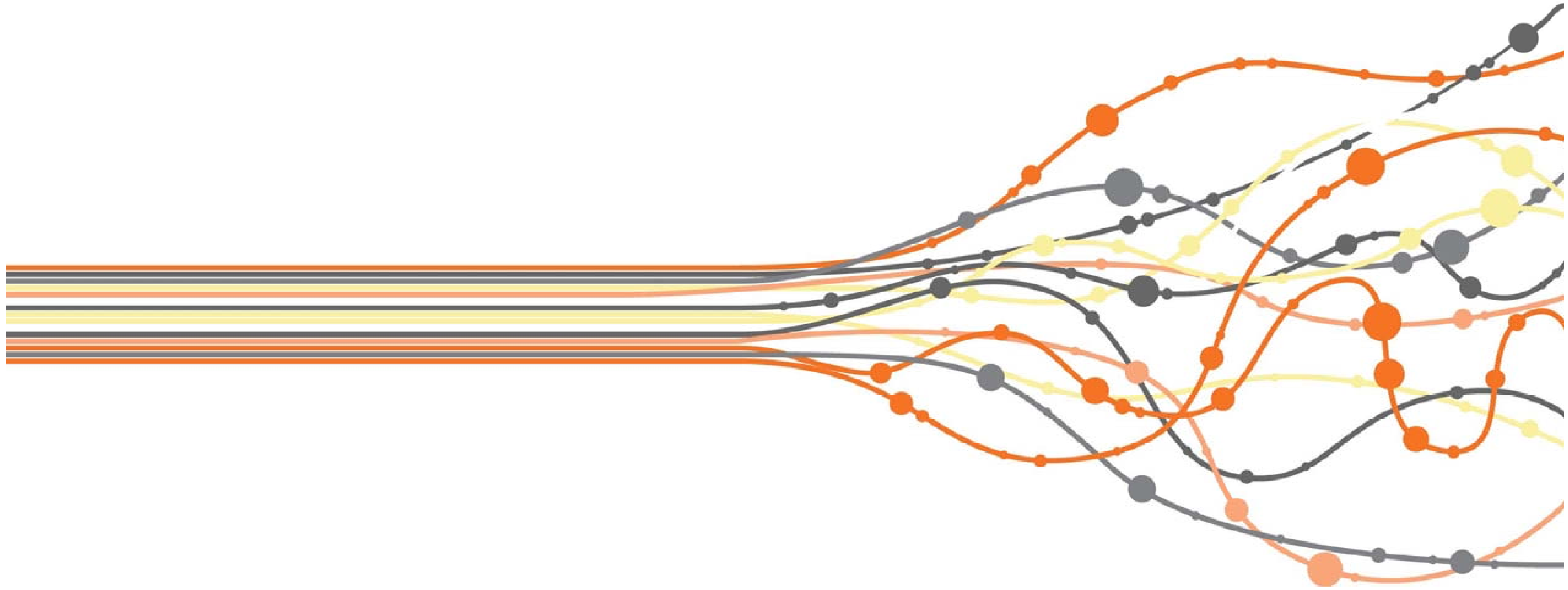
Aphasia Rehabilitation Best Practice Statements 2014

Comprehensive supplement to the Australian Aphasia Rehabilitation Pathway



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PART 1 - INTRODUCTION

DEVELOPMENT OF THE BEST PRACTICE STATEMENTS

This document presents best practice statements for aphasia rehabilitation developed by the National Health and Medical Research Council (NHMRC) funded Centre for Clinical Research Excellence (CCRE) in Aphasia Rehabilitation. The CCRE in Aphasia Rehabilitation is an Australian research group that has driven a national collaborative effort to improve the overall journey for people with aphasia (Thomas et al., 2014). Internationally, there is an international lack of high-quality, detailed recommendations for aphasia rehabilitation (Rohde, Worrall, & Le Dorze, 2013). Nevertheless, clinicians are required to make decisions daily about how to manage their clients with aphasia. Lack of agreement on what constitutes 'best care' is a likely contributor to the wide variation of care received by people with aphasia. The CCRE in Aphasia Rehabilitation has developed 82 best practice statements to improve the consistency of care and these statements form the basis for the Australian Aphasia Rehabilitation Pathway (AARP: www.aphasiapathway.com.au). The AARP contains these evidence-based statements along with resources in a dynamic web-based implementation tool. To validate the statements, the RAND/UCLA Appropriateness Method (RAM) (Fitch et al., 2001) was used and an expert panel of nine aphasia researchers, clinicians and policy makers rated each statement's 'appropriateness' on a scale of 1-9 (not appropriate to highly appropriate). Statements with a median score greater than 7 have been included in this document.

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 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 monolingual nature of many Australian speech pathologists; and (iii) the inclusion of best practice statements in regards to working with people from Aboriginal and Torres Strait Islander backgrounds.

Individual client factors

Additionally, individual client factors should always be taken into account when working with people with aphasia. In particular, cultural factors should always be taken into consideration, as some statements may not be appropriate for every individual across different cultures. Additional care may be required when working with clients and families who are not proficient in English. Section 7 (Enhancing Personal Factors) provides some statements that may assist clinicians to provide culturally sensitive rehabilitation aphasia services. This section includes statements to enhance aphasia rehabilitation with culturally and linguistically diverse (CALD) populations and Aboriginal and Torres Strait Islander populations. These statements provide more specific care recommendations (including assessment and intervention) for clinicians working with people from these populations but are not repeated throughout the assessment and interventions sections. The online Australian Aphasia Rehabilitation Pathway will contain hyperlinked sections so that the interactions between components are highlighted.

UNDERSTANDING THE PRESENTATION OF STATEMENTS

Statements

The 82 best practice statements are presented over 8 domains of care (receiving the right referral, optimising initial contact, setting goals and measuring outcomes, assessing, providing intervention, enhancing the communicative environment, enhancing personal factors, planning for transition). The National Stroke Foundation Clinical Guidelines for Stroke Management (National Stroke Foundation, 2010) formed the basis of the statements and the CCRE in Aphasia Rehabilitation conducted further literature searches and synthesis to update and add to the NSF guidelines. The CCRE Community of Practice (COP) provided feedback on the statements through face to face and online consultations and finally, the statements were further refined and validated by a group of nine aphasia rehabilitation experts in the RAM process (Fitch et al., 2001).

Rationale

Each statement has an accompanying rationale that is designed to provide a short summary of the scientific evidence for the statement in question. 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.

“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 or where there is significant variation in opinion, the word *“can”* has been used. 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)” (Sackett, 1992). Therefore, no statement is listed for this intervention.

References

The reference column aims to provide the highest available evidence reference for each statement. The reference 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.

Levels of evidence

For each statement, the primary reference has been graded according the NHMRC Levels of Evidence (National Health and Medical Research Council, 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 CCRE in Aphasia Rehabilitation and the levels align with the Australian Clinical Guidelines for Stroke Management (NSF, 2010). 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 best practice statements, qualitative studies are utilised as evidence but are not assigned a ranking.

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**.** The website contains a detailed introduction to the best practice statements, 82 statements with 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, 82 statements with rationales, the references and level of evidence for each statement. It also contains a reference list of studies cited in the supplement.
3. **The Australian Aphasia Rehabilitation Pathway concise Supplement.** The concise supplement contains the list of 82 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

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.

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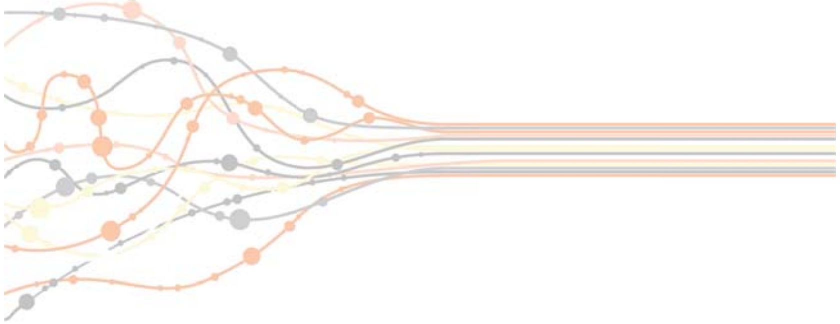

PART 2 - APHASIA REHABILITATION BEST PRACTICE STATEMENTS

SECTION 1 :: RECEIVING THE RIGHT REFERRALS

Best Practice Statement: 1 Receiving the right referral	Reference	Level of Evidence
Community awareness of aphasia		
1.1 Community awareness of aphasia should be raised. **Rationale:** It is well recognised that aphasia is a largely unknown disorder to the public (Code et al., 2001; Elman, Ogar, & Elman, 2000; Mavis, 2007; Simmons-Mackie, Code, Armstrong, Stiegler, & Elman, 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% had some basic knowledge of aphasia (Code et al., 2001; Mavis, 2007; Simmons-Mackie et al., 2002). 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.	**N/A**	**GPP**
1.2 In awareness campaigns, it should be highlighted that aphasia can be an early and persisting symptom of stroke. **Rationale:** Recognition of stroke symptoms and subsequent activation of emergency services are critical to ensuring optimal outcomes (NSF, 2010). 'Speech problems' are commonly reported during ambulance calls of a stroke event but are often not associated with recognition of stroke (Mosley, Nicol, Donnan, Patrick, & Dewey, 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.	**N/A**	**GPP**

1.3 Appropriate stroke information should be given to people with aphasia and their families. **Rationale:** Research shows that stroke patients (including those with aphasia) and their families are dissatisfied with the information provided and have a poor understanding of stroke and associated issues (Smith et al., 2008). There is evidence that provision of stroke information can improve patient and carer knowledge of stroke, aspects of patient satisfaction, and may reduce patient depression scores (Smith et al., 2008). 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, Worrall, & McKenna, 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 when given on one occasion only (Smith et al., 2008).	**(Smith et al., 2008)**	**I**
Communication training of health professionals		
1.4 Speech pathologists should provide communication training to people involved in the care of people with aphasia and provide strategies for enhancing communication. **Rationale:** There is evidence that providing healthcare students and volunteers with communication skills training significantly improves their ability to interact with an adult with aphasia in terms of obtaining information and establishing rapport (Simmons-Mackie, Raymer, Armstrong, Holland, & Cherney, 2010). These results underscore the need for communication skills training of healthcare professionals who interact with individuals with aphasia.	**(Simmons-Mackie et al., 2010)**	**I**
Referral process		
1.5 People with acute onset of aphasia should be suspected of having a stroke and transferred directly to a hospital with an acute stroke unit and admitted to the acute stroke unit. **Rationale:** There is strong evidence that patients who receive organised stroke unit care are more likely to survive their stroke, return home and make a good recovery (Stroke Unit Trialists, 2007).	**(Stroke Unit Trialists, 2007)**	**I**

Best Practice Statement: 1. Receiving the right referral continued	Reference	Level of Evidence
1.6 All people post stroke should be screened using a valid and reliable tool that is sensitive to the presence of aphasia. **Rationale:** Prompt, accurate identification of aphasia in stroke patients is an essential component of stroke care. Efficient and effective screening procedures ensure that all patients with aphasia receive appropriate education, support, intervention, and the optimisation of rehabilitation outcomes. Inadequate screening procedures risk missed diagnoses, inappropriate patient management and resultant unnecessary healthcare burden. Aphasia is a common consequence post-stroke therefore all stroke patients require screening for language deficits in the acute post-recovery phase.	**(National Stroke Foundation, 2010)**	**GPP**
1.7 Any person with suspected aphasia should be referred to a speech pathologist. **Rationale:** 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 interprofessional team should assess patients with stroke 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 interdisciplinary members of the team.	**N/A**	**GPP**
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. **Rationale**: It is recognised that some people with aphasia post-stroke may not present to a hospital or be referred to the speech pathology service. It is therefore important that potential referring services (e.g. aged-care facilities, general practitioners, community-based health professionals) are aware of aphasia and how to refer to speech pathology services.	**N/A**	**GPP**

SECTION 2 :: OPTIMISING INITIAL CONTACT

Best Practice Statement: 2. Optimising initial contact	**Reference**	**Level of Evidence**
Initial Assessment		
2.1 People with suspected aphasia should receive assessment by a speech pathologist to determine the presence and severity of aphasia. **Rationale:** The Australian Clinical Guidelines for Stroke Management (NSF, 2010) 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 & Chung, 2012). Severity of aphasia has been demonstrated to be a predictor of patient prognosis and outcome (Kertesz & McCabe, 1977; Lazar et al., 2010; Pedersen, Vinter, & Olsen, 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.	**(National Stroke Foundation, 2010)**	**GPP**
2.2 Hospital patients with suspected aphasia should receive assessment by a speech pathologist to determine the patient's ability to communicate their healthcare needs. **Rationale:** Approximately 50% of stroke inpatients have difficulty communicating their healthcare needs in hospital (Hemsley, Werninck, & Worrall, 2013). The incorporation of patient needs and values in healthcare decision making is a key component in the delivery of evidence-based care (Straus, Richardson, Glasziou, & Haynes, 2011). Patients who are therefore unable to communicate their healthcare needs are at risk of not 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	**(Bartlett et al., 2008; Hemsley et al., 2013; O'Halloran, Grohn, & Worrall, 2012)**	**IV**

distress and anger (Hemsley et al., 2013; Susie Parr, Sally Byng, Sue Gilpin, & Ireland, 1997). Additionally, people with communication difficulties, including people with aphasia, are six times more likely to experience an adverse event in hospital (Bartlett, Blais, Tamblyn, Clermont, & MacGibbon, 2008). Adequate assessment of the functional communication abilities of each person with suspected aphasia is therefore imperative in ensuring adequate support for all stroke patients.		
Initial Prognosis		
2.3 Individual language recovery cannot be accurately predicted immediately post stroke, therefore all individuals should be offered aphasia rehabilitation services. Rationale: 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 or unlikely to benefit from rehabilitation. Based on this, the ASC Assessment for Rehabilitation: Pathway and Decision-Making Tool (Australian Stroke Coalition Rehabilitation Working Group, 2012) recommends that all stroke survivors (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.	**N/A**	**GPP**
Initial Management		
2.4 People with aphasia and their family/carers should be offered information about stroke and aphasia tailored to meet their changing needs using relevant language and communication formats. **Rationale**: People with aphasia have reported that they want information about aphasia and stroke for themselves and their families. They also report wanting information about their prognosis and what to expect at different stages of rehabilitation (Worrall et al., 2011). Evidence suggests that this information should be: provided in a way that actively involves patients and carers and includes planned follow-up for clarification (Smith et al., 2008); is aphasia-friendly (Rose, Worrall, Hickson, & Hoffmann, 2010); and tailored to the specific needs and preferences of the patient and their family (Eames, McKenna, Worrall, & Read, 2003). When providing information, clinicians should be sensitive to the changing support needs of their clients (Cameron & Gignac, 2008).	**(Smith et al., 2008; Worrall et al., 2011)**	**I** **Qual.**

Best Practice Statement: 2. Optimising initial contact continued	**Reference**	**Level of Evidence**
Initial Management		
2.5 Speech pathologists should offer support and training to family/ carers of people with aphasia to become skilled conversational partners. **Rationale:** For family members/carers who are ready, conversation partner training should 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., 2010)**	**I**
2.6 Speech pathologists should provide hospital staff with individualised communication strategies that are tailored to enhance communication with each patient with aphasia. **Rationale:** Providing communication training to health care providers is likely to improve the ability of people with aphasia to understand information and participate in health care decision-making making (Legg, Young, & Bryer, 2005; Simmons-Mackie et al., 2010). Acute stroke inpatients with communication disabilities (including aphasia) need knowledgeable and skilled health care providers in order to communicate as effectively as possible (O'Halloran et al., 2012). Appropriate communication strategies need to be identified in order to support the patient and his/her health care providers. The Canadian Best Practice Recommendations for Stroke Care (The Canadian Stroke Strategy, 2010) recommend that all care providers working with persons with stroke across the eople with TBI. They will be sought from the 3rd and 4th year cohorts of the B Speech Pathology program and the 2nd year cohort of the Masters**N/A**	**N/A**	**GPP**

SECTION 3 :: SETTING GOALS AND MEASURING OUTCOMES

Best Practice Statement: 3. Setting goals and measuring outcomes	Reference	Level of Evidence
Goal setting		
3.1 Goal setting should be a dynamic process that is reviewed across the continuum of care in order to reflect the client/family context, wishes and language recovery. **Rationale:** 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, Worrall, Howe, Sherratt, & Davidson, 2012).	**(Hersh et al., 2012)**	**Qual.**
3.2 Therapists should explain the goal setting process to the person with aphasia and their family in an accessible way. **Rationale:** 'Patient focused' goal setting actively involves the client and their family and includes education about the goal setting process. This includes education about realistic goal achievement with consideration to 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.	**N/A**	**GPP**
3.3 Systems should be established to ensure involvement of people with aphasia and their family as part of the rehabilitation team. **Rationale:** It is important that people with aphasia and their family/carers are involved in goal setting discussions with the interdisciplinary team. The literature proposes that an interdisciplinary team approach involving the client along with specialists such as speech pathologists, improves discussion and documentation of client goals (Rosewilliam, Roskell, & Pandyan, 2011). Developing interdisciplinary goals at the client's bedside can be an effective way of including clients and their families in the goal setting process.	**(Rosewilliam et al., 2011)**	**III-2**

3.4 The 'SMARTER' framework can be used to help ensure that goal setting is truly collaborative and client-centred. **Rationale:** It is recommended that the SMARTER framework is used alongside SMART goals and will encourage greater collaboration within the goal setting process additionally emphasising potential areas of improvement. SMARTER goal setting involves the following notions: Shared, Monitored, Accessible, Relevant, Transparent, Evolving and Relationship-centred (Hersh et al., 2012).	**(Hersh et al., 2012)**	**Qual.**
Measuring outcomes		
3.5 Outcome measures for people with aphasia should be relevant, meaningful, and important to stakeholders. **Rationale:** 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, Threats, & Kagan, 2005). The ICF (World Health Organization, 2001) provides one framework for organising and systematically documenting 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).	**N/A**	**GPP**
3.6 Outcome measures for people with aphasia should be suitable to the construct being measured and psychometrically robust (reliable, valid and sensitive). **Rationale:** 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 & 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, & 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 (http://ebrsr.com/uploads/Chapter-21-outcome-assessment-SREBR-15_1.pdf).	**N/A**	**GPP**

Best Practice Statement: 3. Setting goals and measuring outcomes continued	Reference	Level of Evidence
3.7 Outcome data for the person with aphasia should be reported in a full and unbiased manner to people with aphasia and their families. **Rationale:** Reporting ensures that people with aphasia and their families have a clear understanding of what has been done 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.	**N/A**	**GPP**

SECTION 4 :: ASSESSING

Best Practice Statement: 4. Assessing	**Reference**	**Level of Evidence**
4.1 The assessment process should be iterative and dynamic. **Rationale:** Therapy, assessment and goal setting should continuously inform each other producing a responsive and tailored intervention sequence. A clinician may start this process by talking to the client, 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 standardised or non-standardised 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, is then made with further discussion and assessment woven into that therapy as part of that dynamic process.	**(Hersh et al., 2013)**	**GPP**
4.2 Assessment should be therapeutic. **Rationale:** The process of assessment should be a learning opportunity, not only for the clinician, but also for the client. The client should find the actual assessment to be therapeutic in that it provides information on which that client can build and progress. This process should be made 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, tasks and goals should be transparent and part of an evolving and dynamic progression through the period of treatment.	**(Hersh et al., 2013)**	**GPP**

4.3 All domains of functioning and disability should be considered for assessment. **Rationale:** Assessment of a person with aphasia and their family/carers needs to be flexible and holistic, considering whatever aspects are important or relevant to his or her situation. The ICF (WHO, 2001) can be used as a framework to ensure all key aspects of health have been considered.	**N/A**	**GPP**
4.4 The person with aphasia and key conversation partners should be invited to contribute to the assessment. **Rationale:** Stakeholders may include any conversational partner relevant to the client. This includes not only family but also friends and other health professionals. The clinician and client may learn a great deal from the opinions of family, friends and other health professionals regarding the communication of the person with aphasia. It may also be possible to find out how these people act as conversation partners during this process. Keeping stakeholders involved and informed is helpful in building a holistic approach to intervention. Just as aphasia is considered a family problem, intervention may involve family solutions, but this requires the assessments to be dynamic, transparent and relevant to all those affected by the aphasia. Stakeholders can also provide important background information relating to the person with aphasia's medical history and premorbid status.	**N/A**	**GPP**
4.5 All assessment results should be documented and reported in an accessible format to people with aphasia and their families. **Rationale:** 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 this accessible record is part of the idea that assessment can itself be a learning opportunity. This sharing of information also equalises the relationship between client and clinician and the transparency of the rehabilitation process.	**N/A**	**GPP**

SECTION 5 :: PROVIDING INTERVENTION

Best Practice Statement: 5. Providing Intervention	**Reference**	**Level of Evidence**
5.1 People with aphasia should be offered therapy to gain benefits in receptive and expressive language, and communication in everyday environments. **Rationale:** The results of a recent Cochrane systematic review showed that aphasia rehabilitation was more effective than no aphasia rehabilitation for functional communication, receptive language and expressive language.	**(Brady, Kelly, Godwin, & Enderby, 2012)**	**I**
5.2 People with chronic aphasia should be offered therapy to gain benefits in receptive and expressive language, and communication in everyday environments. **Rationale:** Even for people with chronic aphasia (> 6 months post stroke onset), there is evidence to support the use of a number of treatments such as the use of computer-based treatments, constraint-induced language therapy, group language therapies and training conversation/communication partners. Further research is required to determine the effectiveness of other aphasia interventions in the chronic stage.	**(Allen, Mehta, McClure, & Teasell, 2012)**	**I**
5.3 People with aphasia post one month should have access to intensive aphasia rehabilitation if they can tolerate it. **Rationale:** The results of the recent Cochrane review suggest a benefit of intensive over non-intensive speech and language therapy on measures of functional communication, severity of impairments and written language. However; the results were confounded by a significantly higher dropout from intensive speech and language therapy.	**(Brady et al., 2012)**	**I**

5.4 People with aphasia earlier than one month post onset could have access to intensive aphasia rehabilitation if they can tolerate. **Rationale:** Research has shown that people with mild to severe aphasia who are able to interact for up to 30 minutes a day post stroke benefit from daily aphasia therapy when it is provided at 45-60 minutes per day for 20 sessions. The total amount of therapy equates to between 15-20 hours of therapy within the first 4-5 weeks post-stroke. After controlling for initial aphasia and stroke severity, people with aphasia who received the above therapy regimen achieved 18% greater recovery than those who received standard care on the Aphasia Quotient score of the Western Aphasia Battery at therapy completion. This therapeutic benefit was maintained at six months post-stroke, indicating a significant improvement in communication recovery over and above what is expected of spontaneous recovery and usual ward-based aphasia therapy (Godecke et al., 2014; Godecke, Hird, Lalor, Rai, & Phillips, 2012).	**(Godecke et al., 2014; Godecke et al., 2012)**	**II**
5.5 Aphasia rehabilitation should:		
a. Be tailored to the needs of the person with aphasia and the nature of their communication difficulty	**(Plowman, Hentz, & Ellis, 2012; Worrall et al., 2011)**	**Qual**
b. Address the impact of aphasia on functional everyday activities, participation and quality of life including the impact upon relationships, vocation and leisure as appropriate from post-onset and over time for those chronically affected	**(Hilari, Needle, & Harrison, 2012)**	**I**
c. Address the needs of family/carers	**(Howe et al., 2012)**	**Qual**
d. Include information tailored to meet the needs of people with aphasia and their family/carers	**(Worrall et al., 2011)**	**Qual**
e. Include communication partner training	**(Simmons-Mackie et al., 2010)**	**I**

Best Practice Statement: 5. Providing Intervention continued	**Reference**	**Level of Evidence**
Rationale: People with aphasia report significantly worse health-related quality of life (QoL) than stroke survivors without aphasia, and worse QoL than healthy controls, particularly in the areas of independence, social relationships, and aspects of access to the environment (Hilari et al., 2012). While people with aphasia report prioritising communication goals in their overall rehabilitation process, they also emphasize social, relationship, leisure, and work goals, and the need for information tailored to their needs (Worrall et al., 2011). Communication partner training was shown to be an effective approach for improving communication activities and/or participation of some communication partners and is probably effective in improving communication activities and/or participation of some persons with chronic aphasia when they are interacting with trained communication partners (Simmons-Mackie et al., 2010).		
5.6 Aphasia rehabilitation can include:		
a. Treatment of aspects of language following models derived from cognitive neuropsychology	**(Brady et al., 2012)**	**I**
i. Word retrieval deficits	**(Wiseburn & Mahoney, 2009)**	**IV**
ii. Reading deficits	**(Brady et al., 2012)**	**I**
iii. Writing deficits	**(Brady et al., 2012)**	**I**
b. Treatment of sentence comprehension and production impairments	**(Thompson et al. 2003)**	**III-3**
c. Discourse treatment	**(Boyle, 2011)**	**IV**
d. Augmentative and alternative communication	**(Baxter, Enderby, Evans, & Judge, 2012)**	**IV**
e. Constraint-induced language therapy	**(Brady et al., 2012)**	**I**
f. Gesture-based therapy	**(Rose, Raymer, Lanyon, & Attard, 2013)**	**III-2**

Rationale: It has been demonstrated that therapy for word-retrieval and production disorders can be effective (de Jong-Hagelstein et al., 2011; Doesborgh et al., 2004; Wiseburn & Mahoney, 2009). The Wiseman & Mahoney systematic review presented evidence from a range of study designs including a substantial number of single case experimental designs (assigned a level of evidence of IV here). However, we still cannot predict which therapy will work for which impairment (Nickels, 2002). There is emerging evidence that impairment-focused therapy can impact on the conversations of people with aphasia (Carragher, Conroy, Sage, & Wilkinson, 2012). While these early findings are promising, investigations have been limited to naming therapies and the methods of data collection used have implications for ecological validity.

Treatment of Underlying Forms (TUF), which targets complex Wh-movement sentences, has been reported to result in improved production and comprehension of these structures and generalization to less complex Wh-movement constructions (Thompson, Shapiro, Kiran, & Sobecks, 2003).

Discourse treatment for word retrieval appears to be a promising approach. Further research is required to inform the true effectiveness of the approach. Positive outcomes were reported on measures of word retrieval across all studies in the Boyle (2011) review.

Some individuals with aphasia may benefit from high-technology AAC, further understanding is required to assist clinicians in being able to determine which clients are most likely to benefit and the types of AAC that are most effective. The use of low-technology AAC has not been well reported (Baxter et al., 2012).

Constraint induced therapy is one potential approach to use within aphasia rehabilitation (Meinzer, Rodriguez, & Gonzalez Rothi, 2012). Based on current literature it is premature to conclude that there is a clear advantage of applying constraint principles to aphasia rehabilitation over other types of intensive intervention (Barthel, Meinzer, Djundja, & Rockstroh, 2008; Cherney, Patterson, Raymer, Frymark, & Schooling, 2008; Rose, 2013).

The current literature supports a benefit of combined gesture + verbal treatment for noun and verb production for some people with aphasia. Any additional benefit from gesture treatment for others remains uncertain (Rose et al., 2013).

Best Practice Statement: 5. Providing Intervention continued	**Reference**	**Level of Evidence**
5.7 In addition to individual therapy delivered by speech pathologists aphasia rehabilitation may include:		
a. Group therapy and conversation groups	**(Lanyon, Rose, & Worrall, 2013)**	**I**
b. Computer-based treatments	**(Cherney, 2010; Katz & Wertz, 1997)**	**II**
c. Telerehabilitation	**(Cherney & van Vuuren, 2012; Dechêne et al., 2011)**	**IV**
d. Trained volunteers	**(Brady et al., 2012)**	**I**
Rationale: The evidence indicates that community and outpatient group participation can improve specific linguistic processes. There is also some evidence that group participation can benefit social networks and community access. However, there is limited evidence demonstrating improvement in functional communication as a consequence of group participation. Computer-based treatments have the potential to increase the frequency and vary the nature of language treatments. Significant changes in language scores were shown following a computer-based language treatment. Promising results have been reported by one well-designed, multi-site RCT (Katz & Wertz, 1997), a one single site RCT (Cherney, 2010) , which investigated a computer-provided language intervention. 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).		

Studies that compared volunteer-facilitated aphasia therapy compared to therapy from speech pathologists have shown little to no difference (Brady et al., 2012). Brady et al. (2012) report that this result is not surprising because volunteers were trained by a speech pathologist. The therapy plan was developed by the SLP and volunteers were given access to relevant therapy materials.		

SECTION 6 :: ENHANCING THE COMMUNICATIVE ENVIRONMENT

Best Practice Statement: 6. Enhancing the communicative environment	**Reference**	**Level of Evidence**
6.1 Communication partner training should be provided to improve the communicative environment provided by frequent communication partners for the person with aphasia. **Rationale:** Communication partner training was shown to be an effective approach for improving communication activities and/or participation of some communication partners.	**(Simmons-Mackie et al., 2010)**	**I**
6.2 People with aphasia should have support material available to enable them to participate in communication. **Rationale:** A preliminary study showed that aphasia friendly material (AF) assists people with aphasia to comprehend written information (Brennan, Worrall, & McKenna, 2005; Rose et al., 2003). Recommendations for how to best format printed education material (PEM) for people with aphasia include: short, simple language; content that is relevant and interesting to the reader; san serif font; bolding of important information; well organised information and the use of relevant graphics that contain captions (Rose et al., 2003; Rose, Worrall, Hickson, & Hoffmann, 2012). However, individual variations must always be considered as not everyone prefers AF 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, AF material needs to be supported by dialogue between the health professional and client, be easily obtainable, repeatedly provided and available in a range of media (Rose et al., 2010; Worrall, Rose, Howe, McKenna, & Hickson, 2007).	**(Rose et al., 2003)**	**III-2**

6.3 Communicatively accessible environments should be provided for people with aphasia. **Rationale:** Environmental barriers exist at the system, service and policy level and efforts to reduce these barriers are likely to improve communicative access for people with aphasia (Duchan, Jennings, Barratt, & Butler, 2006; Kagan & LeBlanc, 2002; Parr, Pound, & Hewitt, 2006). These peer-reviewed articles describe the clinical experiences of creating communicatively accessible health care and community services for people with aphasia and other communication disabilities (Duchan et al., 2006; Kagan & LeBlanc, 2002; Parr et al., 2006). It is recommended consideration be given to: 1. Establishing an advisory group that includes multiple perspectives and expertise. 2. Involving people with aphasia at every step. 3. Drawing on relevant legislation, organisational values and research evidence and implementation science to motivate for change.	**N/A**	**GPP**

SECTION 7 :: ENHANCING PERSONAL FACTORS

Best Practice Statement: 7. Enhancing personal factors	**Reference**	**Level of Evidence**
Self-management		
7.1 People with aphasia and their families should be provided with self-management strategies. **Rationale:** Patient education should promote self-efficacy through mastering self-management skills, including managing emotions of fear, anger and depression (The Canadian Stroke Strategy, 2010). The central premise of self-management techniques is to empower patients to manage their own health conditions, including symptoms, treatment, physical and social consequences, and lifestyle changes (Cameron, Tsoi, & Marsella, 2008).	**N/A**	**GPP**
7.2 Connections with appropriate social supports should be facilitated for people with aphasia and their families. **Rationale:** In the initial weeks following stroke, the presence of social supports and contacts are essential to individuals who are facing considerable life changes following a stroke event (Robinson, Murata, & Shimoda, 1999). Improvement of available social support and prevention of social deterioration could be an important strategy in reducing or preventing psychiatric distress and post-stroke depression (Salter, Foley, & Teasell, 2010).	**(Salter et al., 2010)**	**I**
Culturally and linguistically diverse populations (CALD): General		
7.3 Health care providers should consider both cultural and linguistic factors of the person/family with aphasia that may have an impact on service delivery. **Rationale:** The typical methods and materials used for assessment and intervention may not apply to all individuals in a diverse society (Holland & Penn, 1995). Individuals may have different attitudes towards healthcare in general, aphasia and the rehabilitation process (Legg & Penn, 2013).	**(Holland & Penn, 1995; Legg & Penn, 2013)**	**Qual.**

7.4 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. **Rationale:** The use of professional trained interpreters, as opposed to untrained interpreters or none at all, improves the quality of clinical care, reducing communication errors, and increasing patient satisfaction (Flores, 2005; Karliner, Jacobs, Chen, & Mutha, 2007). The use of untrained and unqualified interpreters (such as family members or other employees of the organisation) gives rise to ethical issues of privacy, confidentiality and may compromise the autonomy of the person with aphasia (Brisset, Leanza, & Laforest, 2013). The client's choice and preferences for the use of family or friends as interpreters must always be taken into consideration. Interpreters, even when professionally qualified, may not be knowledgeable about aphasia and/or the specific needs for speech pathology, and thus may demonstrate behaviours that invalidate assessment and therapy procedures (Roger & Code, 2011). Speech pathologists should share their professional knowledge with the interpreter, specifically about typical responses and behaviours of clients that form essential information for diagnosis (Kambanaros & van Steenbrugge, 2004).	**(Flores, 2005; Karliner et al., 2007)**	**I**
Culturally and linguistically diverse populations (CALD): Assessment		
7.5 Where a patient reports having used more than one language premorbidly, comprehensive information about the patient's language history should be obtained. **Rationale:** Estimation of premorbid levels of bilingual proficiency may require information about a combination of factors such as self-ratings of proficiency, age of acquisition, and language use patterns (Kiran & Roberts, 2012). A comprehensive language history can also be used to guide intervention goals (Centeno & Ansaldo, 2013; Roberts, 2008).	**N/A**	**GPP**

Best Practice Statement: 7. Enhancing personal factors continued	**Reference**	**Level of Evidence**
7.6 Where possible, assessments should be used that are appropriate to the languages/dialects and cultural backgrounds of each client. **Rationale:** Mere translations of tasks do not ensure equivalency of linguistic difficulty and also may not capture the varied symptoms of aphasia across different languages (Paradis, 2011). *Consideration should be given to the following:* • Discourse sampling, when conducted well, may be a culturally appropriate as an assessment tool to explore language use (Altman, Goral, & Levy, 2012) and also gain insight into unique bilingual communicative behaviours in its natural context . • Assessments of how the person with aphasia's communication is perceived (by the person or their family), such as the American Speech and Hearing Association Functional Assessment of Communication Skills (Frattali, Thompson, Holland, Wohl, & Ferketic, 1995) and the Communicative Effectiveness Index (Lomas et al., 1989), may be adapted for use (see for example Penn & Beecham, 1992; Watson, 2000).	**N/A**	**GPP**
Culturally and linguistically diverse populations (CALD): Intervention		
7.7 Where possible, treatment should be offered in all relevant languages and the relevant modalities. **Rationale:** Systematic avoidance of a language may reduce the potential for its recovery (Meinzer, Obleser, Flaisch, Eulitz, & Rockstroh, 2007). In addition, avoidance of a language may reduce the communication access opportunities for a bilingual person (Centeno & Ansaldo, 2013; Penn, Commerford, & Ogilvy, 2007). Cross-linguistic transfer of treatment gains provided only in one language does not occur for all cases (Ansaldo & Saidi, 2013; Faroqi-Shah, Frymark, Mullen, & Wang, 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 & Saidi, 2013). However, the choice of language should reflect relative accessibility and proficiency, and also the client's preferences and needs among other factors (Centeno & Ansaldo, 2013; Roberts, 2008).	**N/A**	**GPP**

7.8 Language behaviours unique to the bilingual person with aphasia such as translation, language mixing and switching should be considered in both assessment and intervention planning. **Rationale:** Aphasia may result in disturbances to bilingual behaviours and cause difficulties with translation and/or code-switching (Ansaldo, Saidi, & Ruiz, 2010). Code-switching or mixing does not need to be avoided, especially if they help the client maximize communication and if it occurs in an appropriate context. However, where language mixing is pathological and occurs inappropriately and unintentionally, this behaviour may be shaped using translation based approaches to switch back to the intended language (Ansaldo et al., 2010).	**(Ansaldo & Saidi, 2013)**	**IV**
7.9 Speech pathologists should talk with the person with aphasia and their family about the roles the client has in the family and community. **Rationale:** 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 become apparent that the client is an elder in which case a particular level of respect is appropriate.	**(Coffin et al., 2004)**	**GPP**
7.10 Speech pathologists should explain terminology in a way that is relevant and culturally appropriate. **Rationale:** In order to help the client understand the speech pathology context, information should be provided in a way that is relevant and culturally appropriate.	**(Bohanna et al., 2013; Lowell et al., 2012; Shahid, Finn, Bessarab, & Thompson, 2011; Shahid & Thompson, 2009)**	**Qual.**

Best Practice Statement: 7. Enhancing personal factors - Working with people from Aboriginal and Torres Strait Islander backgrounds	**Reference**	**Level of Evidence**
7.11 Speech pathologists should be trained in cross-cultural competence with particular reference to Aboriginal and Torres Strait Islander cultures. **Rationale:** In order to commence the journey towards developing cultural competence and providing cultural security to Aboriginal and Torres Strait Islander clients, it is essential that speech pathologists engage with cultural competence training. Such training is known to enhance client engagement with health services and improve health outcomes. It is recommended that this training be carried out regularly.	**(Betancourt, Carrillo, & Green, 1999)**	**GPP**
7.12 Speech pathologists should implement local protocols that guide working with Aboriginal and Torres Strait Islander communities. **Rationale:** General principles can underpin engagement activities and assist in the development of relationships and appropriate cross-cultural communication and cultural security. Such principles may include being respectful; being informed and informing others; establishing sustainable relationships; behaving ethically; being meaningful; being outcomes focussed and ensuring follow-up and feedback occur. It should be recognised that every community is unique and that great diversity exists in Aboriginal and Torres Islander society. Therefore speech pathologists should collaborate with their local Aboriginal and Torres Strait Islander communities to develop respectful local protocols.	**Coffin et al. (2004)**	**GPP**
7.13 Speech pathologists should routinely check Aboriginal and Torres Strait Islander status in clients' health records and with the clients themselves. **Rationale:** People of Aboriginal and Torres Strait Islander background cannot necessarily be identified on the basis of physical appearance. It is important to be aware of a client's ethnic/cultural background in order to provide culturally safe and appropriate services and to understand potential linguistic/pragmatic behaviours. 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.	**N/A**	**GPP**

7.14 Speech pathologists should offer the involvement of an Aboriginal Liaison Officer (ALO) where possible to advise on cultural issues and liaise with client and family. **Rationale:** As noted above, understanding different worldviews is important in assessment/management (e.g. the concept of 'shame' about the stroke/aphasia may be different and it is important to investigate how this may be manifesting for the person with aphasia). The speech pathologist may be able to talk with the ALO about ways of trying to reduce this for the patient as it can be disempowering. It may be that working directly on impairments singles out the patient and makes their difference obvious which can be something that causes shame. The ALO may also assist with developing trust between health care provider and the person with aphasia and their family, which is a strong value within Aboriginal and Torres Strait Islander communities.	**(Shahid et al., 2011; Taylor, Thompson, Dimer, Ali, & Wood, 2009)**	**Qual.**
7.15 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. **Rationale:** Use of interpreters is essential. While the wide range of Aboriginal languages often makes access to relevant interpreters difficult, it is known that health professionals do not always access interpreters for Aboriginal and Torres Strait Islander clients even when they are readily available. Where interpreters are not available in the geographical area where the hospital/rehabilitation service is located, services should be sought via telephone or other media.	**(Lowell et al., 2012; Shahid et al., 2011)**	**Qual.**

Best Practice Statements: 7. Enhancing personal factors - Working with people from Aboriginal and Torres Strait Islander backgrounds	Reference	Level of Evidence
7.16 Speech pathologists should explain speech pathology terms in a way that is relevant and culturally appropriate to the Aboriginal and Torres Strait Islander person and their family. **Rationale:** In order to help the client understand the speech pathology context, information should be provided in a way that is relevant and culturally appropriate to an Aboriginal/Torres Strait Islander context i.e. pictures of familiar contexts, familiar terms to equate with professional jargon. Language difference, worldview and conceptualisation of disease/ disorder may be different from western views of health and medicine/ treatment. Power imbalances are often barriers for Aboriginal and Torres Strait Islander clients in hospitals and health settings. SLPs should be aware that hospital environments and health settings can be hugely disempowering and frightening for some Aboriginal and Torres Strait Islander patients. The stress and emotional distress of illness and aphasia can exacerbate all of this. Time spent in developing a relationship and trust with the client and their family is essential. Use of pictures and engaging technology has been found to be effective.	**(Bohanna et al., 2013; Lowell et al., 2012; Sackett & Rennie, 1992; Shahid, Bessarab, Howat, & Thompson, 2009; Shahid & Thompson, 2009)**	**Qual.**
7.17 Speech pathologists should include some yarning time with Aboriginal and Torres Strait Islander clients and their family during the assessment process i.e. time talking about personal backgrounds (both therapist and client). **Rationale:** Communication styles of Aboriginal and Torres Strait Islander peoples are likely to be influenced by cultural norms as well as the power imbalances that can exist when interacting with a non-Aboriginal and Torres Strait Islander person. Social yarning is one way to find equilibrium and develop rapport with the client.	**(Bessarab & Ng'andu, 2010)**	**Qual.**
7.18 Speech pathologists should talk with the Aboriginal and Torres Strait Islander person with aphasia and their family about the roles the client has in the family and community. **Rationale:** Apart from helping to build a relationship, conversation may reveal important information that guides interactions and management. For example, it may become apparent the client is an elder in which case a particular level of respect is appropriate.	**Coffin et al. (2004)**	**GPP**

7.19 Speech pathologists should take a holistic approach to assessment and management that is aligned to an Aboriginal and Torres Strait Islander worldview. **Rationale:** This may include: i. Working closely with family (including family members non-Aboriginal and Torres Strait Islander Australians would call 'extended family'). ii. Working jointly with other allied health colleagues (joint sessions in a multidisciplinary approach). iii. Making pre-discharge links with the client's local Aboriginal Medical Service if they are associated with one. iv. Being flexible with therapy context e.g. include home visits. v. Making opportunities for the client to participate in yarning and social activity if they would like it. vi. Traditional healing.	**N/A**	**GPP**
7.20 Where possible, assessments should be used that are appropriate to the languages/dialects and cultural backgrounds of each Aboriginal and Torres Strait Islander client. **Rationale:** There are currently no existing standardised tests available to assess acquired communication impairments in Aboriginal and Torres Strait Islander peoples. Unless the purpose of the assessment is to assess the person's Australian English, the use of existing tools (not standardized for use with Aboriginal or Torres Strait Islander Australians) may yield misdiagnoses. A lack of familiar vocabulary, grammar and format may significantly disadvantage Aboriginal and Torres Strait Islander Australians leading to an underestimation or misinterpretation of an individual's language competency. In particular, pragmatics and narrative styles are significantly different between Aboriginal and Torres Strait Islander Australians and non-Aboriginal and Torres Strait Island Australians. Hence caution must be taken especially in these areas. Assessment of activity and participation should involve more than the use of tools with a patient and instead, assessment processes should explore the impact of the communication impairment on cultural, family and community functioning. There should also be reduced importance placed on work/leisure distinctions, as these distinctions are not always made in Aboriginal cultures.	**(Bohanna et al., 2013)**	**Qual.**

Best Practice Statements: 7. Enhancing personal factors - Working with people from Aboriginal and Torres Strait Islander backgrounds	**Reference**	**Level of Evidence**
7.21 Speech pathologists should develop an awareness of local Aboriginal health services and Aboriginal specific social services. **Rationale:** Knowing what services are available can help in discharge and therapy planning as well as advocacy. For example it may be that the Aboriginal health service offers a chronic disease service/clinics and the speech pathologist could facilitate the client's access to this and offer to assist the clinicians in their understanding of aphasia.	**(Armstrong, Hersh, Hayward, Fraser, & Brown, 2012)**	**Qual.**
7.22 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 guidance of a mentor. **Rationale:** Critical reflective practice brings cultural competency behaviours into the foreground of professional and interpersonal practice. Critical reflective practice involves both examining and integrating Aboriginal and Torres Strait Islander and Western knowledge systems to help non-Aboriginal or Torres Strait Islander people know “how to act” when working in an unfamiliar context.	**N/A**	**GPP**

SECTION 8 :: PLANNING FOR TRANSITIONS

Best Practice Statement: 8. Planning for transitions	**Reference**	**Level of Evidence**
8.1 Planning for the next phase should be initiated as early as possible. **Rationale:** Effective discharge planning is essential for smooth transitions through the continuum of care. Delayed or incomplete planning leads to prolonged hospital stays and an increased risk of adverse events following discharge (Canadian Stroke Strategy, 2013; Shepperd et al., 2013).	**(Shepperd et al., 2013)**	**I**
8.2 Speech pathologists should be part of the discharge planning team and adopt an advocacy role to promote optimal care. **Rationale:** Multiple opportunities should be made available, from early on, for both the patient and carer to discuss their available options as well as any fears or concerns. People with aphasia are often confused by their discharge and transition arrangements and may benefit from the added support of a speech pathologist to explain the process and invite the person's participation in discussions and decision-making.	**(Hersh, 2009)** **(Ellis-Hill et al., 2009)**	**Qual.** **Qual.**
8.3 During transitions, timely, up-to-date, accurate and appropriate patient-related information should be shared with the receiving healthcare providers. **Rationale:** Stroke patient care tends to be complex and require ongoing monitoring and management. Clear communication in a timely manner is essential to ensure continuity of care, patient safety, and reduce risk of complications and adverse events resulting from the confusion and ambiguity that can arise during transition points (Canadian Stroke Strategy, 2013). A systematic review of discharge from hospital cited lack of communication between health professionals as a significant factor in adverse events (Kripalani et al., 2007).	**(Kripalani et al., 2007)**	**I**

8.4 At the time of any transition, written information that includes current diagnosis, action plans, follow-up care, and goals should be provided to the patient, family and carers. **Rationale:** The patient and their family should be provided with up-to-date information, in written and verbal formats, clearly defining the patient's diagnosis, functional abilities at discharge, significant interventions and ongoing care (Canadian Stroke Strategy, 2013). Such information can assist in keeping the patient and significant others informed and actively involved in their health care.	**(The Canadian Stroke Strategy, 2010)** **(Hersh, 2009)**	**GPP**
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. **Rationale:** Before transition home, the speech pathologistshould provide information in relation to whether the person with aphasia is ready for discharge. Additional education and training may be required to prepare for the transition home (e.g. getting help in an emergency, safely answering the door). To facilitate the person to actively engage in the community, training and relevant supports may be required.	**(Worrall et al., 2011)**	**Qual.**
8.6 Services that provide early supported discharge should ensure that the person with aphasia and their family is still carefully linked in with ongoing supports and appropriately prepared for the transition. **Rationale:** In the initial weeks following stroke, the presence of social supports and contacts are 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 deterioration could be an important strategy in reducing or preventing distress and warding off post-stroke depression (Salter et al., 2010).	**(Salter et al., 2010)**	**I**
8.7 The speech pathologist should endeavour to connect the person with aphasia and their family with other people with aphasia, aphasia groups or support organisations. **Rationale:** There is some evidence that group participation can benefit social networks and community access for people with aphasia (Lanyon et al., 2013).	**(Lanyon et al., 2013)**	**I**

Best Practice Statement: 8. Planning for transitions continued	**Reference**	**Level of Evidence**
8.8. As part of the interdisciplinary 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. **Rationale:** In cases where the speech pathologist is aware of potential issues that may lead to legal challenges to the testamentary capacity of the client, not only should full documentation of the client's functioning occur, but the speech pathologist may act as a facilitator of communication between the client and the solicitor. In addition, speech pathologists may need to raise the awareness of the legal profession about aphasia and the potential contribution of the expertise of speech pathologists with regard to testamentary capacity.	**(Ferguson et al., 2003)**	**Qual.**
8.9 People with aphasia and their families/carers should have access to a contact person for any queries post-discharge and know how to self-refer to appropriate speech pathology services after discharge if they feel further rehabilitation is required. **Rationale:** Aphasia can be a life-altering condition that often leaves people with ongoing functional impairments. It is often not until adults are discharged from hospital-based stages of care that the degree of communication limitations becomes apparent (Worrall et al., 2013). It is at this time adults with communication impairments request services (O'Callaghan, McAllister, & Wilson, 2009). We need to ensure clients are aware of services available to them and how to access them.	**N/A**	**GPP**

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 [1]	Diagnostic accuracy [2]	Prognosis	Aetiology [3]	Screening Intervention
I [4]	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,[5] among consecutive persons with a defined clinical presentation[6]	A prospective cohort study[7]	A prospective cohort study[7]	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,[5] among non-consecutive persons with a defined clinical presentation[6]	All or none[8]	All or none[8]	A pseudo-randomised controlled trial (i.e. alternate allocation or some other method)
III-2	A comparative study with concurrent controls: • Non-randomised, experimental trial[9] • Cohort study • Case-control study • Interrupted time series with a control group	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: • Non-randomised, experimental trial[9] • Cohort study • Case-control study

III-3	A comparative study without concurrent controls: • Historical control study • Two or more single arm study[10] • Interrupted time series without a parallel control group	Diagnostic case-control study[6]	A retrospective cohort study	A case-control study	A comparative study without concurrent controls: • Historical control study • Two or more single arm study
IV	Case series with either post-test or pre-test/post-test outcomes	Study of diagnostic yield (no reference standard)[11]	Case series, or cohort study of persons at different stages of disease	A cross-sectional study or case series	Case series

Explanatory notes

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

[2] 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).

[3] 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 (ie. cannot allocate groups to a potential harmful exposure, such as nuclear radiation), then the 'Aetiology' hierarchy of evidence should be utilised.

[4] 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 incude 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.

[5] 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).

[6] Well-designed population based case-control studies (eg. 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).

[7] 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.

[8] 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 small pox after large-scale vaccination.

[9] 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).

[10] 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).

[11] 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 eg. 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

CCRE	Centre for Clinical Research Excellence
GPP	Good practice points
ICF	International Classification of Functioning, Disability and Health
NHMRC	National Health and Medical Research Council
RAM	RAND/UCLA Appropriateness Method
RCT	Randomised control trial
SLT	Speech language therapy
SR	Systematic review

Definitions

Acute 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; active involvement of stroke survivors and their families to be involved in the rehabilitation process.

Aphasia: Aphasia is an acquired communication disability caused by damage to the language processing centres of the brain. It relates to a "loss of ability to communicate orally, through sign or in writing, or a reduced ability to understand such forms of language" (Darley, 1982). The best practice statements relate to aphasia post-stroke.

Aphasia-friendly material: Material adapted for people with aphasia. Method of adaption includes the use of simple vocabulary, simple syntax, short sentences, large and standard font, relevant pictures, appropriate layout and low reading grade level.

Can: Where the evidence is less clear or where there was significant variation in opinion, 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 time-frame to define acute versus chronic, however for the purpose of the statements, it can be defined as ongoing language difficulties six months post stroke.

Client: The person with aphasia is referred to as a 'client' when receiving services post-hospital care.

Communication training or Communication Partner Training: An intervention 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, including, but not limited to, family members, friends, volunteers, or health care providers.

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.

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, context factors, environmental supports) that may influence performance (Coelho et al., 2005)

Early supported discharge: Pathways of care for people transferred from an inpatient environment to a primary care setting to continue a period of rehabilitation and recuperation at a similar level of intensity and delivered by staff with the same level of expertise, as they would have received in the inpatient setting.

FAST mnemonic: The FAST mnemonic stands for Face, Arm, Speech and Time and has used to help raise the identification of stroke.

Formal vs. informal assessment: Formal assessments as described here 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). For these reasons, Ferguson (2008) has suggested the adoption of the term 'individualised' when describing this latter approach to assessment

Gesture therapy: 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 (McNeill, 2005). 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).

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 elucidates the process of achieving them.

Good practice points (GPP): Refers to when there was no robust Level I, II, III or IV evidence available but there was consensus within the statements working group, or documented expert opinion.

High technology communication devices: Electronic computer-based communication devices used to support or replace verbal/written communication.

International Classification of Functioning, Disability and Health (ICF): A classification of health and health-related domains. These domains 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 in a context, the ICF also includes a list of environmental 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.

Non-systematic review: Provides a synthesis of studies on a particular topic but may not have involved the systematic location, selection and appraisal of evidence.

Patient: The person with aphasia is referred to as 'patient' during the hospital admission

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

Randomised controlled trial: 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.

Should: In general, where the evidence is clear and trusted, or where there is consensus on the basis of clinical experience and expert opinion, the word **"should"** has been used to indicate that the intervention should be routinely carried out. Where the evidence is less clear or where there was significant variation in opinion, the word **"can"** has been used. Individual patient factors should always be taken into account when considering different intervention options.

Subacute services: Sub-acute care has many definitions, depending on the context in which it is considered. At its simplest, sub-acute 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.

Systematic review: Systematic location, appraisal and synthesis of evidence from scientific studies.

Transitions: Refers to the movement of patients among healthcare locations, providers, different goals of care, and across the various settings where healthcare services are received.

APPENDIX 3 :: REFERENCE LIST

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