



<p>There is emerging evidence suggesting that clinicians can help in this process by recognising, facilitating, and validating reconstructed identities. This can be achieved by, for example (Shadden, 2005; Shadden &amp; Agan, 2004; Simmons-Mackie &amp; Elman, 2011):</p> <ul style="list-style-type: none"> <li>• seeing the “person”, rather than the “patient”,</li> <li>• focusing on personal strengths, skills, knowledge, values, and competence rather than on incompetence or disability,</li> <li>• prioritising communicative content rather than language performance, and</li> <li>• guiding the person to clarify their personal values and helping them engage in new activities in line with those values, to facilitate the identity reconstruction and adjustment processes.</li> </ul> <p>Speech pathologists can also facilitate interventions that help people construct their identity and share their life stories. Community aphasia groups may promote this by providing a social context and safe space for constructing and presenting one’s self without a sole focus language performance, as well as a sense of belonging with other people who have similar challenges (Shadden &amp; Agan, 2004; Shadden &amp; Koski, 2007; Simmons-Mackie &amp; Elman, 2011 – see also statements 5.22 and 8.7). Such social identification-building interventions have the potential to improve overall health, mood, physical health, psychosocial wellbeing, and quality of life for people with a range of health problems, including aphasia (Corsten et al., 2014; Corsten et al., 2015; Steffens et al., 2019).</p>		
<p><b>5.22 In addition to individual therapy delivered by speech pathologists, aphasia rehabilitation can include community aphasia groups.</b></p> <p><b>Rationale:</b> The evidence indicates that community and outpatient group participation can improve specific linguistic processes (Lanyon et al. 2013). While there is limited evidence demonstrating improvement in functional communication as a consequence of group participation (Lanyon et al. 2013), research has shown that participation in community aphasia groups can benefit social participation, and community access for people with aphasia (Lanyon et al., 2013; Lanyon et al., 2018). People with aphasia and their family, friends and carers also report a wide range of benefits to psychological wellbeing from attending aphasia groups, including forming positive relations with others, purpose in life, environmental mastery, autonomy, personal growth, and self-acceptance (Attard et al., 2015).</p> <p>Speech pathologists can facilitate access to aphasia groups by fostering relationships with and referring their clients to local aphasia groups. These groups may be led by professional (e.g., speech pathologists,</p>	<ul style="list-style-type: none"> <li>• Attard et al., 2015: Narrative review</li> <li>• <b>Lanyon et al., 2013: Systematic review of 29 studies (12 pre-post test case series, 10 single-case design studies, 4 RCTs, 3 non-randomised controlled trials)</b></li> <li>• Lanyon et al., 2018: Qualitative study</li> <li>• Pettigrove et al., 2022: Scoping review of 177 publications</li> </ul>	<ul style="list-style-type: none"> <li>• III-3</li> </ul>



<p>other healthcare workers) or non-professional facilitators (e.g., trained volunteers, students, peers with aphasia). Dedicated community aphasia group facilitator training is recommended (Pettigrove et al., 2022), as unskilled facilitation can lead to negative outcomes for group members, especially those with more severe aphasia (Lanyon, et al., 2018).</p>		
<p><b>5.23 Aphasia rehabilitation should include communication partner training.</b></p> <p><b>Rationale:</b> Communication partner training can improve the knowledge, skills, and attitudes of communication partners of people with aphasia, especially in the chronic recovery phase.</p> <p>For some communication partners, CPT can result in (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016):</p> <ul style="list-style-type: none"> <li>• increased communication partner knowledge of aphasia,</li> <li>• increased use of effective communication strategies,</li> <li>• decreased use of non-supportive strategies,</li> <li>• increased ability to obtain accurate information,</li> <li>• increased ability to establish rapport, and</li> <li>• increased self-confidence and positivity towards communication.</li> </ul> <p>Research has confirmed the CPT outcomes for unfamiliar partners are similar across varied modes of delivery including face-to-face, tele-delivery or online training formats (Cameron et al., 2019, Finch et al., 2020; Heard et al., 2017; Power et al., 2020).</p> <p>For people with aphasia, CPT can result in positive changes in communication activity and participation such as increased content words and sentences, increased ratings of the quality of communication transaction and communication strategy use, as well as increased self-confidence in communication situations (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016).</p>	<ul style="list-style-type: none"> <li>• Cameron et al., 2019: RCT</li> <li>• Finch et al., 2020: Qualitative study</li> <li>• Heard et al., 2017: Parallel randomised trial</li> <li>• Power et al., 2020: RCT</li> <li>• <b>Simmons-Mackie et al., 2010: Systematic review of 31 studies (11 group designs, 8 case studies, 7 SCED, 5 qualitative studies)</b></li> <li>• Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group design, 11 case studies, 2 qualitative studies, 1 SCED)</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>



<b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b>	
<b>7.6</b> Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and family.	See section 7 for rationale and evidence
<b>7.8</b> Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.	See section 7 for rationale and evidence
<b>Additional considerations when working with clients with a CALD background</b>	
<b>7.17</b> Where possible, treatment should be offered in all relevant languages and relevant modalities.	See section 7 for rationale and evidence
<b>7.18</b> Language behaviours unique to the bi/multilingual person with aphasia such as translation, language mixing and code-switching should be considered in both assessment and intervention planning.	See section 7 for rationale and evidence



## SECTION 6: ENHANCING THE COMMUNICATIVE ENVIRONMENT

BEST PRACTICE STATEMENTS 6: ENHANCING THE COMMUNICATIVE ENVIRONMENT	REFERENCES	EVIDENCE LEVEL
<p><b>6.1 Communication partner training should be provided to improve the communicative environment provided by frequent communication partners for the person with aphasia.</b></p> <p><b>Rationale:</b> Communication partner training can improve the knowledge, skills, and attitudes of communication partners of people with aphasia, especially in the chronic recovery phase. For people with aphasia, CPT can result in positive changes in communication activity and participation (Simmons-Mackie et al., 2010; Simmons-Mackie et al., 2016). When CPT is provided as part of a broader intervention to enhance the hospital communication environment, it may increase hospital staff confidence, knowledge and skills in using aphasia communication strategies, promote shared responsibility for communication within the multidisciplinary team, facilitate communication exchange, improve efficiency within therapy sessions, promote better staff-patient relationships and meaningful participation for people with aphasia (D’Souza et al., 2021a; D’Souza et al., 2021b; D’Souza et al., 2021c). CPT can therefore be provided to frequent communication partners as one component of enhancing the communication environment (e.g., healthcare setting, family setting).</p>	<ul style="list-style-type: none"> <li>• D’Souza et al., 2021a: Qualitative study</li> <li>• <b>D’Souza et al., 2021b: Before-and-after pilot intervention study</b></li> <li>• D’Souza et al., 2021c: Qualitative study</li> <li>• Simmons-Mackie et al., 2010: Systematic review of 31 studies (11 group designs, 8 case studies, 7 SCEDs, 5 qualitative studies)</li> <li>• Simmons-Mackie et al., 2016: Systematic review of 25 studies (11 group design, 11 case studies, 2 qualitative studies, 1 SCED)</li> </ul>	<ul style="list-style-type: none"> <li>• IV</li> </ul>
<p><b>6.2 People with aphasia should have aphasia-friendly material available to enable them to participate in communication.</b></p> <p><b>Rationale:</b> Aphasia-friendly materials can assist people with aphasia to comprehend written information (Brennan et al., 2005; Rose et al., 2003). Recommendations for how to best format printed education material for people with aphasia include the use of (Rose et al., 2003; Rose et al., 2012): short, simple language, content that is relevant and interesting to the reader, sans serif font, bolding of important information, well organised information, and the use of relevant graphics that contain captions.</p>	<ul style="list-style-type: none"> <li>• Brennan et al., 2005: cohort study</li> <li>• <b>Rose et al., 2003: Pre and post experimental design</b></li> <li>• Rose et al., 2010: Qualitative study</li> <li>• Rose et al., 2012: Qualitative study</li> <li>• Worrall et al., 2007: Narrative review</li> </ul>	<ul style="list-style-type: none"> <li>• III-2</li> </ul>



<p>However, individual variations must always be considered as not everyone prefers aphasia-friendly material (Rose et al., 2003). Particular caution should be taken when using illustrations as some reports suggest that they can be distracting rather than helpful (Brennan et al., 2005). In addition, aphasia-friendly materials need to be supported by dialogue between the health professional and client, easily obtainable, provided repeatedly, and available in a range of media (Rose et al., 2010; Worrall et al., 2007).</p>		
<p><b>6.3 Communicatively accessible environments should be provided for people with aphasia.</b></p> <p><b>Rationale:</b> Environmental communication barriers exist in the physical environment, in the knowledge, skills and attitudes of communication partners, and at the system, service and policy levels (Parr et al., 2006; Howe et al., 2008a; Howe et al., 2008b; O’Halloran et al., 2011, 2012; Stans et al., 2017; Casey et al., 2023; D’Souza et al, 2021d). Reducing these barriers improves communicative access for people with aphasia (Simmons-Mackie et al., 2007; Kagan et al., 2023; D’Souza et al, 2021a,b,c).</p> <p>In establishing communicatively accessible environments in healthcare settings, it is recommended that consideration be given to:</p> <ul style="list-style-type: none"> <li>• working at a systems level,</li> <li>• working in collaborative teams of people with lived experience of aphasia, healthcare providers and senior management staff,</li> <li>• learning from the experiences people with aphasia and their family members,</li> <li>• building long term relationships (Kagan et al., 2023).</li> </ul> <p>Communication partner training is one way of making environments communicatively accessible – see statement 2.7.</p>	<ul style="list-style-type: none"> <li>• Casey et al., 2023: Qualitative study</li> <li>• D’Souza et al., 2021a,b,c,d</li> <li>• Howe et al., 2008a: Qualitative study</li> <li>• Howe et al., 2008b: Qualitative study</li> <li>• Kagan et al., 2023: Descriptive report of implementation study</li> <li>• O’Halloran et al., 2011: Qualitative study</li> <li>• O’Halloran et al., 2012: Qualitative metasynthesis</li> <li>• Parr et al., 2006: Descriptive report</li> <li>• Simmons-Mackie et al., 2007: Qualitative study</li> <li>• Stans et al., 2017: Scoping review</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative</li> </ul>



## Additional considerations when working with Aboriginal and Torres Strait Islander clients

**7.6** Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)\* where possible to advise on cultural issues and liaise with the person with aphasia and family.

See section 7 for rationale and evidence

**7.8** Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.

See section 7 for rationale and evidence





## SECTION 7: ENHANCING PERSONAL FACTORS

Care has been taken to phrase statements using language and terminologies that are as appropriate and culturally safe as possible at the time of publication, considering the most recent developments in these fields. We are aware, however, that developments in these fields are rapid and that the AARP (being a relatively static document) may therefore not reflect the most appropriate terminology and/or practice in the future. We acknowledge this as an inherent weakness of the AARP and are dedicated to ensuring that future editions of this document will be updated accordingly.

It is important to point out here that the term “CALD” can be considered “othering” and “reductive” as it does not do justice to the rich diversity within this group (Armstrong et al., 2024). We acknowledge these limitations but have chosen to use this term in the context of the AARP so as to be able to provide specific clinically relevant guidance when working with people with this background and given the prevalence of this term in Australia.

We have chosen to use the term “Aboriginal and Torres Strait Islander people” or “Aboriginal people” when referring to Australia’s First Peoples. We want to stress that whenever we use “Aboriginal people”, we intend this to also refer to Torres Strait Islander people (see Australian Public Service Commission, 2022).

BEST PRACTICE STATEMENTS 7: ENHANCING PERSONAL FACTORS	REFERENCES	EVIDENCE LEVELS
<p><b>7.1 People with aphasia, their families and carers, and speech pathologists should work together to develop appropriate self-management strategies.</b></p> <p><b>Rationale:</b> The incorporation of self-management techniques for people with aphasia aligns with a person-centred and holistic treatment approach (Nichol et al., 2023a – see also AARP introduction). While there is not currently sufficient evidence to inform the optimal method of incorporating self-management strategies for people with aphasia (Wray et al., 2018), qualitative research demonstrates its importance for successfully living with aphasia (Nichol et al., 2022).</p> <p>Self-management plans should be developed collaboratively, be based on individual needs, goals, and resources, and enable and empower the person with aphasia to take responsibility for managing life with aphasia (Nichol et al., 2023b). These plans may include (Nichol et al., 2019; Nichol et al., 2022; Nichol et al., 2023a; Nichol et al., 2023b):</p>	<ul style="list-style-type: none"> <li>Nichol et al., 2019: Scoping review of 45 studies (aphasia-focused; 2 RCTs, 15 case study/series, 14 single group/within subjects, 5 experimental vs control group, 4 mixed methods, 2 qualitative)</li> <li>Nichol et al., 2021: Qualitative study</li> <li>Nichol et al., 2022: Qualitative study</li> <li>Nichol et al., 2023a: Qualitative study</li> <li>Nichol et al., 2023b: Qualitative study</li> <li>Palmer et al., 2019: RCT</li> <li>Wray et al., 2018: Systematic review of 24 RCTs (not restricted to aphasia)</li> </ul>	<ul style="list-style-type: none"> <li>Qual.</li> </ul>



<ul style="list-style-type: none"> <li>● active participation in meaningful social interactions and recreational activities (,</li> <li>● building communication confidence through encouragement, positivity, and opportunities for communication success,</li> <li>● establishing emotional and psychosocial supports to enable discussion of frustrations, other emotions, and life changes. This may include (access to) psychological therapy (see statements 5.19 and 5.20),</li> <li>● using technology (including AAC – see statement 5.14) to support communication access, social connection, independence, and control,</li> <li>● community-based interventions such as peer support and community aphasia groups (see statement 5.22), or communication partner training (see statements 2.6, 5.23, 6.1), and</li> <li>● self-managed computer-based word finding therapy, to increase frequency/intensity of practice (Palmer et al., 2019).</li> </ul> <p>Communication partners, speech pathologists, and technology are key support sources for aphasia self-management (Nichol et al., 2021).</p>		
<p><b>7.2 Connections with appropriate social supports should be facilitated for people with aphasia and their families.</b></p> <p><b>Rationale:</b> The presence of social supports and contacts is essential for individuals facing considerable life changes following a stroke event (Robinson et al., 1999). People with aphasia often report losing friendships (Brown et al., 2012). Developing new friendships can contribute to living successfully with aphasia (Brown et al., 2012), and improvement of available social support may help to prevent social isolation and reduce or prevent the distress and post-stroke depression (Hilari, 2011; Hilari et al., 2021; Salter et al., 2010; Thomas &amp; Lincoln, 2008).</p> <p>Appropriate supports may include:</p> <ul style="list-style-type: none"> <li>● peer befriending services (Hilari et al., 2021).</li> <li>● community-based groups for people with aphasia and their families. For example, conversation groups, peer support groups, arts and leisure groups (Attard et al., 2015; Lanyon et al., 2013),</li> <li>● Aboriginal Community Controlled Health Organisations (National Aboriginal Community Controlled Health Organisation, n.d.),</li> </ul>	<ul style="list-style-type: none"> <li>● Attard et al., 2015: Narrative review</li> <li>● Brown et al., 2012: Qualitative meta-synthesis</li> <li>● Hilari, 2011: Non-randomised observational study</li> <li>● <b>Hilari et al., 2021: RCT</b></li> <li>● Lanyon et al., 2013: Systematic review of 29 studies (12 pre-post test case series, 10 single-case design studies, 4 RCTs, 3 non-randomised controlled trials)</li> <li>● Robinson et al., 1999: Non-randomised observational study</li> <li>● <b>Salter et al., 2010: Systematic review of 10 RCTs</b></li> <li>● Thomas &amp; Lincoln, 2008: Non-randomised observational study</li> </ul>	<ul style="list-style-type: none"> <li>●  </li> </ul>



<ul style="list-style-type: none"> <li>• local and national advocacy organisations (e.g., The AAA),</li> <li>• aphasia research organisations, and</li> <li>• university-based aphasia clinics.</li> </ul>		
<b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b>		
<p><b>7.3 Speech pathologists should engage in training and other activities to develop interpersonal skills and reflective practices for examining cultural safety and anti-racism with particular reference to Aboriginal and Torres Strait Islander cultures.</b></p> <p><b>Rationale:</b> Engaging in training opportunities (e.g., cultural safety training; Indigenous Allied Health Australia, 2019) and developing reflective practices can support speech pathologists in examining racism and bias in their work and workplaces (Mayes, 2020), as well as within the speech pathology evidence base (Humphrey, 2001). Non-Indigenous speech pathologists are encouraged to yarn with and learn from Aboriginal colleagues (see statement 7.8), to be active in their intercultural learning, and to critically examine current policies and practices so that services offered and practices delivered are respectful of Aboriginal and Torres Strait Islander worldviews, ways of being, knowing, and doing (McDermott, 2019).</p>	<ul style="list-style-type: none"> <li>• Indigenous Allied Health Australia, 2019: IAHA Framework</li> <li>• Humphrey, 2001: Discussion paper</li> <li>• Mayes, 2020: Discussion paper</li> <li>• McDermott, 2019: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>7.4 Speech pathologists should implement local protocols that guide working with Aboriginal and Torres Strait Islander communities.</b></p> <p><b>Rationale:</b> The development and implementation of local protocols can assist in ensuring the delivery of culturally appropriate services. General principles can underpin these protocols and assist in the development of relationships and appropriate cross-cultural communication and cultural security. Such principles may include (Indigenous Allied Health Australia, 2019):</p> <ul style="list-style-type: none"> <li>• being respectful,</li> <li>• being open and self-aware.</li> <li>• being informed and informing others,</li> <li>• establishing sustainable relationships,</li> </ul>	<ul style="list-style-type: none"> <li>• Armstrong et al., 2022: Co-design study</li> <li>• Cochrane et al., 2020: Systematic review of 6 studies (4 qualitative, 1 quantitative, 1 mixed methods)</li> <li>• Indigenous Allied Health Australia, 2019: IAHA Framework</li> <li>• McDermott, 2019: Discussion paper</li> <li>• Penn &amp; Armstrong, 2017: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<ul style="list-style-type: none"> <li>• behaving ethically,</li> <li>• being meaningful,</li> <li>• being outcomes-focussed, and</li> <li>• ensuring that follow-up and feedback occur.</li> </ul> <p>It should be recognised that every community is unique, and that great diversity exists in Aboriginal and Torres Islander society with respect to language and culture (e.g., Cochrane et al., 2020; Penn &amp; Armstrong, 2017). Therefore, long-term authentic engagement and collaboration between speech pathologists and local Aboriginal and Torres Strait Islander communities (at personal and systemic levels) are necessary to develop respectful local protocols (Armstrong et al., 2022; McDermott, 2019).</p>		
<p><b>7.5 Speech pathologists should routinely check Aboriginal and Torres Strait Islander status in clients’ health records and with the clients themselves.</b></p> <p><b>Rationale:</b> Under-identification of Indigenous status has significant implications for clinical decision-making, data collection, and resource allocation across health settings. Specific health interventions and health care services may be available to Aboriginal and Torres Strait Islander people, such as Aboriginal Liaison Officers who can assist in navigation through health services. Furthermore, it is important to be aware of a client’s ethnic and cultural background in order to understand potential linguistic and/or pragmatic behaviours (Cochrane et al., 2021; Penn &amp; Armstrong, 2017).</p> <p>Without knowledge of the client’s cultural background, particularly in terms of linguistic issues in the context of speech pathology (e.g., languages/dialects spoken), misdiagnoses are possible and inappropriate assessment and intervention practices may be used. At the same time, some Aboriginal people may choose not to openly identify as Aboriginal in a healthcare setting. This too needs to be respected by clinicians. Guidelines are available to assist clinicians in asking all clients about Aboriginal and Torres Strait origins (see Australian Institute of Health and Welfare, 2010)</p>	<ul style="list-style-type: none"> <li>• Australian Institute of Health and Welfare, 2010: Best practice guidelines</li> <li>• Cochrane et al., 2021: Retrospective chart review</li> <li>• Penn &amp; Armstrong, 2017: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p><b>7.6 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and their family.</b></p> <p><b>Rationale:</b> Understanding different worldviews is important in aphasia assessment and management. It is recommended that speech pathologists work with ALOs/AHWs who can help to bridge these different worldviews (Cochrane et al., 2020; Hersh et al., 2015). The ALO/AHW may be able to assist with developing trust between healthcare providers and the person with aphasia and their family, which is an important value within Aboriginal and Torres Strait Islander communities. The ALO/AHW may also be able to advise the speech pathologist regarding specific cultural issues and needs (Ciccone et al., 2019). The speech pathologist may be able to work with the ALO/AHW to identify factors that have the potential to reduce or facilitate participation in rehabilitation.</p> <p>Increased communication and engagement between speech pathologist and ALO/AHW may be required to define the ALO/AHW's role, including potential limitations (e.g., providing interpreter services, considering the wide range of Indigenous languages and dialects; Cochrane et al., 2016; Cochrane et al., 2020). Relationships can be built through yarning between the speech pathologist and ALO/AHW, which in turn can help to establish relationships with clients and their communities (see statement 7.8).</p> <p>*Different terms may be used to describe similar positions, for example: Indigenous Health Officer, Torres Strait Islander Health Officer, Aboriginal and Torres Strait Islander Health Worker, Aboriginal Hospital Liaison Officer, Aboriginal Health Liaison Officer, Aboriginal clinicians.</p>	<ul style="list-style-type: none"> <li>• Ciccone et al., 2019: Pre-post design</li> <li>• Cochrane et al., 2016: Qualitative study</li> <li>• Cochrane et al., 2020: Systematic review of 6 studies (4 qualitative, 1 quantitative, 1 mixed methods)</li> <li>• Hersh et al., 2015: Survey</li> </ul>	<ul style="list-style-type: none"> <li>• IV; Qual</li> </ul>
<p><b>7.7 Where the speech pathologist is not proficient in a language of the person with aphasia, a trained and qualified interpreter, knowledgeable in the specific requirements for speech pathology, should be used.</b></p> <p><b>Rationale:</b> The use of trained and qualified interpreters improves quality of clinical care, reduces communication errors, and increases patient satisfaction (Flores, 2005; Karliner et al., 2007), and should be considered essential when the speech pathologist and the person with aphasia do not speak the same language (Larkman et al., 2023).</p>	<ul style="list-style-type: none"> <li>• Cochrane et al., 2020: Systematic review of 6 studies (4 qualitative, 1 quantitative, 1 mixed methods)</li> <li>• Flores, 2005: Systematic review of 36 studies</li> <li>• Karliner et al., 2007: Systematic review of 28 studies (4 qualitative, 24 quantitative)</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>



<p>There are particular considerations to be made when working with interpreters for Aboriginal and Torres Strait Islander clients. In collaboration with the client, Aboriginal Liaison Officers (ALO) and/or Aboriginal Health Workers (AHW) and family should be consulted – these parties may be able to assist in:</p> <ul style="list-style-type: none"> <li>• identifying all languages spoken by the client, in order to seek the services of the correct interpreter,</li> <li>• deciding whether the involvement of an interpreter is appropriate for a specific client, and</li> <li>• identifying the client’s preferences – for example, regarding culturally sensitive issues such as men’s and women’s business.</li> </ul> <p>A record of all languages spoken by the client should be documented in the notes.</p> <p>While there may be challenges to accessing a qualified interpreter for all languages, it is known that health professionals do not always access interpreters for Aboriginal and Torres Strait Islander clients even when they are available (Ralph et al., 2017). Where interpreters are not available in the geographical area of the hospital/rehabilitation service, services should be sought via telephone or other media. Speech pathologists may need to explore their health networks and state interpreting services to find interpreters. It is important to note that while ALOs/AHWs may be able to provide linguistic assistance if no trained interpreters are available, this cannot be assumed due to the wide range of Aboriginal and Torres Strait Islander languages and dialects (Cochrane et al., 2020).</p> <p>When working with an interpreter, pre- and post-session briefings with the interpreter, the ALO/AHW, and the speech pathologist may be necessary to clarify the purpose of therapy sessions and the role of the interpreter. Please refer to statement 7.14 for additional information about working with interpreters.</p>	<ul style="list-style-type: none"> <li>• Larkman et al., 2023: Scoping review of 20 studies (10 descriptive papers, 8 surveys, 2 interview studies)</li> </ul>	
<p><b>7.8 Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.</b></p> <p><b>Rationale:</b> Yarning is an Indigenous concept which is about sharing information and stories (Bessarab &amp; Ng’andu, 2010). Clinical yarning is a framework that combines Aboriginal ways of communicating with biomedical knowledge (Lin et al., 2016). Clinical yarning is a person-centred, holistic approach</p>	<ul style="list-style-type: none"> <li>• Bessarab &amp; Ng’andu, 2010: Discussion paper</li> <li>• Cochrane et al., 2016: Qualitative study</li> <li>• Ciccone et al., 2019: pre post design</li> <li>• Jones et al., 2020: Systematic review and meta-narrative synthesis of 54 qualitative studies</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p>that is relaxed and open-ended, and can be used to build a trusting relationship and as a way to communicate health information (Lin et al., 2016).</p> <p>Clinical yarning consists of three interrelated parts (Lin et al., 2016):</p> <ol style="list-style-type: none"> <li>1. Social yarning is about finding common ground and establishing connection. It is a chance for clinicians to learn about the person and about local Aboriginal culture and to share personal information. Social yarning is holistic, patient-led, values the patient as expert, and values the patient’s story and life knowledge.</li> <li>2. Diagnostic yarning is about the patient telling their health story, with the clinician interpreting through a biomedical lens. Rather than asking a series of questions, the aim is for the person to tell their story. Open-ended questioning, non-judgemental listening, and allowing conversational silences are key.</li> <li>3. Management yarning is about the clinician having an honest discussion with their client about their condition and deciding on a management plan together. Information shared with the patient should be clear and medical jargon should be avoided. Stories and metaphors can be used to share information in a meaningful and understandable way, and people should be provided with appropriate resources (such as <i>My Stroke Journey</i> (SF, 2023 – also available in other languages), <i>Our Stroke Journey</i> (SF, 2021), and/or <i>the Aphasia Handbook</i> (SF/AAA, 2023)). The goal of this type of yarn is to come up with an agreed upon plan that is clearly understood by all parties.</li> </ol> <p>A good starting point for learning more about clinical yarning is the Clinical Yarning e-learning module by the Western Australian Centre for Rural Health (Western Australian Centre for Rural Health, n.d.).</p> <p>Inclusion of (extended) family members should be facilitated if desired by the person with aphasia, considering the importance of (extended) family in many Aboriginal and Torres Strait Islander communities. It is important for speech pathologists and their employers to acknowledge that additional time and flexible approaches may be necessary in order to accommodate yarning (Ciccione et al., 2019; Cochrane et al., 2016; Jones et al., 2020).</p>	<ul style="list-style-type: none"> <li>• Lin et al., 2016: Discussion paper</li> </ul>	
<p><b>7.9 Goal setting and aphasia management should be person-centred and strength-based and should be considerate of Aboriginal and Torres Strait Islander models of health and wellbeing.</b></p> <p><b>Rationale:</b> Different worldviews may influence people’s preferences and their understandings of what makes interventions worthwhile or successful (Penn &amp; Armstrong, 2017). This is important</p>	<ul style="list-style-type: none"> <li>• Armstrong et al., 2015: Qualitative study</li> <li>• Armstrong et al., 2019: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>



<p>considering that aphasia may impact many aspects of a person’s life including family and community roles, ability to express cultural identity, and participation in education, employment, and social opportunities (see Statement 5.5). Some of these life areas may be especially important for younger people who have experienced stroke and aphasia (Armstrong et al., 2015; Cochrane et al., 2020; Katzenellenbogen et al., 2014). All of these areas should therefore be considered in goal setting and aphasia management in order to facilitate full reintegration into communities, which has been flagged as a key priority by Aboriginal and Torres Strait Islander people (Armstrong et al., 2015).</p> <p>It should be noted that the notion of individual goals is a primarily Western concept and may not be used in some Aboriginal and Torres Strait Islander cultures (Armstrong et al., 2019). Identifying and yarning about the things people want to work on may be a more appropriate approach (see statement 7.8). The Shared Decision-Making Model (Agency for Clinical Innovation, n.d.) can be used as a starting point for yarning about this topic.</p> <p>Speech pathologists should also take a strengths-based approach to their work with Aboriginal and Torres Strait Islander clients. In doing so, speech pathologists are encouraged to consider frameworks such as an Aboriginal model of health and wellbeing and social and emotional models of health and wellbeing to guide their work in goal setting and management. A resource that may guide this process is the National Strategic Framework for Aboriginal and Torres Strait Islander People’s Mental Health and Emotional Wellbeing (Commonwealth of Australia, 2017).</p> <p>Speech pathologists are encouraged to consider:</p> <ul style="list-style-type: none"> <li>● working closely with family (including family members non-Aboriginal and Torres Strait Islander Australians would call ‘extended family’),</li> <li>● working jointly with other allied health colleagues (Cochrane et al., 2016),</li> <li>● making pre-discharge links with the client’s local Aboriginal Medical Service or preferred medical service if they are associated with one (see statement 7.11),</li> <li>● being flexible with therapy context e.g., including or excluding home visits depending on client’s preferences (Penn &amp; Armstrong, 2017),</li> <li>● offering opportunities for the client to participate in yarning and social activity,</li> <li>● traditional healing and beliefs,</li> <li>● being mindful of co-morbidities whose treatment may take precedence (Penn &amp; Armstrong, 2017), and</li> <li>● collaborating closely with ALO/AHW colleagues (see statement 7.6).</li> </ul>	<ul style="list-style-type: none"> <li>● Cochrane et al., 2016: Qualitative study</li> <li>● Cochrane et al., 2020: Systematic review of 6 studies (4 qualitative, 1 quantitative, 1 mixed methods)</li> <li>● Commonwealth of Australia, 2017: National Strategic Framework</li> <li>● Katzenellenbogen et al., 2014: Retrospective chart review</li> <li>● Penn &amp; Armstrong, 2017: Discussion paper</li> </ul>	
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<p><b>7.10 When considering assessment of aphasia in Aboriginal and Torres Strait Islander clients, speech pathologists should be mindful of the significant limitations of and potential harms in using formal assessment tools.</b></p> <p><b>Rationale:</b> Currently no formal (standardised) assessments nor screening tools exist for exploring aphasia in Aboriginal and Torres Strait Islander peoples. Tools for assessing English have been standardised on non-Indigenous people and while many Aboriginal and Torres Strait Islander people speak English, these tools may yield misdiagnoses for some people (SPA, 2023a). Speech pathologists should be aware that a lack of familiar vocabulary, grammar and format in standardised language tests may significantly disadvantage Aboriginal and Torres Strait Islander Australians leading to an underestimation or misinterpretation of an individual’s language abilities. In addition, negative experiences of being tested may be triggered among some Aboriginal people as a result of language assessments and it is important to be mindful of this. On a more fundamental note, assessment can reinforce deficit discourse and privilege a western/colonial lens (McDermott, 2019) and can therefore feel very unsafe for Aboriginal and Torres Strait Islander people.</p> <p>Speech pathologists are therefore encouraged to refrain from performing formal assessments and instead to move towards a non-deficit focused, person-centred approach. Dynamic assessment that involves observations and clinical yarning (see statement 7.8) is a culturally safe way of understanding a person and their needs and can be used to agree on a treatment approach.</p> <p>Should formal assessments be necessary (e.g., for NDIS applications), an informal and authentic conversation between the speech pathologist and the client is necessary to explain the purpose of the assessment. Yarning should always take place prior to assessment. In addition, it is important for speech pathologists to regard all varieties of English equally, as failure to do so devalues community languages and dialects and promotes structural racism (SPA, 2023a). Phonology, semantics, grammar, pragmatics and narrative styles can differ significantly between Aboriginal and Torres Strait Islander Australians and non-Aboriginal and Torres Strait Island Australians (Armstrong et al., 2017). Hence caution must be taken by speech pathologists to ensure that speech patterns arising from linguistic and cultural differences are not inaccurately be labelled as errors; Armstrong et al., 2017; Penn &amp; Armstrong, 2017). Engaging with a client’s family, other community members, and/or an ALO/AHW may help to better understand language processes in their community.</p>	<ul style="list-style-type: none"> <li>• Armstrong et al., 2017: Discussion paper</li> <li>• McDermott, 2019: Discussion paper</li> <li>• Penn &amp; Armstrong, 2017: Discussion paper</li> <li>• SPA, 2023a: Position statement</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
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<p>Assessment of activity and participation should be broader than formal linguistic assessments and should explore the impact of the communication impairment on cultural, family and community functioning (Armstrong et al., 2017).</p>		
<p><b>7.11 Speech pathologists should develop an awareness of local Aboriginal health services and Aboriginal specific social services.</b></p> <p><b>Rationale:</b> Knowing what local services are available to Aboriginal and Torres Strait Islander clients can help in discharge and therapy planning as well as advocacy. Such knowledge can help to ensure that people are referred to services that are culturally safe and best address their personal needs and priorities. For example, people may prefer to engage in non-disability-centred Aboriginal and Torres Strait Islander community groups, rather than healthcare-based groups with a stronger focus on communication disabilities (Armstrong et al., 2015; Penn &amp; Armstrong, 2017). Engagement with such groups should therefore be actively encouraged and facilitated by speech pathologists. On the other hand, some Aboriginal and Torres Strait Islander people may prefer not to engage with Aboriginal-specific services. An open, non-judgmental discussion (see Statement 7.8) is necessary to determine which services the client would like to connect with and how the speech pathologist can facilitate.</p> <p>For speech pathologists, awareness of local Aboriginal health services and social services includes investing in long-term relationships with local service providers, which may include Aboriginal Community Controlled Health Organisations (National Aboriginal Community Controlled Health Organisation, n.d.).</p> <p>It is important that clients and their families are made aware of ways to contact health services after discharge should they want to (e.g., by contacting their ALO/AHW – see also statement 8.9). Speech pathologists are encouraged to have an open-door policy, sharing their contact details and making it easy for discharged clients and their families to get back in touch. Relationship-building is key to facilitate this process.</p>	<ul style="list-style-type: none"> <li>• Armstrong et al., 2015: Qualitative study</li> <li>• Penn &amp; Armstrong, 2017: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p><b>7.12 Speech pathologists should develop reflective practice skills so that they learn from each experience with an Aboriginal or Torres Strait Islander client and improve the service they provide with each new client, with the guidance of a mentor.</b></p> <p><b>Rationale:</b> Continuous self-improvement and education, as well as openness to learning from more experienced (non-Indigenous) colleagues and other Aboriginal and Torres Strait Islander people are vital in order to enhance culturally safe practices (Indigenous Allied Health Australia Ltd., 2019). This process includes building relationships with Aboriginal and Torres Strait Islander colleagues and seeking guidance and feedback, thereby learning from others’ experiences. Speech pathologists are encouraged to ask questions and learn from their experiences with Aboriginal colleagues, as well as clients and their families. Respect and appreciation of Indigenous knowledge systems is key, and a local mentor may be able to help in this respect (Armstrong et al., 2022; McDermott, 2019).</p>	<ul style="list-style-type: none"> <li>• Armstrong et al., 2022: Co-design study</li> <li>• Indigenous Allied Health Australia Ltd., 2019: IAHA Framework</li> <li>• McDermott, 2019: Discussion paper</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>Additional considerations when working with clients with a CALD background</b></p>		
<p><b>7.13 Healthcare providers should consider the cultural and linguistic background of the person with aphasia, their family, and their community.</b></p> <p><b>Rationale:</b> Cultural and linguistic factors that may impact service delivery include language(s) and/or dialect(s) spoken at home or in the community, ethnic background, nationality, dress, traditions, food, societal structures, art, and religious and spiritual beliefs (Ethnic Communities Council of Victoria, 2012). True person-centred care therefore requires a holistic approach, which is considerate of these factors, as well as other factors related to a client’s background or journey, such as their country of birth, path to Australia, socio-political history of their previous country, possible refugee status, the possibility of trauma, and level of acculturation. Another factor is citizenship/residency status, which impacts on access to services such as Medicare and health insurance, as well as contributing to experiences of stress (Federation of Ethnic Communities’ Councils Australia, 2020).</p> <p>Speech pathologists should also be mindful of social determinants of health (e.g., access to healthcare, education, and social inclusion; WHO, 2001) and how these may affect people with aphasia from CALD backgrounds specifically. This in turn requires speech pathologists to familiarise</p>	<ul style="list-style-type: none"> <li>• Centeno et al., 2021: Book chapter</li> <li>• Federation of Ethnic Communities’ Councils Australia, 2020: Access and Equity Report</li> <li>• Holland &amp; Penn, 1995: Book chapter</li> <li>• Legg &amp; Penn, 2013: Qualitative study</li> <li>• Siyambalapitiya &amp; Davidson, 2015: Discussion paper</li> <li>• SPA, 2023a: Position statement</li> <li>• WHO, 2001: WHO Framework</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>



<p>themselves with a person’s (cultural) norms and background (Centeno et al., 2021), and engage in critical reflection and evaluation of one’s own (un)conscious biases (SPA, 2023a). Attitudes and traditional beliefs towards healthcare, aphasia and the rehabilitation process, may differ both across different cultural or ethnic groups, and also between members of the same cultural or ethnic group, and should therefore be considered on an individual basis (Centeno et al., 2021; Legg &amp; Penn, 2013; Siyambalapatiya &amp; Davidson, 2015). As such, the typical methods and materials used for assessment, intervention, and education may not be suitable for all individuals in a diverse society (Holland &amp; Penn, 1995).</p> <p>Healthcare providers should consider the following:</p> <ul style="list-style-type: none"> <li>• Who in the family/community is the decision maker?</li> <li>• How do families/communities make decisions on behalf of individual community members?</li> <li>• How do individuals/families/communities engage with illness/healthcare?</li> <li>• How do individuals/families/communities navigate the healthcare system (which may conflict with their cultural values)?</li> </ul> <p>For reasons of linguistic diversity, assessment norms in one language cannot simply be transferred to a different language/dialect. Cultural diversity may also impact relevance and/or recognition of images and concepts presented in assessments developed in Western contexts. Speech pathologists may therefore need to use their own discretion when interpreting test results in a different language/dialect (Centeno et al., 2021) – see also statements 7.10 and 7.16. Similarly, certain therapy approaches or methods may not align with characteristics and features of a client’s language (e.g., some languages may not use passive constructions to the same extent as English; Centeno et al., 2021). Speech pathologists are encouraged to liaise closely with qualified interpreters – see statements 7.7 and 7.14.</p>		
<p><b>7.14 Where the speech pathologist is not proficient in a language of the person with aphasia, a trained and qualified interpreter, knowledgeable with the specific requirements for speech pathology, should be used.</b></p> <p><b>Rationale:</b> The use of trained and qualified interpreters improves quality of clinical care, reduces communication errors, and increases patient satisfaction (Flores, 2005; Karliner et al., 2007), and</p>	<ul style="list-style-type: none"> <li>• Babbitt et al., 2022: Qualitative study</li> <li>• Brisset et al., 2013: Systematic review of 61 qualitative studies</li> <li>• Flores, 2005: Systematic review of 36 studies</li> <li>• Huang et al., 2019: Systematic review of 10 studies (5 single-case reports, 4</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>



<p>should be considered essential when the speech pathologist and the person with aphasia do not speak the same language (Larkman et al., 2023).</p> <p>Trained and qualified interpreters may not have specific knowledge or training regarding aphasia and speech pathology assessment and treatment procedures. Speech pathologists should share their professional knowledge with the interpreter, specifically about the way in which a person’s aphasia may affect typical language use. This information is essential for valid diagnosis and treatment (Kambanaros &amp; Van Steenbrugge, 2004; Roger &amp; Code, 2011). Pre- and post-session briefings may therefore facilitate aphasia sessions with an interpreter (Huang et al., 2019; Larkman et al., 2023).</p> <p>Speech pathologists should also educate themselves on the role and practices of interpreters, and be aware that working with people with aphasia is fundamentally different from how interpreters usually work. For example, interpreters often ask clarifying questions, which may result in prompting or cueing during aphasia assessment. They are also trained to convey meaning rather than linguistic/grammatical form, and so may require specific instruction about the type of information needed by the speech pathologist (e.g., language errors made; Babbitt et al., 2022; Roger &amp; Code, 2011). Aphasia assessment, treatment, and education is likely to require more time in this cohort, due to time needed to establish rapport, to liaise with interpreters, to create informal assessment and therapy resources, and for clinical reasoning (Siyambalapitiya &amp; Davidson, 2015).</p> <p>The use of untrained or unqualified interpreters such as family members or other employees of the organisation (e.g., healthcare or other staff) raises ethical issues of privacy and confidentiality and may compromise the autonomy of the person with aphasia (Brisset et al., 2013). However, the person with aphasia’s choice and preference for the use of family or friends as interpreters must always be considered. Please refer to statement 7.7 for more information about working with interpreters for Aboriginal and Torres Strait Islander clients.</p>	<p>surveys, 1 single-case qualitative study)</p> <ul style="list-style-type: none"> <li>• Kambanaros &amp; Van Steenbrugge, 2004: Case study</li> <li>• Karliner et al., 2007: Systematic review of 28 studies (4 qualitative, 24 quantitative)</li> <li>• Larkman et al., 2023: Scoping review of 20 studies (10 descriptive papers, 8 surveys, 2 interview studies)</li> <li>• Roger &amp; Code, 2011: Qualitative study</li> <li>• Siyambalapitiya &amp; Davidson, 2015: Discussion paper</li> </ul>	
<p><b>7.15 Where a patient reports having used more than one language premorbidly, comprehensive information about the patient’s language history should be obtained.</b></p> <p><b>Rationale:</b> Discussion with the client, and their family, friends and carers may assist in identifying all languages spoken by the client. A record of all languages spoken by the client should be documented in the notes.</p>	<ul style="list-style-type: none"> <li>• Centeno &amp; Ansaldo, 2013: Book chapter</li> <li>• Kiran &amp; Roberts, 2012: Book chapter</li> <li>• Roberts, 2008: Book chapter</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



<p>Estimation of premorbid levels of bi/multilingual proficiency may require additional information about a combination of factors such as self-ratings of proficiency, age of acquisition, and language use patterns (Kiran &amp; Roberts, 2012). A comprehensive language history can also be used to guide intervention goals (Centeno &amp; Ansaldo, 2013; Roberts, 2008).</p>		
<p><b>7.16 Where possible, assessments should be used that are appropriate to the languages/dialects and cultural backgrounds of each client.</b></p> <p><b>Rationale:</b> Simply translating assessment tasks does not ensure the equivalence of linguistic difficulty, and may not capture the varied symptoms of aphasia across different languages (Paradis, 2011). For this reason, culturally and linguistically appropriate assessment tools should be used wherever possible – see also statements 7.10 and 7.13.</p> <p>Discourse sampling, when conducted well, may be a culturally appropriate assessment tool for exploring language use (Altman et al., 2012) and may provide insight into unique bi/multilingual communicative behaviours in their natural context.</p> <p>Additionally, assessments of how the person with aphasia’s communication is perceived (by the person or their family, friends or carers), such as the American Speech and Hearing Association Functional Assessment of Communication Skills (Frattali et al., 1995) and the Communicative Effectiveness Index (Lomas et al., 1989), may be adapted for use (see for example Penn &amp; Beecham, 1992; Watson, 2000).</p>	<ul style="list-style-type: none"> <li>• Altman et al., 2012: Single-participant study</li> <li>• Paradis, 2011: Discussion paper</li> <li>• Penn &amp; Beecham, 1992: Case study</li> <li>• Watson, 2000: Masters thesis</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>
<p><b>7.17 Where possible, treatment should be offered in all relevant languages and relevant modalities.</b></p> <p><b>Rationale:</b> Systematic avoidance of a language may reduce the potential for its recovery (Meinzer et al., 2007). In addition, avoidance of a language may reduce the communication access opportunities for a bi/multilingual person (Centeno &amp; Ansaldo, 2013; Penn et al., 2007). Cross-linguistic transfer of treatment gains provided only in one language does not occur in all cases (Ansaldo &amp; Saidi, 2014;</p>	<ul style="list-style-type: none"> <li>• Ansaldo &amp; Saidi, 2014: Narrative review</li> <li>• Centeno &amp; Ansaldo, 2013: Book chapter</li> </ul>	<ul style="list-style-type: none"> <li>• III-2</li> </ul>



<p>Faroqi-Shah et al., 2010), but may occur more easily when using translation tasks, Semantic Feature Analysis or a combination of this approach with phonological cueing, and treating in the weaker premorbid language or in the stronger post-morbid language (Ansaldo &amp; Saidi, 2013).</p> <p>However, the choice of language should reflect relative accessibility and proficiency, and also the client's preferences and needs among other factors (Centeno &amp; Ansaldo, 2013; Roberts, 2008).</p>	<ul style="list-style-type: none"> <li>• <b>Faroqi-Shah et al., 2010: Systematic review of 14 studies (12 case studies, 2 single subject design)</b></li> <li>• Meinzer et al., 2007: Case study</li> <li>• Penn et al., 2007: Non-randomised observational study</li> <li>• Roberts, 2008: Book chapter</li> </ul>	
<p><b>7.18 Language behaviours unique to the bi/multilingual person with aphasia such as translation, language mixing and code-switching should be considered in both assessment and intervention planning.</b></p> <p><b>Rationale:</b> Aphasia may result in disturbances to bi/multilingual behaviours such as translation, language mixing and/or code-switching (Ansaldo et al., 2010). Language switching and code-switching do not necessarily need to be avoided, especially if these behaviours existed premorbidly, help the client maximise communication, and they occur in an appropriate context. However, where these behaviours occur inappropriately and/or unintentionally, they may be a suitable target for treatment ,and may be shaped using translation-based approaches to switch back to the intended language (Ansaldo et al., 2010). Discussion with the client and their family, friends and carers may assist in identifying the client's premorbid use of these behaviours, and their (in)appropriate use in different contexts.</p>	<ul style="list-style-type: none"> <li>• Ansaldo et al., 2010: Case study</li> </ul>	<ul style="list-style-type: none"> <li>• IV</li> </ul>
<p><b>7.19 Speech pathologists should explain terminology in a way that is relevant and culturally appropriate.</b></p> <p><b>Rationale:</b> In order to help the client and their family, friends and carers to understand the speech pathology and rehabilitation context, information should be provided in a way that is relevant and culturally appropriate. Speech pathologists are encouraged to work closely with relevant professionals (e.g. ALO/AHWs – see statement 7.6; and interpreters – see statements 7.7 and 7.14) to determine suitable terminology and culturally appropriate approaches to clinical discussions.</p>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>	<ul style="list-style-type: none"> <li>• GPP</li> </ul>



## SECTION 8: PLANNING FOR TRANSITIONS

BEST PRACTICE STATEMENTS 8: PLANNING FOR TRANSITIONS	REFERENCES	EVIDENCE LEVEL
<p><b>8.1 Planning for the next phase of care should be initiated as early as possible.</b></p> <p><b>Rationale:</b> Effective discharge planning is essential to ensure clients experience smooth transitions through their continuum of care. Delayed and/or incomplete discharge planning can lead to prolonged hospital stays and an increased risk of adverse events following discharge (Canadian Stroke Strategy, 2010; Shepperd et al., 2013).</p>	<ul style="list-style-type: none"> <li>• Canadian Stroke Strategy, 2010: Clinical guidelines</li> <li>• <b>Shepperd et al., 2013: Cochrane review (not restricted to aphasia)</b></li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>
<p><b>8.2 Speech pathologists should be part of the discharge planning team and adopt an advocacy role to promote optimal care.</b></p> <p><b>Rationale:</b> Multiple opportunities should be made available, from early on, for both the person with aphasia and their family, friends and carers to discuss their available discharge options, as well as any fears or concerns they may have.</p> <p>People with aphasia are often confused by their discharge and transition arrangements and may benefit from the added support of a speech pathologist using supported communication strategies to explain the process and invite the person's participation in discussions and decision-making (Ellis-Hill et al., 2009; Hersh, 2009).</p>	<ul style="list-style-type: none"> <li>• Ellis-Hill et al., 2009: Qualitative study</li> <li>• Hersh, 2009: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>
<p><b>8.3 During transitions, timely, up-to-date, accurate and appropriate patient-related information should be shared with the receiving healthcare providers.</b></p> <p><b>Rationale:</b> Stroke patient care tends to be complex and require ongoing monitoring and management. Clear and timely communication is essential to ensure continuity of care, patient</p>	<ul style="list-style-type: none"> <li>• Canadian Stroke Strategy, 2010: Clinical guidelines</li> <li>• <b>Kripalani et al., 2007: Systematic review of 73 studies (55 observational studies, 3 RCTs, 7</b></li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>





<p>safety, and reduce the risk of complications and adverse events that can result from confusion or ambiguity during transition points (Canadian Stroke Strategy, 2010).</p> <p>A systematic review of discharge from hospital cited lack of communication between health professionals as a significant factor contributing to the likelihood of adverse events (Kripalani et al., 2007). For these reasons, clear, timely and accurate information should be communicated between the discharging service and the receiving service and their health professionals at all transitions along the continuum of care.</p>	<p><b>non-randomised CTs, 8 pre post-design) (not restricted to aphasia)</b></p>	
<p><b>8.4 At the time of any discharge or transition, information that includes current diagnosis, action plans, follow-up care, and goals should be provided to the person with aphasia, and their family, friends and carers using relevant language and communication formats.</b></p> <p><b>Rationale:</b> At the time of any discharge or transition, the person with aphasia and their carers should be provided with up-to-date information that clearly defines the person’s diagnosis, functional abilities, significant interventions, and ongoing care (Canadian Stroke Strategy, 2010).</p> <p>Education is a key component of aphasia rehabilitation which supports access to services and participation in healthcare decision-making (Rose et al., 2018). This can improve the way people with aphasia and their carers engage with rehabilitation and their levels of self-efficacy (Eames et al., 2013). People with aphasia report the need for information about the causes and consequences of aphasia, their prognosis, and what to expect at different stages of recovery (Worrall et al., 2011).</p> <p>This information should also be provided to families, friends and carers of people with aphasia (Simmons-Mackie et al., 2017) so they can become more effective communication partners and advocates and ensure ongoing inclusion of the person with aphasia. Information should be tailored to meet individual needs using relevant language and communication formats (Worrall et al., 2011), including aphasia-friendly materials for people with aphasia (Rose et al., 2003). Information and should be provided at different stages in the recovery process with opportunities for follow-up, clarification, and reinforcement of information (Crocker et al., 2021).</p>	<ul style="list-style-type: none"> <li>● Canadian Stroke Strategy, 2010: Clinical guidelines</li> <li>● Crocker et al., 2021: Cochrane review (not restricted to aphasia)</li> <li>● Eames et al., 2013: RCT</li> <li>● Rose et al., 2003: Pre and post experimental design</li> <li>● Rose et al., 2018: Qualitative study</li> <li>● Simmons-Mackie et al., 2017: Qualitative study</li> <li>● Worrall et al., 2011: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>● GPP</li> </ul>



<p><b>8.5 The speech pathologist, as part of an interdisciplinary team approach, should contribute information about the communication skills of the person with aphasia that may influence appropriateness of discharge.</b></p> <p><b>Rationale:</b> Before the transition from hospital, the speech pathologist should provide information to the multidisciplinary team regarding the person with aphasia’s suitability and safety, from a communication perspective, to be discharged.</p> <p>For example, a person with significant communication difficulties who is returning to the community may require additional speech pathology input and support to prepare for tasks such as seeking help in an emergency, or safely answering the door. To facilitate the person with aphasia to actively engage in the community, a range of training and relevant supports may be required (Worrall et al., 2011).</p>	<ul style="list-style-type: none"> <li>• Worrall et al., 2011: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>
<p><b>8.6 Services that provide early supported discharge should ensure that the person with aphasia and their family are linked in with ongoing (social) supports and appropriately prepared for the transition.</b></p> <p><b>Rationale:</b> Home-based early supported discharge services can reduce the length of hospital stay and long-term care needs for some people with mild to moderate disability following stroke (Langhorne et al., 2017).</p> <p>In the initial weeks following stroke, the presence of social supports and contacts is essential to individuals who are facing considerable life changes following a stroke event (Robinson et al., 1999). Improvement of available social support and prevention of social isolation can be an important strategy in reducing or preventing distress and post-stroke depression (Hilari, 2011; Salter et al., 2010; Thomas &amp; Lincoln, 2008).</p> <p>In the case of early discharge, speech pathologists should still ensure that people with aphasia are still appropriately prepared for the transition. This includes raising awareness and/or referring people to appropriate (social) supports, such as:</p> <ul style="list-style-type: none"> <li>• peer befriending services (Hilari et al., 2021),</li> </ul>	<ul style="list-style-type: none"> <li>• Hilari, 2011: Non-randomised observational study</li> <li>• Hilari et al., 2021: RCT</li> <li>• Langhorne et al., 2017: Cochrane review</li> <li>• Robinson et al., 1999: Non-randomised observational study</li> <li>• <b>Salter et al., 2010: Systematic review of 10 RCTs</b></li> <li>• Thomas &amp; Lincoln, 2008: Non-randomised observational study</li> </ul>	<ul style="list-style-type: none"> <li>• I</li> </ul>



<ul style="list-style-type: none"> <li>• community-based groups for people with aphasia and their families (e.g., conversation groups, peer support groups, arts and leisure groups),</li> <li>• Aboriginal Community Controlled Health Organisations (see National Aboriginal Community Controlled Health Organisation, n.d.),</li> <li>• local and national aphasia advocacy organisations (e.g., the AAA),</li> <li>• aphasia research organisations, and</li> <li>• University-based aphasia clinics.</li> </ul>		
<p><b>8.7 The speech pathologist should connect the person with aphasia and their family, friends and carers with other people with aphasia, community aphasia groups, and support organisations.</b></p> <p><b>Rationale:</b> Being discharged from hospital or outpatient care is a critical time point for people with aphasia and their families. Without appropriate supports, people with aphasia face a high risk of mood disturbance (Hilari et al., 2010), social isolation and poor quality of life (Hilari et al., 2009). Family members taking on carer roles also face a high risk of carer burden and reduced quality of life (Blom Johansson et al., 2022; Grawburg et al., 2012).</p> <p>Research has shown that participation in community aphasia groups can benefit language, social participation, and community access for people with aphasia (Lanyon et al., 2013; Lanyon et al., 2018). People with aphasia and their carers report a range of benefits to psychological wellbeing from attending community aphasia groups, including forming positive relations with others, purpose in life, environmental mastery, autonomy, personal growth, and self-acceptance. (Attard et al., 2015). Similarly, research has shown improvements to mood and quality of life for people with aphasia participating in peer befriending programs (Hilari et al., 2021)</p> <p>Appropriate supports may include:</p> <ul style="list-style-type: none"> <li>• peer befriending services (Hilari et al., 2021),</li> <li>• community-based groups for people with aphasia and their families (Attard et al., 2015, 2018; Lanyon et al., 2018),</li> <li>• Aboriginal Community Controlled Health Organisations (see National Aboriginal Community Controlled Health Organisation, n.d.),</li> <li>• local and national aphasia advocacy organisations (e.g., The AAA),</li> <li>• aphasia research organisations, and</li> <li>• university-based aphasia clinics.</li> </ul>	<ul style="list-style-type: none"> <li>• Attard et al., 2015: Narrative review</li> <li>• Attard et al., 2018: Case series</li> <li>• Blom Johansson et al., 2022: Qualitative study</li> <li>• Grawburg et al., 2012: Qualitative study</li> <li>• Hilari et al., 2009: Qualitative study</li> <li>• Hilari et al., 2010: Non-randomised observational study</li> <li>• <b>Hilari et al., 2021: RCT</b></li> <li>• Lanyon et al., 2013: Systematic review of 29 studies (12 pre-post test case series, 10 single-participant design studies, 4 RCTs, 3 non-randomised controlled trials).</li> <li>• Lanyon et al., 2018: Qualitative study</li> </ul>	<ul style="list-style-type: none"> <li>• II</li> </ul>



<p><b>8.8. As part of the multidisciplinary team, the speech pathologist should, for legal issues, document all observations regarding the person’s ability to understand written and verbal information and express their wishes.</b></p> <p><b>Rationale:</b> In cases where the speech pathologist is aware of potential issues that may lead to legal challenges to the testamentary capacity of the client, the speech pathologist should ensure that full documentation of the client's communication functioning occurs.</p> <p>The speech pathologist may also act as a facilitator of communication between the client and the solicitor. In addition, speech pathologists may need to raise awareness within the legal profession about aphasia and the potential contribution of the expertise of speech pathologists when testamentary capacity is being considered (Ferguson et al., 2003).</p>	<ul style="list-style-type: none"> <li>• Ferguson et al., 2003: Case study; Qual</li> </ul>	<ul style="list-style-type: none"> <li>• Qual</li> </ul>
<p><b>8.9 People with aphasia and their family, friends and carers should have access to a contact person (e.g., a stroke coordinator or speech pathologist) for any queries post-discharge, and should know how to self-refer to appropriate speech pathology services after discharge if they feel further rehabilitation is required.</b></p> <p><b>Rationale:</b> Aphasia can be a life-altering condition and often leaves people with ongoing functional impairments. It is often not until people with aphasia are discharged from hospital-based stages of care-and experience everyday life with aphasia (including its effects on relationships with family and friends, identity, and social situations), that the impact of aphasia becomes apparent (Ford et al., 2018; Shadden &amp; Agan, 2004; Worrall et al., 2013; Wray &amp; Clarke, 2017). It is often at this time that people with communication impairments request services (O'Callaghan et al., 2009); however, accessing services post-discharge can be difficult, as stroke survivors and their carers often do not have the knowledge or skills to re-engage with healthcare services (Pindus et al., 2018).</p> <p>On discharge, speech pathologists should ensure that clients are aware of the services available to them and know how to access them. Clients should also have access to a relevant contact person for any queries post-discharge, as their information needs may change, particularly during the first year, with adjustment, self-reliance, and self-management increasing over time (Pindus et al., 2018). It has been suggested that active information provision (with healthcare providers actively engaging to ensure information needs are met) may be more useful in this context than passive information</p>	<ul style="list-style-type: none"> <li>• Crocker et al., 2021: Cochrane review (not restricted to aphasia)</li> <li>• Ford et al., 2018: Scoping review of 21 qualitative studies</li> <li>• O'Callaghan et al., 2009: Narrative review</li> <li>• Pindus et al., 2018: Systematic review of 51 qualitative studies</li> <li>• Shaddan &amp; Agan, 2004: Theoretical review</li> <li>• Worrall et al., 2013: Discussion paper</li> <li>• Wray &amp; Clarke, 2017: Systematic review of 32 qualitative studies</li> </ul>	<ul style="list-style-type: none"> <li>• Qual.</li> </ul>



provision (e.g., leaving leaflets in waiting areas), particularly for stroke survivors themselves (Crocker et al., 2021).		
<b>Additional considerations when working with Aboriginal and Torres Strait Islander clients</b>		
<b>7.6 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) and/or Aboriginal Health Worker (AHW)* where possible to advise on cultural issues and liaise with the person with aphasia and family.</b>	See section 7 for rationale and evidence	
<b>7.8 Speech pathologists should incorporate clinical yarning as a means to build rapport and trust with the Aboriginal and Torres Strait Islander person and their family and to discuss speech pathology terms in a relevant and culturally appropriate way.</b>	See section 7 for rationale and evidence	
<b>7.11 Speech pathologists should develop an awareness of local Aboriginal health services and Aboriginal specific social services.</b>	See section 7 for rationale and evidence	



## APPENDIX 1: NHMRC LEVELS OF EVIDENCE

**Table 1 NHMRC Evidence Hierarchy: designations of ‘levels of evidence’ according to type of research question** (including explanatory notes)  
(National Health and Medical Research Council, 2010)

Level	Intervention <sup>1</sup>	Diagnostic accuracy <sup>2</sup>	Prognosis	Aetiology <sup>3</sup>	Screening Intervention
I <sup>4</sup>	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies	A systematic review of level II studies
II	A randomised controlled trial	A study of test accuracy with: an independent, blinded comparison with a valid reference standard, <sup>5</sup> among consecutive persons with a defined clinical presentation <sup>6</sup>	A prospective cohort study <sup>7</sup>	A prospective cohort study <sup>7</sup>	A randomised controlled trial
III-1	A pseudo-randomised controlled trial (i.e. alternate allocation or some other method)	A study of test accuracy with: an independent, blinded comparison with a valid reference standard, <sup>5</sup> among non-consecutive persons with a defined clinical presentation <sup>6</sup>	All or none <sup>8</sup>	All or none <sup>8</sup>	A pseudo-randomised controlled trial (i.e. alternate allocation or some other method)
III-2	A comparative study with concurrent controls: <ul style="list-style-type: none"> <li>• Non-randomised, experimental trial<sup>9</sup></li> <li>• Cohort study</li> <li>• Case-control study</li> <li>• Interrupted time series with a control group</li> </ul>	A comparison with reference standard that does not meet the criteria required for Level II and III-1 evidence	Analysis of prognostic factors amongst persons in a single arm of a randomised controlled trial	A retrospective cohort study	A comparative study with concurrent controls: <ul style="list-style-type: none"> <li>• Non-randomised, experimental trial<sup>9</sup></li> <li>• Cohort study</li> <li>• Case-control study</li> </ul>



III-3	A comparative study without concurrent controls: <ul style="list-style-type: none"> <li>• Historical control study</li> <li>• Two or more single arm study<sup>10</sup></li> <li>• Interrupted time series without a parallel control group</li> </ul>	Diagnostic case-control study <sup>6</sup>	A retrospective cohort study	A case-control study	A comparative study without concurrent controls: <ul style="list-style-type: none"> <li>• Historical control study</li> <li>• Two or more single arm study</li> </ul>
IV	Case series with either post-test or pre-test/post-test outcomes	Study of diagnostic yield (no reference standard) <sup>11</sup>	Case series, or cohort study of persons at different stages of disease	A cross-sectional study or case series	Case series

### Explanatory notes

<sup>1</sup> Definitions of these study designs are provided on pages 7-8 *How to use the evidence: assessment and application of scientific evidence* (NHMRC 2000b).

<sup>2</sup> The dimensions of evidence apply only to studies of diagnostic accuracy. To assess the effectiveness of a diagnostic test there also needs to be a consideration of the impact of the test on patient management and health outcomes (Medical Services Advisory Committee 2005; Sackett and Haynes 2002).

<sup>3</sup> If it is possible and/or ethical to determine a causal relationship using experimental evidence, then the 'Intervention' hierarchy of evidence should be utilised. If it is only possible and/or ethical to determine a causal relationship using observational evidence (i.e. cannot allocate groups to a potential harmful exposure, such as nuclear radiation), then the 'Aetiology' hierarchy of evidence should be utilised.

<sup>4</sup> A systematic review will only be assigned a level of evidence as high as the studies it contains, excepting where those studies are of level II evidence.

Systematic reviews of level II evidence provide more data than the individual studies and any meta-analyses will increase the precision of the overall results, reducing the likelihood that the results are affected by chance. Systematic reviews of lower-level evidence present results of likely poor internal validity and thus are rated on the likelihood that the results have been affected by bias, rather than whether the systematic review itself is of good quality. Systematic review *quality* should be assessed separately. A systematic review should consist of at least two studies. In systematic reviews that include different study designs, the overall level of evidence should relate to each individual outcome/result, as different studies (and study designs) might contribute to each different outcome.

<sup>5</sup> The validity of the reference standard should be determined in the context of the disease under review. Criteria for determining the validity of the reference standard should be pre-specified. This can include the choice of the reference standard(s) and its timing in relation to the index test. The validity of the reference standard can be determined through quality appraisal of the study (Whiting et al. 2003).



<sup>6</sup> Well-designed population-based case-control studies (e.g. population-based screening studies where test accuracy is assessed on all cases, with a random sample of controls) do capture a population with a representative spectrum of disease and thus fulfil the requirements for a valid assembly of patients. However, in some cases the population assembled is not representative of the use of the test in practice. In diagnostic case-control studies a selected sample of patients already known to have the disease are compared with a separate group of normal/healthy people known to be free of the disease. In this situation patients with borderline or mild expressions of the disease, and conditions mimicking the disease are excluded, which can lead to exaggeration of both sensitivity and specificity. This is called spectrum bias or spectrum effect because the spectrum of study participants will not be representative of patients seen in practice (Mulherin and Miller, 2002).

<sup>7</sup> At study inception the cohort is either non-diseased or all at the same stage of the disease. A randomised controlled trial with persons either non-diseased or at the same stage of the disease in *both* arms of the trial would also meet the criterion for this level of evidence.

<sup>8</sup> All or none of the people with the risk factor(s) experience the outcome; and the data arises from an unselected or representative case series which provides an unbiased representation of the prognostic effect. For example, no smallpox develops in the absence of the specific virus; and clear proof of the causal link has come from the disappearance of smallpox after large-scale vaccination.

<sup>9</sup> This also includes controlled before-and-after (pre-test/post-test) studies, as well as adjusted indirect comparisons (i.e. utilise A vs B and B vs C, to determine A vs C with statistical adjustment for B).

<sup>10</sup> Comparing single arm studies i.e. case series from two studies. This would also include unadjusted indirect comparisons (i.e. utilise A vs B and B vs C, to determine A vs C but where there is no statistical adjustment for B).

<sup>11</sup> Studies of diagnostic yield provide the yield of diagnosed patients, as determined by an index test, without confirmation of the accuracy of this diagnosis by a reference standard. These may be the only alternative when there is no reliable reference standard.

**Note A:** Assessment of comparative harms/safety should occur according to the hierarchy presented for each of the research questions, with the proviso that this assessment occurs within the context of the topic being assessed. Some harms are rare and cannot feasibly be captured within randomised controlled trials; physical harms and psychological harms may need to be addressed by different study designs; harms from diagnostic testing include the likelihood of false positive and false negative results; harms from screening include the likelihood of false alarm and false reassurance results.

**Note B:** When a level of evidence is attributed in the text of a document, it should also be framed according to its corresponding research question e.g. level II intervention evidence; level IV diagnostic evidence; level III-2 prognostic evidence.

**Source:** Hierarchies adapted and modified from: NHMRC, 1999; Bandolier, 1999; Lijmer et al. 1999; Phillips et al. 2001.





## APPENDIX 2: GLOSSARY OF TERMS

### Abbreviations

AAA	Australian Aphasia Association
AAC	Augmentative and alternative communication
AARP	Australian Aphasia Rehabilitation Pathway
AHW/ALO	Aboriginal Health Worker/Aboriginal Liaison Officer
Aphasia CRE	Centre of Research Excellence in Aphasia Recovery and Rehabilitation
CCRE	Centre for Clinical Research Excellence
CPT	Communication partner training
GPP	Good practice point
ICF Health	International Classification of Functioning, Disability and Health
IPD	Individual participant data
NDIS	National Disability Insurance Scheme
NHMRC	National Health and Medical Research Council
RAM	RAND/UCLA Appropriateness Method
RCT	Randomised controlled trial
RELEASE	REhabilitation and recovery of peopLE with Aphasia after Stroke
SCED	Single case experimental design
SF	Stroke Foundation
SPA	Speech Pathology Australia
WHO	World Health Organization

### General Terms and Definitions

**Allied Health Assistant:** Allied health assistants assist professionals in the health sector such as physiotherapy, speech pathology, nutrition and podiatry. The duties of a health assistant can vary, but these professionals typically focus on caring for patients and assisting allied health professionals.

**Aphasia:** Aphasia is a communication disability due to an acquired impairment of language modalities caused by focal brain damage (Berg et al., 2020). Language modalities include speaking, understanding, reading, writing and using signs. Aphasia may affect participation and quality of life of the person with aphasia as well as their family and friends. Aphasia masks competence and affects functioning across relationships, life roles and activities, thereby influencing social inclusion, social connectedness, access to information and services, equal rights, and wellbeing in family, community and culture (Berg et al., 2020). In the context of the best practice statements, 'aphasia' refers specifically to post-stroke aphasia.

**Aphasia-friendly material:** Material that has been adapted for people with aphasia. Recommendations for how to best format printed education material for people with aphasia include the use of short, simple language, content that is relevant and interesting to the reader, large sans serif font, bolding of important information, well organised information, increased white space, relevant pictures, simple layout, low reading grade level, and graphics that contain captions.



**Augmentative and alternative communication (AAC):** Communication through means other than speech. While there is no consensus on exact terminology, AAC solutions can be categorised based on the extent to which they involve products or technology. Some people distinguish between:

- no-technology (e.g., gestures) / low- technology (e.g., communication boards, cue cards) AAC, and
- high-technology AAC (e.g., (portable) computers, dedicated AAC devices, mobile devices and applications).

**Can:** For best practice statements where the evidence is less clear, and/or there is not a clear clinical consensus, the word “can” has been used. Individual patient factors should always be taken into account when considering different intervention options.

**Chronic aphasia:** Aphasia that persists beyond the acute stages. There is no clear timeframe to define acute versus chronic, however for the purpose of the statements, chronic aphasia is defined as ongoing language difficulties more than six months post stroke.

**Client:** The person with aphasia is referred to as a ‘client’ when receiving services post-hospital care, or when a statement applies to both hospital and post-hospital care.

**Dynamic assessment:** Assessments where the clinician takes on an experimental approach in the sense that they attempt to identify the effects of factors (e.g., strategies, task modifications, contextual factors, environmental supports) that may influence performance.

**Early supported discharge:** Pathways of care for transferring patients from an inpatient environment to the community sooner than usual, to continue a period of rehabilitation and recuperation at a similar level of intensity and delivered by a coordinated interdisciplinary team with the same level of expertise, as they would have received in the inpatient setting.

**Formal vs. informal assessment:** Formal (standardised) assessments are those used for the purposes of replication, for example, when the purpose of the assessment is to compare the person with aphasia to a normative reference standard or to compare their performance over time. Informal assessment processes are those used for the purposes of developing an in-depth understanding of an individual’s performance and difficulties in relation to their identified needs and the scope of the assessment (e.g. to design therapy, to consider decision-making capacity).

**Goal setting:** Goal setting has been defined as an iterative process of collaborative discussions between the clinician, patient and family members about the goals of aphasia rehabilitation. The discussion identifies the end targets of intervention and explains the process of achieving them.

**Good practice point (GPP):** A recommendation for which there is currently no robust Level I, II, III or IV evidence available, but there was consensus within the AARP working group, and/or documented expert opinion.

**Interdisciplinary Team:** An interdisciplinary team is composed of members from different healthcare professions with specialised skills and expertise. The members collaborate together to make treatment recommendations that facilitate quality patient care. Some interdisciplinary teams carry out assessment/intervention sessions with two or more different healthcare professionals present in highly collaborate practice.

**International Classification of Functioning, Disability and Health (ICF):** Developed by the WHO, the ICF is framework that provides unified and standard language for the description of health and health-related states. These states are classified from body, individual and societal perspectives by means of two lists: a list of *body functions and structure*, and a list of domains of *activity and participation*. Since an individual’s functioning and disability occurs within a context, the ICF also includes *contextual* (environmental and personal) factors.



**Multidisciplinary team:** A multidisciplinary team (MDT) is composed of members from different healthcare professions with specialised skills and expertise. The members collaborate together to make treatment recommendations that facilitate quality patient care.

**Patient:** The person with aphasia is referred to as ‘patient’ during the hospital admission

**Phases of care:** The critical timepoints post-stroke that link to the currently known biology of recovery, and around which stroke services are commonly delivered. Bernardt et al. (2017) define the following phases of care:

- hyper-acute: 0-24 hours
- acute: 1-7 days
- early subacute: 7 days to 3 months
- late subacute: 3 to 6 months
- chronic: >6 months

**Prognosis:** The prediction of the likely outcome of one’s current condition

**Self-management:** the ability of a person with aphasia to manage the symptoms, treatment, physical and psychosocial consequences, and lifestyle changes inherent in living with chronic aphasia. Self-management techniques are ones that may assist and empower the person with aphasia to achieve this.

**Should:** For best practice statements where the evidence is clear and trusted, or where there is consensus on the basis of clinical experience and expert opinion (good practice point: GPP), the word “**should**” has been used to indicate that the intervention should be routinely carried out. Individual patient factors should always be taken into account when considering different intervention options.

**Stroke unit:** Stroke units with a focus on acute care and early aspects of rehabilitation, with varying degrees of intensity and follow-up. Stroke units share the following characteristics: located in a geographically discrete unit;

comprehensive assessment; a coordinated multidisciplinary team; early mobilisation and avoidance of bed-rest; staff with special interest in the management of stroke, and access to ongoing professional education and training; clear communication with regular team meetings to discuss management (including discharge planning) and other meetings as needed (e.g. family conferences); and active encouragement of stroke survivors and their families to be involved in the rehabilitation process.

**Subacute services/care:** Subacute care has many definitions, depending on the context in which it is considered. At its simplest, subacute care is about goal-oriented (and in many instances time-limited) interventions aimed at assessing and managing often complex conditions to maximize independence and quality of life for people with disabling conditions.

**Tele-assessment:** See **Telerehabilitation**

**Telerehabilitation:** The remote delivery of rehabilitation via some form of telecommunication technology (e.g., Zoom or Skype). This can include both treatment (telerehabilitation, telepractice) and assessment (tele-assessment).

**Transitions:** Refers to the movement of patients among healthcare locations, providers, goals of care, and the various settings where healthcare services are received. Key transition points along the rehabilitation pathway include:

- Discharge from acute hospital,
- Discharge from subacute rehabilitation/inpatient rehabilitation,
- Discharge from community-based/outpatient rehabilitation, and/or
- Discharge from community services such as Intensive Comprehensive Aphasia Programs, NDIS short term programs of therapy, etc.



**(Clinical) Yarning:** Yarning is an Indigenous concept which is about sharing information and stories. Clinical yarning is a framework that combines Aboriginal ways of communicating with biomedical knowledge. Clinical yarning is a person-centred, holistic approach that is relaxed and open-ended, and can be used to build a trusting relationship and to communicate health information.

Clinical yarning consists of three interrelated parts:

1. Social yarning is about finding common ground and establishing connection. It is a chance for clinicians to learn about the person and about local Aboriginal culture and to share personal information. Social yarning is holistic, patient-led, values the patient as expert, and values the patient's story and life knowledge.
2. Diagnostic yarning is about the patient telling their health story, with the clinician interpreting through a biomedical lens. Rather than asking a series of questions, the aim is for the person to tell their story. Open-ended questioning, non-judgemental listening, and allowing conversational silences are key.
3. Management yarning is about the clinician having an honest discussion with their client about their condition and deciding on a management plan together. Information shared with the patient should be clear and medical jargon should be avoided. Stories and metaphors can be used to share information in a meaningful and understandable way, and people should be provided with appropriate resources. The goal of this type of yarn is to come up with an agreed upon plan that is clearly understood by all parties.

## Interventions

**Behavioural Activation:** Behavioural activation is a behaviour therapy for treating mood disorders. BA is a way by which mood can be improved through the active engagement and planning of potentially mood-boosting activities. BA also involves the understanding of an individual's specific behaviours and the use of specific methods to enable them to overcome avoidance.

**Cognitive Behavioural Therapy (CBT):** a type of psychotherapy in which negative patterns of thought about the self and the world are challenged in order to alter unwanted behaviour patterns or treat mood disorders such as depression.

**Communication partner training (CPT):** An environmental intervention that aims to train communication partners to understand the characteristics of aphasia and successfully communicate with people with aphasia. CPT is directed at people other than the person with aphasia, with the intent of improving the language, communication, participation, and/or wellbeing of the person with aphasia. Communication partners are people in the environment with whom the person with aphasia might interact. This includes both familiar communication partners (e.g., family, friends), and unfamiliar communication partners (e.g., health professionals, formal/paid carers, students, volunteers).

**Community aphasia group:** a community-based group designed for people with aphasia. These groups may include language and communication-based activities, and typically include a focus on peer support, social connection, supported conversation, wellbeing and access to enjoyable activities. They may or may not include the family members and friends of people with aphasia.

**Constraint-induced language therapy:** Constraint-induced language therapy (CILT) or constraint-induced aphasia therapy (CIAT) is an intensive therapy model based on the forced use of verbal oral language as the sole channel of communication, while any alternative communication modes such as writing, gesturing or pointing are discouraged.

**Discourse treatment:** treatments that focus on naturally occurring (real-life) conversations and those that focus on improving linguistic performance by treating within a structured discourse context.

**Gesture treatment:** Gestures can be used as a compensatory communication modality in the event of verbal language failure. In addition, gestures have been advocated as a means to facilitate restoration of language skills. Gestures come



in many types, including beats, deictics, iconics, pantomimes and emblems. Compensatory communication relies primarily on symbolic gestures that express some type of meaning, such as iconics (e.g., hand shaped as an object, such as house), emblems (e.g., familiar actions used within a culture, such as thumbs up or salute) and pantomimes (e.g., use of objects or actions such as fork/eating).

**Language Underpins Narrative in Aphasia (LUNA):** LUNA is a theory based, co-designed, multi-level discourse intervention, which aims to facilitate the telling of personal stories through word, utterance (sentence) and discourse macrostructure level treatment activities. It integrates familiar treatments - semantic feature analysis, mapping therapy, story grammar - to provide flexible metalinguistic tools for improving people's confidence and ability to express themselves through narrative.

**Mapping Therapy (MT):** Mapping Therapy was developed for people with non-fluent agrammatic aphasia. It aims to improve the production and/or comprehension of sentences. It is based on the hypothesis that people with agrammatism retain skills with syntax but cannot relate syntactic forms to meaning. They cannot, therefore, compose or comprehend sentence word order. Their problems are compounded with moved argument, non-canonical forms, such as passives. Mapping treatment involves explicit discussion about where verb roles (agent/patient/theme) are expressed in a sentence. The treatment engages sentence comprehension &/or production tasks and can work with a variety of sentence forms.

**Modified Multiple Oral Rereading (MMOR):** A modification of MOR Multiple Oral Rereading therapy for treating alexia involving repeated oral reading of written discourse aimed at increasing reading speed, accuracy and reading comprehension.

**Multimodal Aphasia Treatment (MMAT):** Multi-Modality Aphasia Therapy (MMAT) is a high-dose intervention aimed at improving verbal communication at

word, sentence and discourse level, utilising specific verbal (naming, repetition, writing) and nonverbal strategies (gesture, drawing) while playing language games with cards depicting objects or actions.

**Multiple Oral Rereading (MOR):** A technique for treating alexia involving independent repeated oral reading of written discourse aimed at increasing reading speed and accuracy.

**Narrative and Discourse Intervention in Aphasia (NADIIA):** Narrative and Discourse Intervention in Aphasia (NADIIA) is a structured multi-level language therapy, delivered using a natural interactive approach. It draws on evidence-based therapies for improving microstructure (words and sentences) and combines these to build macrostructure (e.g., the beginning, middle and end of a topic) for a range of monologic genres (i.e., telling stories, giving opinions, explaining procedures, recounting events). A metalinguistic and metacognitive approach underpins the combining of language with cognitive skills, all needed to produce informative and coherent discourse, and which are pivotal to the transfer of gains to communication outside the clinical setting.

**Oral Reading for Language in Aphasia (ORLA®):** Oral Reading for Language in Aphasia (ORLA®) is a treatment designed to improve reading comprehension and oral reading fluency in people with aphasia but has also demonstrated indirect effects on other language modalities including oral expression (i.e., apraxia of speech) and auditory comprehension. The treatment combines listening, choral reading, and repetition of sentences or paragraphs in a structured, repetitive protocol that also includes single word recognition and production. ORLA®'s multi-modality nature (i.e., seeing the text, seeing the therapist's oral movements, hearing the therapist's production, hearing the patient's own production) and intensity/repetition (i.e., completing multiple steps with each stimulus sentence or paragraph) are essential components.



**Peer befriending:** Peer befriending is social and emotional support provided by people with experience of a condition to others sharing a similar condition to bring about a desired social or personal change. Peer befrienders, who have achieved improvements in their own condition, have been found to offer acceptance, respect, empathy, support, companionship, hope and share experiences and ideas about how to cope.

**Problem solving therapy:** Problem-solving therapy is a brief intervention that provides people with the tools they need to identify and solve problems that arise from big and small life stressors. It aims to improve your overall quality of life and reduce the negative impact of psychological and physical illness

**Relaxation therapy:** Relaxation therapy refers to a number of techniques designed to teach someone to be able to relax voluntarily. These techniques can include special breathing practices and progressive muscle relaxation exercises, which are designed to reduce physical and mental tension

**Solution Focused Brief Therapy:** Solution-focused brief therapy is a strength-based approach to psychotherapy that focuses on solution-building rather than problem-solving. Unlike other forms of psychotherapy that analyse present problems and past causes, Solution-focused brief therapy concentrates on current circumstances and future hopes.

**Treatment of Underlying Forms (TUF):** Treatment of Underlying Forms (TUF) is a psycholinguistically based therapy developed for improving sentence deficits in individuals with agrammatic aphasia, a type of aphasia characterized by production of short, grammatically impoverished utterances with frequent word finding pauses. TUF focuses on verbs, their thematic roles, and sentence building, using simple active sentences to build complex, noncanonical structures in both comprehension and production. Treatment is based on the Complexity Account of Treatment Efficacy (CATE): training complex structures promotes generalization to sentences of lesser linguistic complexity when the abstract underlying properties of language overlap across structures.

**Verb Network Strengthening Treatment (VNeST):** Verb Network Strengthening Treatment (VNeST) is a sentence level aphasia treatment that aims to promote increased lexical retrieval abilities beyond what is explicitly trained (generalisation) so individuals can more effectively convey their ideas in novel/untrained sentences, discourse, and contexts

## Research Methodologies

**Background paper/Discussion Paper:** A report or other written document which describes the contextual and historical background that helps people better understand a problem or situation.

**Case series:** A study reporting observation on a series of individuals, usually all receiving the same intervention, with no control group.

**Case study:** A study reporting observation on a single individual.

**Cochrane review:** A systematic review and summary of research in health care and health policy that is published in the Cochrane Database of Systematic Reviews. They are intended to help people make practical decisions.

**Co-design study:** Co-design is a human-centered design methodology used in research-action projects to design a product or service. In the co-design approach, end users (or potential users) participate in knowledge creation and idea generation alongside researchers and designers.

**Consensus statement:** statement and recommendations for an area of practice that are developed based on a collective opinion, or consensus, of a convened expert panel.

**Descriptive report:** an article that provides a general description of a project or activity that was undertaken but may not have prospectively/systematically measured and reported on objective outcomes.



**Economic evaluation:** Comparison of the relationship between costs and outcomes (cost-effectiveness) of alternative healthcare interventions

**Meta-analysis:** combining the data from multiple individual trials to produce an overall statistic. This aims to provide a more precise estimate of the effects of an intervention and to reduce uncertainty.

**Narrative review:** attempts to summarise the literature in a way which is not explicitly systematic (in terms of the method of the literature search), but in a wider sense includes a specific research question and a comprehensive summary of all studies.

**Non-randomised controlled trial:** A study estimating the effectiveness of an intervention (harm or benefit) that does not use randomisation to allocate units to comparison groups

**Non-randomised observational study:** Observational studies include case reports, case series, cross-sectional, case-control and cohort studies and do not include the random allocation of participants to groups

**Non-randomised study:** Any quantitative study estimating the effectiveness of an intervention (harm or benefit) that does not use randomisation to allocate units to comparison groups

**Observational study:** A study in which the investigators do not seek to intervene, and simply observe the course of events.

**Qualitative meta-synthesis:** An intentional and coherent approach to analysing data across qualitative studies. It enables researchers to identify a specific research question and then search for, select, appraise, summarise, and combine qualitative evidence to address the research question.

**Qualitative study:** Research that explores people's beliefs, experiences, views, attitudes, motivations, behaviour and/or interactions. Qualitative research asks

questions about how and why and generates non-numerical data using techniques such as focus groups and in-depth interviews.

**Randomised controlled trial (RCT):** The unit of experimentation (e.g. people, or a cluster of people) is allocated to either an intervention (the factor under study) group or a control group, using a random mechanism (such as a coin toss, random number table, computer-generated random numbers) and the outcomes from each group are compared.

**Retrospective chart review:** a type of research design in which pre-recorded, patient-centered data are used to answer one or more research questions.

**Scoping review:** a type of evidence synthesis that aims to systematically identify and map the breadth of evidence available on a particular topic, field, concept, or issue, often irrespective of source (i.e., primary research, reviews, non-empirical evidence).

**Single case experimental design (SCED):** tests the efficacy of an intervention using a small number of patients (typically one to three). Individual behaviour is repeatedly measured (e.g. baseline and post-intervention) allowing participants to serve as their own controls. SCEDs are not case studies but are carefully designed prospective experimental designs.

**Systematic review:** A review that attempts to identify, appraise and synthesize all the empirical evidence that meets pre-specified eligibility criteria to answer a specific research question. Researchers conducting systematic reviews use explicit, systematic methods that are selected with a view aimed at minimizing bias, to produce more reliable findings to inform decision making.

**Theoretical review:** establishes what theories already exist around a particular issue, the relationships between them, to what degree the existing theories have been investigated, and develops new hypotheses to be tested.



## APPENDIX 3: REFERENCE LIST

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