

# Speech pathology and reablement

Speech pathologists can play a central role in the treatment of communication difficulties experienced by people with dementia and supporting existing skills across the course of the disease. **Erin Conway** explains

**W**hile difficulties with memory are one of the most recognisable features of dementia, a change in communication ability is also a common symptom. The changes experienced by people with dementia, such as changes in their ability to find the right words to say, understand the question being asked, or follow along with an everyday conversation (eg, Caramelli *et al* 1998) can have a significant impact on their social interactions, independence, relationships with family and friends, and quality of life (eg, Ritche *et al* 1995; Potkins *et al* 2003).

Speech pathologists are allied health professionals who specialise in the identification and treatment of communication difficulties (as well as swallowing and mealtime difficulties) for people across their lifespan. Speech pathologists can therefore provide services for people with dementia, aimed at enhancing communication function through rehabilitating and/or compensating for the communication difficulties that the person is experiencing, supporting the maintenance of existing skills, and/or facilitating a supportive communicative environment (Speech Pathology Australia 2015). Speech pathologists should play a central role in the treatment of communication for people with dementia across the course of the disease (American Speech-Language-Hearing Association 2017; Royal College of Speech and Language Therapists 2014).

In the past decade there has been an increasing amount of research focused on speech pathology treatment for people with dementia. The following sections summarise some of the current evidence for the efficacy of speech pathology treatment in dementia, highlighting the contribution of Australian research teams.

## Communication partner training

The *Clinical Practice Guidelines for Dementia in Australia* highlight that providing training to support effective communication between a person with dementia and their family or care-givers is a key recommendation for quality dementia care (Laver *et al* 2016). A number of communication skills training programs have been developed for use with people with dementia and their family, care-givers or aged care staff and have shown positive outcomes for quality of life and wellbeing for people with dementia, as well as improvement in communication skills and related knowledge for family or care staff (Eggenberger *et al* 2013).

## MESSAGE training

One communication skills training program that has been developed and evaluated in Australia is the *MESSAGE Communication Skills Training for Caregivers of People with Dementia* (Smith *et al* 2011); available from [www.youtube.com/UQDementiaCare](http://www.youtube.com/UQDementiaCare) (and see box p35 for more details). This program presents practical compensatory strategies, developed following a review of research evidence, that the caregiver can apply in everyday conversation to support the person with dementia's participation.

Evaluations of the MESSAGE training have found that it is able to significantly increase knowledge of communication support strategies for family carers, staff in residential aged care and in community aged care (Broughton *et al* 2011; Liddle *et al* 2012; Conway & Chenery 2016). Other positive outcomes involve improvements in aspects of the carer experience following training, including a measure of positive experience in caregiving and a measure of care staff preparedness to provide care (Conway & Chenery 2016).

Current research is continuing to

explore the outcomes of the MESSAGE training on direct changes to conversation behaviour by care staff, and exploring whether the use of the MESSAGE communication strategies can also reflect a person-centred communication style. A person-centred communication style can be defined using behaviour associated with four indicators of person-centred care (Kitwood 1997) that are most relevant to communication: facilitation (eg, initiating or maintaining a topic of conversation), recognition (eg, recognising the unique person through using their name), negotiation (eg, supporting choice), and validation (eg, affirming the persons emotions) (Savundranayagam 2014).

The MESSAGE strategies have also been applied as part of a training program for people with co-occurring dementia and hearing impairment. The Hear-Communicate-Remember program provided family members of people with dementia and hearing loss with: strategies to support using hearing aids, memory strategies applied to hearing aid use, and the MESSAGE communication strategies (Meyer *et al* 2019). This program was piloted with a small number of family carers and participants reported that they were satisfied with the program and the presentation of strategies in training videos, and were able to learn strategies applicable to their everyday life (Meyer *et al* 2019). Future research should further explore the functional impact of this training.

Overall, communication partner training programs offer the opportunity to create a more supportive communication environment to maximise the participation of people with dementia in everyday communication; there are also more direct rehabilitative approaches available that aim to support everyday communication.

### Rehabilitation of word retrieval

Difficulties with word retrieval (finding or thinking of the right word) is common in many types of dementia and can have a significant impact on everyday communication abilities. This is a growing area of both research and clinical focus for speech pathologists (Speech Pathology Australia 2015). Treatment in this area can focus on compensation for difficulty, restorative rehabilitation, and/or maintenance of existing word knowledge and use.

A recent systematic review revealed that there is positive evidence to support treatment of word retrieval for people with Primary Progressive Aphasia (PPA) diagnoses, and people with an Alzheimer's disease diagnosis (Beales *et al* 2018). Beales and colleagues examined the



**Communication skills training programs have shown positive outcomes for quality of life and wellbeing for people living with dementia.** Photo: Tirachardz/freepik.com

results of 37 studies, the majority of which focused on treatment of people with PPA, and categorised the types of treatment approaches across studies. There were four types of treatment approach identified by Beales *et al*: re-learning, stimulation, reorganisation and cognitive-relay. The outcomes for each are summarised below.

#### Re-learning

The most frequently reported treatment approaches were the re-learning approaches (22 studies); these treatments involved retraining the link between word meaning and word form often using semantic (meaning) and/or phonological (word/sound) cues (eg, Jokel & Anderson 2012). Improvement in direct treatment measures (eg, picture naming) was reported for most investigations (Beales *et al* 2018).

#### Stimulation

The stimulation approaches to word retrieval treatment usually involved repeated presentation of picture stimuli for the client to name, often with the name label presented simultaneously (written and/or spoken) (eg, Savage *et al* 2013). All 12 studies categorised as stimulation approaches reported improvement in their direct treatment outcome measures (eg, picture naming) (Beales *et al* 2018).

#### Reorganisation

The reorganisation investigations refer to neural reorganisation and involved approaches that promoted the use of different parts of the brain to take over for impaired functions. Three investigations were included in the review (Beales *et al* 2018). These investigations involved both behavioural (repeated naming) treatment, and behavioural and neural measures of change (functional MRI studies) (eg, Dressel *et al* 2010). Evidence of compensation by different areas of the

brain following treatment were reported, for instance increased use of frontal and temporal areas in the right hemisphere after treatment (eg, Dressel *et al* 2010).

#### Cognitive-relay

Finally, the cognitive strategy approaches to word retrieval treatment took a more compensatory approach. These interventions involved training people to use an additional cognitive strategy to support their word retrieval; for instance, training participants to use a series of self-cues (self-generated meaning cue – let's say for the word 'pizza' – eg, type of food), autobiographical cue (eg, my favourite take-away food), sound (eg, starts with 'p') and written word (eg, pizza) cues to help think of the word needed (Beales *et al* 2016). Significant improvement in naming accuracy following treatment was reported for the two cognitive strategy studies included in the review, along with indications of increased confidence for participants in retrieving words (Beales *et al* 2018).

#### Rehabilitation beyond naming

In addition to outcomes related to improved naming, it is also important to consider the impact of treatment beyond the single-word level. Exploring the impact of improvement in word use in conversation, for instance, likely has a more functional impact on a person's every day communication. Five studies included in the Beales *et al* (2018) review investigated the impact of their treatment at the discourse level (for example in monologue storytelling tasks or picture descriptions; Beales *et al* 2016; Beeson *et al* 2011). Four of these studies reported some element of improvement in word use at the discourse level following treatment (Beales *et al* 2016; Beeson *et al* 2011; Croot *et al* 2015; Heredia *et al* 2009), suggesting that there is potential for

benefit beyond the single-word level for some treatments.

### **NARNIA intervention**

A recent West Australian study extended upon existing research to focus on treating word retrieval for people with dementia specifically at the discourse level (Whitworth *et al* 2018). Whitworth and colleagues investigated the effect of the Novel Approach to Real-Life Communication: Narrative Intervention in Aphasia (NARNIA) intervention (Whitworth *et al* 2015), originally designed for use with people with non-progressive aphasia related to stroke, for two people with PPA (one with semantic type and one with logopenic type). This intervention incorporated a range of discourse types, such as, expressing opinion, recounting events in a narrative and explaining procedures for tasks that focused on topics of interest or relevance for the person.

The NARNIA intervention focuses on multiple levels of word retrieval, from production of words, to sentences and then directly on the discourse level. Whitworth and colleagues (2018) found that the two participants showed significant improvement across the discourse elements being investigated, including amount of talk, use of nouns and verbs, and the structure of their discourse production.

Overall, there is growing positive evidence to support direct rehabilitation for people with PPA and /or Alzheimer's disease to improve word retrieval performance at the single-word level; and

initial promising results for interventions focused beyond the single-word level to improve word retrieval in discourse. There remains the need for continued research with larger cohorts of participants and further consideration of everyday functional impacts, such as confidence in communication or performance in conversation, as well as a need to enhance the validity of interventions through the involvement and consultation with people with dementia and families in their design.

### **For moderate to advanced dementia**

Much of the research discussed in the previous sections of this article has focused on outcomes for people with mild-to-moderate dementia, however, speech pathologists in clinical practice also require evidence-based approaches to support communication for people with moderate to advanced dementia.

The current available research related to communication treatments for people with moderate to advanced dementia that could be applied by a speech pathologist was explored in a recent systematic review by a group of clinicians and researchers from Queensland (Swan *et al* 2018). Eleven studies were included in the review, with 10 of these investigating direct treatment methods, across cognitive stimulation approaches (eg, reminiscence, social activity, or cognitive stimulation therapy), cognitive training approaches (eg, semantic naming treatment or spaced retrieval treatment), or compensatory approaches (eg, use of memory books); the one study using an indirect approach, ie

not working with the person with dementia directly, involved communication partner training (see Swan *et al* 2018).

Swan and colleagues (2018) found that although there was significant variability between the interventions and methods of the included studies, there were a few commonalities that could represent potential areas for future research or clinical focus when working with people with moderate to advanced dementia.

The focus on conversation as the mechanism of treatment was a common feature across multiple studies, for instance group treatments that facilitated the participation of the person with dementia in conversation as part of the treatment activity (eg, reminiscence or social breakfast club and conversation group; Okumura *et al* 2008; Santo-Pietro & Boczko 1998), or individual treatments where conversation participation was supported through the use of memory aids (Bourgeois *et al* 1997).

The use of group treatments was also commonly seen in the included studies that reported positive outcomes, such as cognitive stimulation therapy (Spector *et al* 2010), reminiscence therapy (Okumura *et al* 2008), conversation therapy (Tappen *et al* 2002), and combined social interaction with procedural tasks around breakfast or 'breakfast club' (Santo-Pietro & Boczko 1998).

The other approach that shows potential for improving communication was the use of external aids, such as memory books, that provide compensatory support for people with dementia in conversation (eg, Bourgeois *et al* 1992). Despite these areas of commonality, the studies included in the review were relatively dated, and had variation in their approaches and outcome measures, with no two investigations the same. Interestingly, only six of the studies included treatments conducted with a speech pathologist, which highlights this as an area of growth for speech pathology research.

### **Reablement practice**

People with dementia represent an important clinical population for speech pathologists, and in order for clinicians to provide best practice person-centred evidence-based care to individuals with dementia they need to be able to access current best evidence that is valid for the clinical population.

There is evidence that direct communication interventions for word retrieval in people with mild to moderate dementia (Beales *et al* 2018), as well as communication interventions for people with moderate-advanced dementia

## **Get the MESSAGE**

*What is MESSAGE, and how can you find out more about it?*

MESSAGE is a mnemonic, with each letter acting as a reminder of the seven communication strategies within the MESSAGE communication skills program. 'M', for example, stands for 'Maximise attention' and 'S' stands for 'Support their conversation'.

Dementia Training Australia (DTA) has launched Dementia Discovery – a series of short, free online training modules offering introductory level education about dementia and aimed at those who are new to the aged and dementia care workforce.

One of the modules within the Dementia Discovery course, 'Communication Matters', introduces learners to the MESSAGE communication skills training program. The module includes two films: one which introduces care staff to the MESSAGE strategies (21 minutes), and the second one which shows the strategies being put into practice (13 minutes). Learners are then asked to respond to a series of questions to check their understanding of the films' content.

A Certificate of Completion is available for those who complete the course, along with help sheets from DTA consortium member Dementia Australia and links to external resources and websites. To access the course and for more information, visit [www.dta.com.au/dementia-discovery](http://www.dta.com.au/dementia-discovery).

(Swan *et al* 2018) may improve or protect communication function, and potentially improve wellbeing. There is also evidence to suggest that communication partner training can facilitate a quality communication environment to support participation of people with dementia both within the family and aged care contexts (eg, Eggenberger *et al* 2013).

There is therefore positive evidence for speech pathologists to focus on reablement and lessen the functional impact of dementia for people by maximising ability through compensatory and/or restorative treatment (Poulos *et al* 2017).

Looking to the future, there is a need for continued research work focused on evidence to support intervention in communication, the role of the speech pathologist in evidence-based dementia care and reablement and, importantly, exploring and incorporating the views of people with dementia in the design of research and interventions. ■



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