Accessible healthcare

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Back cover
1. Sign to McKellar Centre, Barwon
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2. Patient in the Austin Hospital using
an ICU communication board

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From the editors

Nicole Watts Pappas and Marleen Westerveld

Nicole Watts Pappas (left) and Marleen Westerveld

WELCOME TO THE FINAL EDITION OF *ACQUIRING KNOWLEDGE* *in Speech, Language and Hearing* for 2010. The articles in this issue highlight the important, but perhaps neglected topic of the accessibility of healthcare for people with communication impairment. We thank Dr Robyn O'Halloran for soliciting a number of excellent articles for this issue and for suggesting the topic to us.

O'Halloran introduces the issue with an overview of the need for speech pathologists to advocate for accessible healthcare environments in their workplaces. Following are a number of peer-reviewed and "Clinical Insights" papers on a range of related topics. These papers cover both the findings from the literature in accessible healthcare as well as the clinical implications of those findings. Hemsley, Balandin, and Togher review the literature investigating communicative environments in hospital for adults with developmental disability and Towers discusses improving hospital access for people with hearing impairment. Highlighting practical ways to improve the accessibility of healthcare services, McKinley, Poole, and White report on the outcomes of several quality improvement projects focused on improving access in their hospital for people with communication impairment. In a similar vein, Anderson describes the formation and work of the "Communicative Access Care Improvement Group" at Austin Hospital.

Many of our regular columns such as "Top 10 resources", "What's the evidence?" and "Around the journals" also focus on the topic of accessible healthcare. In other articles in this issue, Ferdinando and Stone discuss the challenges of implementing stuttering therapy within a school setting and Osborne describes the process of conducting a parent satisfaction survey in a private clinic. Our fascinating Asia Pacific column in this issue describes speech pathology practice in Japan.

On a personal note, this will be our last issue as co-editors. While Marleen is continuing in her role as co-editor, Nicole has decided to finish her editorship with this issue. We have very much enjoyed working together on *ACQ* for the last two years and hope that it has provided evidence based, and clinically useful articles that have inspired our readers to reflect on their practice and perhaps even to publish in *ACQ*! We come to our last issue with some sadness but are excited to welcome Kerry Ttofari Eecen as the new co-editor of *ACQ* for 2011–2012.

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Communication accessibility in healthcare settings

Robyn O'Halloran

THIS ARTICLE HAS BEEN PEER-REVIEWED

Robyn O'Halloran

People need to be able to communicate effectively with their healthcare providers and access information about their health condition/s in a range of different ways in order to participate in their own healthcare. People with communication disabilities are at risk of not being able to communicate with their healthcare providers or to access the information they need and this places them at greater risk of poorer health outcomes. One way speech pathologists and audiologists can support people with communication disabilities is by creating communicatively accessible healthcare environments. The articles in this issue of *ACQuiring Knowledge in Speech, Language and Hearing* indicate that creating communicatively accessible healthcare environments requires administrative support, ongoing research, personal commitment, and a long-term perspective.

A person's ability to communicate effectively about his or her health is inextricably linked to his or her overall health and well-being (Roter & Hall, 2006). The ability to communicate about health includes how well a person can communicate directly with his or her healthcare providers. This is associated with a range of positive health outcomes such as enhanced patient satisfaction with healthcare, greater patient compliance with medical recommendations and increased adherence to medication schedules, and with specific health outcomes such as better emotional health, symptom resolution and greater pain control for some health conditions (Roter & Hall, 2006). The ability to communicate about health also refers to a person's ability to seek out, understand and evaluate information about a particular health condition from a range of sources such as written information, the internet, and/or health-related education groups. Health communication also consists of the ability to understand health-related messages delivered through the media (Wright, Sparks, & O'Hair, 2008).

Many people with different types of communication disabilities experience difficulty communicating effectively about their health and this may compromise their immediate healthcare and their long-term health outcomes. For example, people with hearing impairment (Hines, 2000; Iezzoni, O'Day, Killeen, & Harker, 2004), vision impairment (O'Day, Killeen, & Iezzoni, 2004), complex communication needs (Balandin, Hemsley, Sigafoos, & Green, 2007), developmental disability (Iacono & Davis, 2003), aphasia (Parr, Byng, Gilpin, & Ireland, 1997), and people who experience temporary communication difficulties, such as patients in intensive care units (Schou & Egerod, 2008), have described having difficulty communicating with their healthcare providers in a range of different healthcare settings. Difficulty communicating with healthcare providers can result in serious consequences for people with communication disabilities, such as getting misdiagnosed (Hines, 2000), and becoming emotionally distressed (Schou & Egerod, 2008). Other consequences include being unable to get basic healthcare needs met such as getting a drink or getting help to go to the toilet (Iacono & Davis, 2003), having difficulty following instructions during radiological procedures (Moelker, Maas, & Pattynama, 2004), or having difficulty reading the healthcare information they are given (Nzegwu, 2004). It is not surprising that recent studies have found that people with communication disabilities are among those who are at greatest risk of preventable adverse events in hospital, such as an adverse drug reaction or hospital incurred injury (Bartlett, Blais, Tamblyn, Clermont, & MacGibbon, 2008), and are less satisfied overall with the healthcare they receive (Hoffman et al., 2005).

One way speech pathologists and audiologists are beginning to address these problems experienced by people with communication disabilities is by helping to create healthcare environments that are more accessible for people with communication disabilities. The World Health Organization's *International Classification of Functioning, Disability and Health* (ICF; World Health Organization, 2001) defines the environment as a person's immediate physical, social, and attitudinal environment, as well as his or her broader social environment, including the informal and formal systems, services, laws, and ideologies of his or her society (World Health Organization, 2001). Thus, the ICF suggests that a communicatively accessible healthcare environment encompasses the physical environment of the healthcare setting, as well as the skills, knowledge and attitudes of healthcare providers and the informal and formal systems of the healthcare setting, such as the institution's policies and procedures. All these aspects of the environment may

be important in creating a communicatively accessible healthcare setting.

Improving the communicative accessibility of healthcare services may be a particularly effective way for speech pathologists to support people with communication disabilities. Any enhancements to the physical environment of the healthcare setting, any improvements in the skills and knowledge of healthcare providers, or any changes to healthcare policies and procedures not only benefit people with communication disabilities receiving healthcare now, but also will benefit people with communication disabilities needing healthcare from that service in the future (O'Halloran, Hickson, & Worrall, 2008).

A review of the literature on the range of environmental factors that create barriers to and/or facilitate communication for people with communication disabilities in the hospital setting identified many different environmental factors that influence the ability of patients with communication disabilities to communicate effectively with healthcare providers in hospital (O'Halloran et al., 2008). For example, some environmental factors related to:

1. products and technology, such as the availability of assistive listening devices and communicatively accessible formats,
2. support and relationships, including the knowledge, skills and attitudes of healthcare providers, and
3. services, systems, and policies, such as hospital policies on hearing accessibility.

Although further research is needed to better understand the range of environmental factors that influence the ability of people with different types of communication disabilities to communicate, research is also needed to understand how healthcare settings can be made more communicatively accessible so that people with communication disabilities and their healthcare providers can communicate more successfully.

This issue of the *ACQ* provides an opportunity to share the innovative clinical and research efforts of some of the Australian speech pathologists and audiologists who are working towards the development of communicatively accessible healthcare environments. These articles suggest that the creation of communicatively accessible healthcare environment requires a high level of commitment, support from executive administration, and effort over a long period of time. These articles also indicate that creating and maintaining communicatively accessible environments calls for a long-term commitment so that the communication needs of people with communication disabilities are considered on an ongoing basis as healthcare settings and services continue to evolve. Finally, although the challenges and complexities involved in creating communicatively accessible healthcare environments may appear daunting, the articles contained in this issue provide us with a glimpse of what is possible.

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Creating a communicative environment in hospital for adults with developmental disability and complex communication needs

Bronwyn Hemsley, Susan Balandin, and Leanne Togher

THIS ARTICLE HAS BEEN PEER-REVIEWED

Bronwyn Hemsley

When adults with developmental disability and complex communication needs enter hospital, their family carers often take a central role in providing care and supporting communication. These adult patients often lack access to systems in the hospital setting and thus rely upon their family carers to be present at all times to speak on their behalf. In this paper, we will (a) outline the implications of a recent body of research investigating the experiences, needs, and roles of family carers of adults with developmental disability for speech pathologists supporting these patients in and out of the hospital setting, and (b) discuss barriers to and strategies for increasing the communicative accessibility of the hospital ward for adults with developmental disability and complex communication needs.

People with complex communication needs have reported that difficulties in communicating with nursing staff coupled with few opportunities to communicate in hospital impact negatively upon their comfort, safety, social interaction, and access to information in hospital (Balandin, Hemsley, Sigafoos, & Green, 2007; Balandin et al., 2001). Nurses have also reported that they have difficulty in communicating with adults who have complex communication needs, and must rely upon family carers to avoid compromising nursing care and to facilitate successful communication between the patient and the nurse (Balandin et al., 2007; Buzio, Morgan, & Blount, 2002; Iacono & Davis, 2003).

The main purpose of the research conducted recently at The University of Sydney (see Hemsley & Balandin, 2004; Hemsley, Balandin, & Togher, 2007a, b) was to explore the experiences of family carers of adults with cerebral palsy and complex communication needs in hospital to (a) arrive at an in-depth understanding of their roles and support needs, (b) gain the participants' expert insights into the communicative environment for the patient with cerebral palsy, including barriers to communication, and strategies for increasing the communicative accessibility of the hospital ward for these

patients, and (c) discover how best to support people with complex communication needs, their family carers, and the hospital staff in communicating effectively in hospital.

An overview of our research design

Phase 1 of our study, a narrative inquiry, involved in-depth interviews with 12 family carers who had provided support in hospital to an adult son or daughter with cerebral palsy for three or more days in the previous two years. Phase 2 of the study involved three focus groups of key stakeholders discussing the experience of family carers of adults with cerebral palsy and complex communication needs in hospital. The focus group transcripts were analysed according to content themes (Morgan, 1988). All participants were sent a summary of the researchers' interpretations for their verification. All participants verified that the written interpretations of the discussions represented their views. (For a full account of both study phases contact the first author and see Hemsley & Balandin, 2004; Hemsley et al., 2007a, b; 2008a, b, c, d.)

Results from this research can be used to inform speech pathologists and others working with these patients about ways to improve both communication and healthcare outcomes for people who have complex communication needs in hospital. In addition, it can inform the development of hospital policies to ensure that those with complex communication needs are not disadvantaged or discriminated against during a hospital stay. Furthermore, such information could be used in developing policies to alleviate difficulties commonly encountered by others who interact with people with complex communication needs in hospital. The information derived from the study has been summarised in this paper to inform speech pathologists supporting adults with developmental disability and complex communication needs and their families both in and out of the hospital.

Summary of results and implications for speech pathologists

As the results of the studies are reported elsewhere (see citations above), here we will discuss the major themes and the implications of our findings for community and hospital speech pathologists. Speech pathologists are called upon to adopt a collaborative approach in implementing a range of service delivery models and strive to improve communication for all people with a communication disability (Speech

Pathology Australia, 2003). Thus, speech pathologists in hospitals are well placed, in their training as communication specialists and in their roles within the hospital environment, to influence the communicative environment for adult patients with pre-existing communication disability and those who care for them. Effective direct nurse–patient communication might ease difficulties in the care of this group of patients and reduce their risk of adverse events in hospital (Bartlett, Blais, Tamblyn, Clermont, & MacGibbon, 2008). Family carers, in having knowledge and experience in the patient's communication methods, are an important resource to for speech pathologists supporting communication in hospital.

Roles of family carers supporting adults with developmental disability

In hospital, family carers often provide support for extended periods of time to adults with cerebral palsy and complex communication needs. Our research indicated the carers 'dropped everything' including other work (often foregoing an income), family, or social responsibilities to stay at the hospital and enact a comprehensive set of roles. These included: supporting communication in hospital, advocacy, protecting the patient from adverse events (e.g., pressure ulcers, medication errors, choking, falls), supporting the exchange of information, providing emotional support, and assisting in positioning and direct care (e.g., toileting, showering, dressing, mealtime assistance) (Hemsley, et al., 2008a).

Furthermore, our findings revealed the enduring nature of responsibilities in providing care in hospital for older parent carers and their emerging concerns for the future when they will no longer be able to provide care in hospital (Hemsley, et al., 2007b). Indeed, hospitals cannot rely upon family carers providing this support forever and may need to consider ways to avoid a crisis in care for these adults in the future. At present, there are no hospital policies guiding the involvement of family carers in providing care on the ward, negotiating their roles with hospital staff, or passing on their expertise and care or communication roles to hospital staff (Hemsley et al., 2007a). While they are still able to provide support, these family carers are a valuable resource in their knowledge and experience in using multiple modes of communication and strategies for improving communication.

Speech pathologists promoting accessible communication can also support family carers to go beyond the role of 'speaking on behalf of the patient' and enhance their roles in 'promoting direct nurse–patient communication' and the successful use of augmentative and alternative communication (AAC) in hospital. Improving direct nurse–patient communication would relieve the family carer not only of the burden of being present at all times to provide support in communication, but also of the anxiety associated with being away from the ward when they know the patient cannot communicate directly with hospital staff.

Lessons from family carers on barriers to communication

Patients lack a readily available communication system

A common theme across both phases of the study was that the patient with complex communication needs lacked access to AAC in hospital. Supporting the results of a growing number of studies on communication using AAC in hospital (see Finke, Light, & Kitko, 2008), participants in our study described the following barriers to communication: 1) the patient not taking the AAC system to hospital; 2) the patient being unable to use the system when lying in bed; 3) fears that the system would be damaged, lost, or stolen; and 4) staff not knowing how to communicate using AAC or not having time to communicate using AAC. In addition, some carers and hospital staff perceived that people with complex

Student nurse Vicki Clausen is taking a patient's blood pressure reading whilst being supervised by an RN (Photo by Chris Stacey)

communication needs do not need to take existing AAC systems to hospital because they do not need to communicate as the carer was there to speak on their behalf.

Older carers in our study described encountering negative attitudes in hospital staff that further reduced the patient's opportunities to communicate (e.g., staff avoiding the patient, the patient being 'talked over' or ignored in discussions, or staff assuming that the patient had intellectual disability). This combination of barriers meant that (a) when carers were present, nurses did not gain opportunities to communicate with the patient, and (b) when carers were absent, the patient had no way to communicate directly with hospital staff. This in turn led to patients feeling isolated, and carers feeling under pressure to be present at all times to support communication.

Nurses lack time to communicate

Our results support previous research that hospital staff are very busy and that the workload pressures on the ward mean that there is limited time available for communication (Hagerty & Patusky, 2003; Iacono & Davis, 2003; Iezzoni, O'Day, Killeen, & Harker, 2004; Magnus & Turkington, 2006; Mendes, Trevizan, Nogueira, & Sawada, 1999). Lack of time is a major barrier because it is (a) a "universal barrier" that could apply to *any* activity where there are competing demands within any period of time, (b) fixed, but perceptual, context bound, and affected by many other environmental and personal factors (e.g., how long a person wishes to engage in an interaction), and (c) unclear who is in the best position to influence the time available to communicate (i.e., policy, administrators, individuals).

The communication barrier 'lack of time' provides a challenge to speech pathologists working in community and acute care settings who aim to improve communication in hospital for patients with pre-existing communication disability. First, 'lack of time' to communicate is a nebulous concept, is not unique to the hospital setting, and occurs whenever communication partners face time restrictions (e.g., at schools, home, shops, travelling). Second, 'time' as a barrier to communication commonly exists for all people who have complex communication needs who attempt to communicate with natural speakers in any context (Beukelman & Mirenda, 2005). Time is also a barrier common to all patients in hospital, as nurses report lack of time as a barrier to forming relationships with patients consistently (Anoosheh, Zarkhah, Faghihzadeh, & Vaismoradi, 2009).

Implications for speech pathologists

Raise the profile of communication at pre-admission

Patients with developmental disability may have pre-existing communication disability and are likely to enter hospital frequently as they get older (Young et al., 2007; Young et al., 2005). Therefore it is important that they prepare well for communication during both planned and unplanned hospital admission (Hemsley et al., 2004; 2008a, b). Speech pathologists from all services may consider they have a responsibility to advocate that during pre-admission interviews with patients, hospital staff seek information on the patient's method of communication. Speech pathologists may also prompt *patients* to bring and use their own low-cost communication boards to hospital for rapid basic needs communication with nurses and *carers* to support nurses in using these systems for direct communication.

Prepare for brief interactions focused on basic needs

Given the common difficulty related to "lack of time" to communicate, speech pathologists supporting adults to prepare for hospitalisation and supporting universal patient communication accessibility on hospital wards should aim for increased success in brief interactions around daily care tasks (see Hemsley, Balandin, & Worrall, *in press b*). Non-electronic communication aids (e.g., message cards, communication boards) might be helpful in the hospital setting if designed to convey messages that relate to everyday basic care tasks. Speech generating devices or other electronic communication aids (e.g., adapted switches for a call system) might be of help in this situation if they provide the patient with a way to gain the nurse's attention from a distance and communicate with the nurse who is otherwise engaged in a care task.

Establish an effective communication method

Hospital speech pathologists have a crucial role in assisting nursing staff to establish a successful mode of communication for yes/no messages and other messages (see Finke et al., 2008). This is an important first step in supporting nurses and patients to communicate successfully and directly about basic care needs, particularly in the absence of a carer. Given that all stakeholders are currently reporting problems and barriers to successful communication, hospital speech pathologists can influence better nurse–patient-carer interaction through:

- encouraging the family to bring in any easy to use communication system for hospital staff to access in daily basic care tasks;
- enlisting the support of family carers or paid carers in the set up or use of the person's communication aid in hospital;
- providing information to (a) nursing staff about different forms of aided communication strategies (including the appropriate use of speech interpreters, sign or gesture systems, communication boards, word or picture boards, spelling boards, and speech generating devices) and (b) family carers about providing care in the hospital setting (e.g., Hemsley, 2008);
- collaborating with nursing staff, family carers, and patients in the design of suitable communication aids (e.g., boards or message cards) for use on hospital wards and accessible to hospital staff at all times;
- training hospital staff in 'communication disability awareness' and communication rights for patients who have developmental disability and complex communication needs.

Conclusion

Speech pathologists have an important role in improving direct nurse–patient communication between patients with developmental disability and complex communication needs and hospital staff. Their actions might involve collaborating with all concerned to design a functional, easy-to-clean and use low-technology communication board that is readily available for use in planned and unplanned admissions to hospital. The results of our study indicate that patients with complex communication needs, their family carers, and the nurses who care for them, are ill equipped to overcome the communication barriers that they encounter in hospital. Hospital speech pathologists who are aware of the barriers to and facilitators for effective communication in hospital may be best placed to influence hospital policy to improve communication access for adults with developmental disability and complex communication needs in hospital.

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Improving communication access across Austin Health

Kathryn McKinley, Shauna Poole, and Melanie White

THIS ARTICLE HAS BEEN PEER-REVIEWED

Kathryn McKinley (top), Shauna Poole (centre), and Melanie White

This article describes three projects aimed to increase communicative accessibility in a hospital environment for visitors, family members, and patients, including those not referred for speech pathology management. The first project describes the implementation and evaluation of a training program aimed at educating Austin Health staff about communication access using the Communication Access Toolkit. The second project used the Inpatient Functional Communication Interview to identify and break down barriers to effective communication between patients and staff in a subacute setting. The third project, conducted in the 20-bed intensive care unit (ICU) at Austin Health, involved the production of a generic durable AAC device used to facilitate communication for all ICU patients, particularly intubated and nonverbal tracheostomised individuals.

Speech pathologists have a role in creating and promoting communicatively accessible environments for all, as well as advocating for those with specific communication disability. A communicatively accessible hospital environment is one in which environmental factors creating barriers to communication have been addressed. The World Health Organization's *International Classification of Functioning, Disability and Health* (ICF) (2001) states that environmental factors comprise the physical environment, social environment, and systems, services and policies. Environmental factors that facilitate or create barriers for people with communication disabilities in acute hospitals have been described by O'Halloran, Hickson and Worrall (2008). These include healthcare providers' knowledge and skills, attitudes of healthcare providers, the physical hospital environment, and services, systems and policies.

Three clinicians working at Austin Health, an 800+ bed tertiary facility in Melbourne's north-east comprising of acute, subacute, and community services, independently embarked on projects that have addressed environmental factors in the hospital setting. The factors addressed included education and training about communication access (knowledge and skills), increasing access to interpreters for culturally and linguistically diverse patients (services, systems and policies), and provision of a generic assistive and augmentive communication (AAC) device in the intensive care unit (ICU; physical environment).

Project 1: Communication access training

Background

Healthcare workers may need to learn skills to communicate effectively with people with a range of communication difficulties (Kagan, 1995; Roter & Hall, 2006). Communication skills training has been shown to be effective in improving healthcare workers' communication skills (Legg, Young, & Bryer, 2005). Staff working in health settings do not always have access to education programs that teach these important skills, as training is often only offered to clinical staff or is not conducted at all.

The *Communication Access Toolkit* (Parr, Wimborne, Hewitt, & Pound, 2008) is a training package developed by Connect. Connect is a UK-based organisation that provides information and supports people with aphasia, provides training and consultancy to service providers, and champions the rights of people with aphasia. This package provides the trainer with the skills, knowledge, and resources to run "Making your service accessible: Communication matters" workshops for people working in health and community settings. The training runs through eight modules and includes information about communication difficulties, communication access, and ways to improve communicative access. Parts of the training are based on Supported Conversation for Adults with Aphasia (SCA™) by Kagan (1995). Although they use examples of people with aphasia, they avoid using aphasia-specific terminology and have used the broader term "communication access", making the training relevant to a wider audience. The first author visited Connect in 2008 and completed training shortly after the toolkit was published.

Project aims

The aims of the project were:
- to implement Communication Access Toolkit training program across Austin Health, and
- to evaluate the effectiveness of the training program, in terms of changes to participants' knowledge, practice, and behaviour.

Results

The one-day training program was conducted on three occasions across Austin Health and a total of 43 people participated in the training. Participants were from a variety of backgrounds, including nursing, allied health, management, administration, and other support services, and were working in a variety of areas of the health service, including intensive care, acute medical wards, subacute services including aged care and inpatient rehabilitation, and outpatient and community services. The training was evaluated using:

1. a Department of Human Service (DHS) mandatory training evaluation,
2. questionnaires and self-rating scales given immediately before and after the training exploring changes to participants' knowledge of communication access,
3. semi-structured interviews conducted three months after the training exploring changes to participants' behaviour and practice as a direct result of the training.

The visual analogue self-rating scales gathered information about participants' confidence levels in communicating with people with communication difficulties and knowledge about communication difficulties pre and post training. The questionnaires asked specific questions about participants' knowledge about communication difficulties, strategies to assist communication and improve communication access pre and post training. These results were then compared and analysed.

The training was well received with all participants rating the training overall as very good or excellent. All participants reported that the training met their expectations and that the training would benefit their clinical practice. Analysis of the questionnaires showed that participants' knowledge of communication access had increased, and their understanding of communication difficulties and their confidence in communicating with people with communication difficulties had improved.

Twelve of the participants consented to an interview at three months after training. The semi-structured interviews were conducted by the author via telephone or face to face and ranged from 11 minutes in length to 40 minutes. With consent, the interviews were recorded and transcribed and a thematic analysis was performed from the transcriptions. During the interviews, the participants described a number of changes in their behaviour and practice as a direct result of the training. Some examples include:

- development of an accessible falls prevention and management document for patients and family members;
- changes to the way staff communicate with people with communication difficulties – allowing extra time for people with communication difficulties, using picture based resources such as visual rating scales to support communication, and writing information down for patients to help them recall what has been discussed
- development of a "way-finding" document for patients and families to help them find their way to various parts of the hospital;
- booking of longer initial appointments for patients attending the Cognitive, Dementia and Memory Service, as well as booking of longer appointments for patients who require an interpreter;
- improving the working environment in both patient and non-patient areas through purchasing plants, hanging up pictures and improving signage, making the environment more comfortable and more accessible for both people with and without communication difficulties.

In summary, the results of the evaluations demonstrated that the participants valued the program, the training program met the participants' objectives and benefited their clinical practice. The participants self-rated their understanding of communication difficulties and their confidence in communicating with someone with a communication difficulty higher after the training and participants were able to change their practice.

Following the one-day training program, staff have expressed interest in attending the "Making your service accessible: Communication matters" workshop. Other units and teams within Austin Health have also requested information about communication access through shorter training sessions, leading to the development of a one-hour in-service. Over 120 staff including those working in the new day surgery centre, radiotherapy interns and allied health working in oncology have attended this shorter training session.

A larger scale rollout of the one-day training program across Austin Health is currently being explored. Issues requiring consideration that were outside the scope of this project include: future funding, sustainability, support for participants to continue to implement initiatives, and more thorough evaluation, in terms of outcomes for patients and families.

Project 2: Identifying communication barriers in a subacute setting

Historically, speech pathologists in the subacute setting at Austin Health have assessed and managed patients who were directly referred by other healthcare professionals.

Although no data is currently available, it is believed that patients who have not been referred for intervention may have unmet needs that affect communication outcomes.

A quality improvement project was conducted to investigate the communicative environment at the Heidelberg Repatriation Hospital, one of Austin Health's subacute sites. The project had three aims:

- to identify communication barriers between patients and staff,
- to provide intervention immediately if specific barriers to communication were identified for individual patients, and
- to assess the data at the end of the data collection period in order to develop and implement strategies to improve communication between staff and patients on the wards over the long term.

The Inpatient Functional Communication Interview (IFCI; O'Halloran et al., 2004) was developed to provide speech pathologists working in the acute setting with a measure to identify how well hospital inpatients can communicate in everyday hospital situations. Examples of everyday situations include the patient explaining why they are in hospital, relating any current medical concerns and following instructions. Information on medical and contextual factors is also collected, such as hearing or vision impairment and cultural background. It was assumed that patients in a subacute setting would experience similar situations.

Two speech pathologists used the IFCI to conduct interviews with a series of patients on two aged-care rehabilitation wards who had not been referred for speech pathology assessment. Over a one-month period 39 patients were interviewed, on average 8 days after admission.

The interviews were analysed for medical and contextual factors likely to cause barriers to communication, such

as hearing and vision impairment, and culturally and linguistically diverse (CALD) background. Several themes also repeatedly emerged from conversations that took place during the interviews. Seven barriers to effective communication were identified and are listed in table 1:

Table 1. Barriers to effective communication	
Barrier	**% of patients**
No or poor knowledge of discharge plan	31
Hearing impairment	28
Poor understanding of rehabilitation	28
Vision impairment	20
Needed an interpreter	15
Lonely/isolated/bored	15
Significant disorientation to time and place	8
N = 39	

As well as addressing the needs of the individual patients who were interviewed, several initiatives have been carried out to reduce these barriers to communication for patients in these wards at Heidelberg Repatriation Hospital. These include:

1. All patients admitted to the aged care rehabilitation wards are now screened by speech pathologists or a trained allied health assistant (AHA) to determine if the patient:
   - needs an interpreter,
   - has a hearing or vision impairment,
   - is oriented,
   - is aware of the reason for admission to rehabilitation.
   Additionally, the interview enables the interviewer to assess the patient's suitability to attend an orientation session and group activities. Most screenings take only a few minutes and are usually completed on the day of admission or the day after, allowing issues to be addressed early in the patient's admission.

2. Orientation boards were placed on the bathroom door in each room, allowing all patients the opportunity to read the information several times a day.

3. Hearing impairment was addressed by:
   - posting "hearing impairment" alert signs above patients' beds, with the patient's consent, with extra symbols for patients who wear aids,
   - purchase of hearing amplifiers to be used by patients with significant hearing impairment and no aids,
   - referral to the AHA for all patients with aids for a "Hearing aid management plan". This is filed in the patient's history and contains information about types of aids the patient wears, their provider in case of breakdown, and the level of assistance required to manage the aids, and
   - offering one-on-one education with the AHA to all patients who lack skills in managing aids.

4. Appropriate "vision impairment" alert signs are posted above a patient's bed when a significant visual impairment is present and the patient gives permission.

5. A weekly information session about rehabilitation for new patients and carers was introduced to address the problem of poor understanding of the rehabilitation process.

6. To address patients' feelings of loneliness and isolation, two weekly groups were introduced to encourage socialisation. Volunteers were recruited to assist the AHA to run a "news and current affairs" group and a recreational activity group. The news group has an added bonus of assisting some patients with orientation.

7. Improved access to interpreters for CALD patients was achieved by routinely booking interpreters for multidisciplinary assessments. Through the screening process, patients who need an interpreter can be quickly identified.

8. Finally, an independent project was commenced, that provided patients with a "key contact person". This project provides patients with knowledge of their discharge plan.

This quality project changed the practice of the speech pathology department in aged care. Although most of the initiatives which resulted from the project took time and energy to introduce and sustain, these initiatives are now standard practice. By minimising and preventing communication barriers, the patients on these wards have increased opportunities to participate in their healthcare.

Project 3: Communication access for the ICU patient

Communication in ICU

Waking from sedation, intubated or tracheostomised in the intensive care unit (ICU) and discovering that you are unable to communicate is both frustrating and stressful (Costello, 2000). Some patients improve quickly and are weaned from ventilation and extubated soon after sedation is ceased. Others, however, may suffer long periods during which they are unable to speak and cannot contribute to important discussions about their treatment or end of life plans (Happ, 2000). Verbal communication can be facilitated in patients with stable ventilatory needs and a tracheostomy tube through leak speech or speaking valves; however, this is not an option for intubated patients, those with complex ventilation requirements or poor airway protection. Research indicates that this period is not only difficult for the patient but also challenging for ICU staff and an extra source of anxiety for family members (Costello, 2000).

AAC in ICU

It is not common practice to provide AAC devices to all ventilator-dependent patients who cannot speak (Garrett, Happ, Costello, & Fried-Oken, 2007). A few devices are available for this population; however, most require a degree of mental acuity and training, not often present in the typical patient in intensive care. Whiteboards are used but are frequently unsuitable as drowsy, weak patients are unable to form legible graphemes (Garrett, et al., 2007).

Project aim

The aim of this project was to provide a cost-effective, durable, generic, cleanable, self-explanatory communication device for intubated and non-verbal tracheotomised ICU patients. The device needed to be suitable for patients of all ages, literacy levels and for whom English was a second language. It also needed to be used without individual speech pathology education, as services are not available during out of business hours.

Method

A survey of 22 ICU nurses was conducted to gain insight into their experiences of communicating with non-verbal patients and to help develop the communication device. Development of the communication board involved discussion regarding ideal size, weight, material, modality

and issues of infection control. Laminated 2mm perspex was found to be firm enough to write on and light enough for a weak or deconditioned patient to pick up and rest on their torso or lap as needed. It can be thoroughly cleaned between patients as per Austin Health infection control policies. In collaboration with Scope (a disability service provider) three modalities were chosen: 1) picture images (Board-maker) with words beneath, 2) the alphabet for letter spelling, and 3) blank space for writing. These alternative options ensured that the device would be suitable for patients with various levels of alertness and literacy. The Wong-Baker FACES Pain Rating Scale (Wong, 2001) and body diagrams were also included to assist patients to communicate the severity and location of pain, as per recommendations from the Austin Health pain team. A marker was attached to the board for the patient to use if appropriate, or for the family to write translations of the pictures into other languages if the patient was not literate in English. The board hangs over the bed rail so that the patient can access it independently and initiate communication as desired.

Family member helping the patient to recall events leading up to his medical admission – an unexpected use of the ICU communicator

Results

The board was trialled in a small group of patients and feedback was sought from nursing staff in ICU before final amendments were made. Feedback included some changes to picture images (deletion of "I want the doctor" and inclusion of " I feel sick", for example) and addition of cleaning instructions. A limitation of the study was that feedback could not be gained from patients due to their poor recollection of their ICU stay. The ICU communication board is now part of the standard equipment in every ICU bay. It has also been purchased by a number of other facilities.

Conclusion

The importance of effective communication between healthcare providers and the public they serve is well known (O'Halloran, Hickson and Worrall, 2008). Hospital settings can be perceived by patients and their families as intimidating and confusing places. Experience of hospital can be one of anxiety and stress, compounded by being unable to communicate effectively. This article describes three projects conducted independently by speech pathologists working within a hospital. In each project communication access was improved by addressing environmental factors and thus reducing barriers to communication.

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Kathryn McKinley graduated from La Trobe University in 1999 and worked at Austin Health while completing the training project. Kathryn has received two scholarships, allowing her to visit Connect and the Aphasia Institute in 2005 and Connect again in 2008. Kathryn also received Royal Talbot Rehabilitation Centre's Health Professionals Scholarship in 2008 which funded the Communication Access Training project. Kathryn is now the Speech Pathology Manager at St Vincent's Hospital in Melbourne.

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Creating communicative access in Barwon Health:

Dwelling in possibility

Natalie Anderson

This paper describes the development of the Communicative Access Care Improvement Group – a multidisciplinary practice improvement group comprised of clinicians, managers, and consumers. The primary objectives of the group are to identify potential barriers to effective communication within Barwon Health; to motivate for change toward a communicatively accessible and inclusive healthcare system; and to participate in achieving this by providing ongoing education and consultation. This discussion focuses specifically on the key strategies used and lessons learned in our attempts to put communicative access on the agenda of our large healthcare network.

Most people would agree that effective communication is fundamental to the quality of life of every individual. This applies across all cultures and all facets of life, including those times in our lives when we require access to healthcare. The collaborative and respectful partnership that is an integral concept to person-centred care cannot be achieved without effective communication between the health provider and the user (Bensing, Verhaak, van Dulmen, & Visser, 2000). People with communication disabilities, however, are at risk of not being able to communicate effectively with healthcare providers and as a consequence have their right to participate in their own care compromised (O'Halloran, Hickson, & Worrall, 2008).

It was at a routine staff meeting in October 2003 that this issue came sharply into focus for the speech pathology group at Barwon Health (BH). Discussing the Inpatient Functional Communication Interview (IFCI; O'Halloran, Worrall, Toffolo, Code, & Hickson, 2004) through the conceptual framework of the *International Classification of Functioning, Disability and Health* (ICF; World Health Organization, 2001), Robyn O'Halloran spoke of a fundamental shift in the way we might view our roles as therapists and the responsibility we have to our patients.

Many of us employed the traditional, individualised therapeutic approach aimed at addressing communication problems with an individual, at an impairment level. Exposure to the work of Connect (Communications Forum, 1997; Parr, Wimborne, Hewitt, & Pound, 2008), and the work of the

Aphasia Institute (Kagan, 1998), however, was beginning to reveal the crucial role environmental barriers and facilitators play in determining an individual's ability to participate in communicative life. We had started to embrace a more integrated, functional approach, which gave us options beyond the limits of addressing impairment alone. But it was this particular discussion, in October, that opened my eyes to the plight of the many people spread across our healthcare network right at that moment struggling to make sense of the systems, information and attitudes through which we delivered our care.

For me there was a sudden clarity of purpose. The next day I sent an email to a handful of colleagues across Barwon Health inviting them to a meeting to discuss the issue of communicative access (CA). The result was the Communicative Access Care Improvement Group (CACIG). What follows is not a discussion of CA per se but rather an attempt to highlight and share key learnings that have emerged through our struggle to make organisation-wide improvement to CA in our corner of the public health system.

The Barwon Health Communicative Access Care Improvement Group (CACIG)

The CACIG is a multidisciplinary group of clinicians, managers, and consumers. We dwell in the possibility that one day: All consumers (will) readily access the information they need to communicate effectively with others, make decisions and participate more fully in their own healthcare.

The group's mission is to: Strive to be instrumental in creating healthcare that is accessible to, and inclusive of, those who struggle to talk, read, hear or understand. We work to achieve this by:

- identifying the barriers to communicative access in partnership with consumers and the community;
- developing sustainable strategies, guidelines and systems that facilitate communicative access for everyone;
- promoting awareness and achieving better practice within Barwon Health and beyond.

Key CACIG projects

Since its inception the group has driven and participated in many projects throughout the organisation. Some of the key projects include the Cognitive Identifier Project, the McKellar Wayfinder Project. These are discussed in more detail below.

The Cognitive Identifier Project

This project aimed to increase staff's skills in communicating with people with a cognitive impairment (CI). A total of 1471 staff attended training over the 12 month period that training was offered face to face, across acute, inpatient rehabilitation and outpatient rehabilitation services. Training was provided to increase staff awareness and understanding of CI, improve communication skills with patients with CI and to introduce the Cognitive Identifier symbol. This was funded through the DHS Dementia Care in hospitals project following the pilot project conducted at Ballarat Health service. Sustainability was addressed through the development of a CD-ROM self-directed learning package, an intranet web page, and training for all new clinical staff embedded in the Barwon Health orientation program. To date 3704 staff have been trained using the self directed learning package or as a new starter to BH as part of orientation (including the 1471 staff who attended initial education sessions). In addition the Cognitive Impairment Identifier symbol (see figure 1) is now a clinical alert communicated using patient information systems. This will also be incorporated into the organisation's ehealth patient care planning system which is under development.

Figure 1. Cognitive Impairment Identifier

The McKellar Wayfinding Project

Clients, carers and visitors' often experience BH when they are at their most vulnerable. In addition, many of our clients have physical, sensory, communication and/or cognitive impairments that make it difficult to access some services and buildings. Complex buildings require a comprehensive range of devices and strategies to help people get to their desired destination with confidence, ease and in time. Poor design in finding their way results in lost and flustered people whose overall experience of the organisation, from the outset, is negative. Anxious people are less likely to be able to take in information and gain the most from the therapeutic environment.

The aim of the McKellar Wayfinding Project was to design the built environment and its systems to support and facilitate people's intuitive abilities to find their way. It was assumed that if users with physical, sensory, communication and/or cognitive impairments experienced success from their wayfinding efforts, then all users (including staff) would find access intuitive and easy.

The review of Wayfinding included:
- internal signage audit
- Community Rehabilitation Centre client survey
- Inpatient Rehabilitation Centre Visitor survey
- staff time and occasions for providing directions and wayfinding assistance at main reception, Café 45.

This project resulted in a comprehensive wayfinding strategy for rehabilitation services including the development of accessible:
- previsit information
- spoken directions training for staff
- road signs and entrances clearly marked
- traffic management and parking strategies
- logical and intuitive internal signage
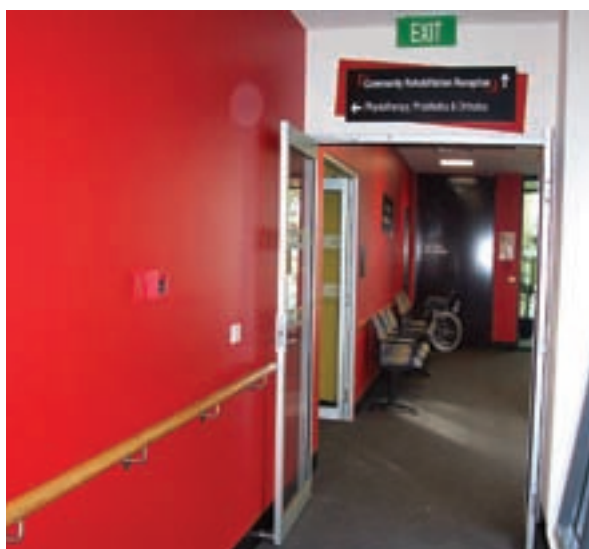- art and design in Wayfinding in order to ensure a welcoming environment.

Figure 2. Red corridor and corresponding colour-coded signage in the McKellar Community Rehabilitation Centre

Accessible written information

A BH-wide protocol, systems of review and a toolkit/ resource were established to ensure that all written information produced for consumers is communicatively accessible. This project is currently being reviewed within the context of broad organisational changes with regard to visual standards and the development of a 'plain English' policy.

From dwelling in possibility to seeing organisational change

We understand that there is a vast difference between knowing there is a problem and attempting to do something about it. In implementing the projects described briefly above the CACIG has gathered experience and learned many lessons about working towards creating more communicatively accessible healthcare environments. These are shared and discussed below in order to provide a starting point for clinicians wanting to improve communicative access – to turn knowing into doing in their own organisations, big or small.

1. Involve consumers at every step and tell their stories

In thinking about creating more communicatively accessible environments we started to observe many of our patients in

a different way and saw that a significant number were unable to understand the information they received on their journey along the continuum of care. We could see that this situation made people feel frustrated, embarrassed, and incompetent and that some were simply excluded from activities. This included people like Lila in the palliative care unit who got a packet of pepper for lunch, because she could not read the menu or write her choices. Or Edward, who was assessed as having a potential delirium until his wife came in with his hearing aids. The authenticity of these stories moved us and helped focus our attention. Sharing these with leaders in our organisation has proven to be one of our most powerful tools in motivating for change.

To keep close to the experiences of real people using our health services we invited Elizabeth, an interested consumer, to join the CACIG. Elizabeth has continued to provide the group with her essential and unique viewpoint, drawing on her own experiences as carer for her husband who is hearing impaired. She continues to keep the group accountable and focused on the user's experience and her input has been invaluable.

2. Make it values driven and evidence based

Embedded in the task of introducing the concept of communicative access to decision-makers is the challenge of convincing others that CA deserves serious consideration alongside the ever-pressing issues of reducing length of stay, managing beds, and balancing the healthcare budget. Articulating the importance of CA for ourselves was vital before we made any attempt to convince others. This required a solid understanding of the values and evidence that ignited our passion in the first place.

Through our reading of the literature we were able to elucidate our values and realised in the process that these values were consistent and fundamental to major trends in healthcare reform internationally. We realised that the basic values of equity, solidarity (societies' collective responsibility to care for others) and participation were fundamental to CA just as they are fundamental to the provision of quality healthcare overall (World Health Organization, 2005). We could argue that universal accessibility comprised of at least four dimensions including communication access (access to information) and we could argue with confidence because the WHO said so (World Health Organization, 2000, 2005)!

In reviewing the evidence around CA it soon became obvious that issues were complex and wide ranging with literature spread across many seemingly disparate fields. Our starting point was in the aphasia literature, in particular the work undertaken by researches and clinicians in the United States (Chapey et al., 2001; Simmons-Mackie, 2001), Canada (Kagan, Black, Duchan, Simmons-Mackie, & Square, 2001) and the United Kingdom (Byng, Farrelly, Fitzgerald, Parr, & Ross, 2005; Byng, Pound, & Parr, 2000; Parr, Byng, Gilpin, & Ireland, 1997) and at home in Australia (Howe, Worrall, & Hickson, 2008; Rose, Worrall, & McKenna, 2003; Worrall, Rose, Howe, McKenna, & Hickson, 2007). The work of these seminal authors work continues to inform our practice and guide our decisions.

3. Collaborate with key people and look for opportunities

A strategically important feature of the CACIG is that it is multidisciplinary, drawing clinical and non-clinical professionals from across the continuum of care. Members come from areas including: ethnic services, quality and governance, communications and marketing, the Centre for Promoting Health Independence (CHPI), service redesign and the Project Unit. Clinical expertise is drawn from speech pathology, audiology, occupational therapy and nursing.

Having a broad membership allows us to tap into opportunities the clinicians in the group may not ordinarily be exposed to. Similarly the non-clinical/managerial staff in the group take away with them an improved understanding of the clinical issues for our patients. Networks formed through our members have been instrumental in raising the group's profile within the organisation, forging links and partnerships, creating opportunities and broadening the perspectives of everyone involved.

4. We have a mandate

Having an awareness of the relevant anti-discriminatory legislative acts of parliament as they relate to people with a communication disability is an important tool in lobbying for change. These include the federal *Disability Discrimination Act* (1992), the *Human Rights and Equal Opportunity Commission Act* (1986) and *Racial Discrimination Act* (1975), and the Victorian state Disability Act (2006). We know that communication disability is a hidden disability in many ways and the specific needs of those with communication problems can be lost within broad overarching guidelines. Healthcare organisations may well be meeting requirements of those with physical disabilities but groups like the CACIG can highlight where our interpretation of the legislation has fallen short for those with communication support needs.

In addition to the legislation we have found it useful to be aware of our own organisational vision and mission statements, our charter of patient rights and responsibilities, documented models of care, and overarching accreditation standards and guidelines. The principles of equity of access and patient participation are certainly embedded in many of Barwon Health's healthcare policy documents, as they would be in many organisations. Where this is the case we can assist decision-makers to make the next step in defining what such principles mean specifically for those with communication support needs.

5. Use conceptual models

Using conceptual models that utilise a common language and help simplify things for others was another useful strategy. We understood the broader conceptual framework of the ICF but we needed to simplify things for our colleagues and ourselves. In practical terms most people don't have time to engage in the kind of discussion necessary to fully appreciate the ICF, let alone apply this to CA. This time the work of Susie Parr and her colleagues helped to simplify and visually conceptualise where the barriers might be. With the Communicative access triangle (Parr et al., 2008) it is possible to show that the barriers to communicative access potentially occur in three main areas: in our interactions with others, in the documents we produce and in the physical and attitudinal environment where we offer our services. Kagan and her colleagues have now developed the Living with Aphasia – Framework for Outcome Measurement (A-FROM; Kagan et al., 2008). The A-FROM is a user-friendly framework adapted from the ICF (World Health Organization, 2001) and is a conceptual guide for thinking about outcomes of aphasia interventions. The A-FROM can be used to provide a common platform for thinking about outcomes but is also potentially a valuable visual tool for communicating to clients, clinicians and managers about communicative access.

Conclusion/final comments

Clear, accessible written and spoken information about services is now a requirement under various legislative acts. Yet as clinicians we know more work is needed to ensure healthcare providers understand and eliminate the barriers faced by those who struggle to read, write, talk and understand. The Barwon Health Communicative Access Care Improvement Group grew from this recognition and is working to ensure that the needs of the person with communication disability are being acknowledged and addressed at various levels within the organisation. By raising awareness, training staff, and transforming the information we provide we aim to ensure that those with communication disability are included and involved in their own healthcare. We have indeed learned many valuable lessons along the way, perhaps most importantly, that with the passionate sense of what can be, for the eye which sees the possible, we clinicians can make a difference and influence systems for the better.

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Clinical insights

Reflections on improving hospital access for people who are Deaf or have a hearing impairment

Evelyn Towers

Evelyn Towers

This article describes the journey undertaken by Princess Alexandra Hospital to create a more accessible environment for patients who are Deaf[1] or have a hearing impairment. It outlines the identification of communication barriers as part of planning for a large-scale redevelopment and discusses what has been achieved in the ten years since. Areas addressed include assistive technology, resource development, and service improvement. Suggestions are given for others who wish to improve access in their organisation together with suggested directions for the future.

Princess Alexandra Hospital is a major tertiary teaching hospital located on the south side of Brisbane. The hospital provides all of the major adult acute medical and surgical specialties and mental health services, and has specialised rehabilitation services including spinal injury, geriatric, and brain injury services. It is a large organisation employing over 5000 staff, which in 2008–09 provided more than 459,000 outpatient appointments and had over 74,000 admissions to the hospital. In 2007 Princess Alexandra Hospital received the inaugural access award from the peak body Deafness Forum of Australia and the Queensland Disability Action Week Award for Local and State Government in recognition of its work in creating accessible healthcare services for people who are Deaf or hearing impaired.

This article describes how we began working towards the development of a more accessible healthcare environment and outlines what has been achieved, provides tips for others setting out on a similar journey, and offers some thoughts for the future. While a number of the initiatives documented here have also provided benefits for visitors and staff who are Deaf or have a hearing impairment, their specific issues have not been outlined below. Reflection on the last ten years has provided insights into what worked well and what didn't. In sharing these experiences, I hope to remove one of the early barriers to progress – the lack of a healthcare model.

Working towards an accessible environment

The task of organisation-wide access improvement commenced in 1999 with planning for a large-scale redevelopment of the hospital. Prior to this, initiatives to facilitate service delivery to people who are Deaf or hearing impaired were limited to providing a few patients with listening devices, giving ad hoc in-service education on hearing tactics and management of hearing aids, and providing sign language interpreters. The redevelopment of the Princess Alexandra Hospital provided the impetus for our organisation to examine and address access issues in a systematic way. The major aim of improving access was to enable all patients, including those with special needs, to optimally utilise health services in the most efficient and informed way.

The organisation identified the redevelopment as a real opportunity for improvement and innovation and engaged staff in the process. In particular the hospital wished to improve user satisfaction and health outcomes as well as to demonstrate compliance with government requirements and relevant legislation such as the *Disability Discrimination Act* (1992).

As director of the Audiology Department I was asked to contribute in two ways. First, by looking at the barriers to access experienced by those who are Deaf and by those with a hearing impairment, and second, by implementing strategies to address these barriers. This work initiated a new role for the Audiology Department in driving access initiatives within the organisation on an ongoing basis.

The scale of the redevelopment was large and included the construction of a new building to replace the existing main building along with the redevelopment and reorganisation of a number of its outlying services. All services in the hospital were engaged in the project and this environment enhanced opportunities for change in both physical and communication access.

The extent of change also created competition for the attention of staff at all levels in the organisation, which was a potential barrier as was the reassignment of resources to areas perceived to be non-clinical. The sheer physical size of the hospital was challenging and a new model for service delivery with outpatient clinics situated adjacent to their specialty wards increased the locations where access requirements needed to be investigated.

A number of strategies were employed to address these potential barriers. Key personnel with credibility and well-

established hospital networks, including a sponsor at the hospital executive level, were enlisted to drive the project. A highly qualified audiologist, Susan Forster was appointed as the project officer to identify and report on access barriers across the hospital and the methods needed to address them. Consumers and staff were also engaged in the consultation process. In the initial phase, recommendations were rationalised and a balance of the specific needs of the two target groups, the Deaf and the hearing impaired, was achieved which resulted in quick executive endorsement of the report.

In 2003, an access working party was formed to continue the implementation of strategies identified in the original report (Princess Alexandra Hospital, 1999), to drive ongoing improvement and to promote sustainability. Another important role for the committee has also emerged over the years. This involves evaluating the effect of other changes and developments on communicative access for people who are Deaf or hearing impaired. For example, a range of issues and opportunities are created by the introduction of new medical and assistive technology available to organisations and individuals. In addition, the built environment continues to change. Since redevelopment, glass and plastic barriers and metal grills have been introduced in high risk reception areas to address staff safety concerns. This has created an impediment to lip reading by obscuring the lips, distorting the face, or introducing visual interference from glare. Audioloops are planned for reception and triage in the Emergency Department redevelopment to address this problem. Other communication strategies are being investigated for patients who do not benefit from using a loop.

Examples of what has been achieved

From the outset the position and design of the new main block addressed some of the noise issues evident in the original building. The hospital was sited at an increased distance from a busy road and inpatient wards were located away from busy common areas. Design features such as air conditioning and double-glazed windows also reduced street noise.

In terms of patient safety, fire alarms and the nurse call buttons were installed that provided visual and audible signals. In addition, the alarms in the lifts were designed so that they could be activated by pushing a button, and were not dependent on the use of an internal phone. This addressed a safety risk identified by Deaf consumers.

Telecommunications and entertainment in the new main building proved to be one of the easiest areas to get access equivalent to that of hearing people and to achieve progress. Captioning on televisions and accessible telephones were mandatory requirements in the selection process for the external service provider. In addition to the entertainment network being caption capable and providing choice at the bedside, it was mandated that televisions in waiting areas and other common areas would be set to receive captions when they were available.

Special public payphones with volume enhancement and telephone typewriter (TTY) facility were provided free of charge by Telstra in the main hospital foyer, in the Emergency Department and in the mental health services building. TTYs were also installed in the switchboard and in Audiology. However, maintaining staff skill in the use of the TTY remains a challenge due to the low volume of

calls received and the number of non-TTY users incorrectly accessing the special line.

More recently in the Geriatric Assessment and Rehabilitation Unit, telephones have been installed at the bedside and all are disability friendly. This is an improvement on the system employed in the main building where special telephones are supplied on a request basis which has proven difficult to administer. TTYs are available for the bedside but only on request due to the cost and infrequency of use.

Common area televisions have also been installed and the specifications used for their selection included the availability of captioning and a minimum set size to allow caption legibility taking into account viewing distance.

In terms of service improvement, one outstanding achievement has been the development of a Centre of Excellence for Deaf and Hard of Hearing People by the Division of Mental Health in 2004, the first of its kind in Australia. Princess Alexandra Hospital responded to previous reports (Briffa, 1999; Queensland Health, 2001) which identified inequitable access to care by establishing a state-wide mental health consultation service for adults who are Deaf or hearing impaired. Consultations are conducted using the most appropriate mode of communication and validated assessment tools. In addition, training programs are provided across the state to assist mental health professionals in delivering appropriate and equitable care. An extensive set of resources has been produced including patient information brochures on common mental health conditions in an accessible format.

Across the hospital there are other innovations in service delivery which are making a difference at a local level. For example, the renal service issues vibrotactile devices to patients who cannot hear warning alarms on home dialysis equipment and has provided a Deaf patient with a fax machine to facilitate ongoing communication.

Tips for creating accessible environments

1. Become familiar with relevant legislation, including key acts such as the *Disability Discrimination Act* (1992) and the *Disability Services Act* (2006). In Queensland, the Queensland Government Captioning Policy (Department of the Premier and Cabinet, 2009), the Queensland Health Disability Service Plan (Queensland Health, 2007) and the Queensland Government Multicultural Policy (Department of the Premier and Cabinet, 2004) have also proven useful. Similar policies and plans exist in other states. Having this knowledge increases your credibility when negotiating with key personnel who may not be aware of organisational responsibilities in relation to Deaf and hearing impaired patients and how to meet them. For additional information the Australian Human Rights Commission website offers excellent resources (see http://www.hreoc.gov.au/disability_rights/index. html).

2. Be alert for opportunities to influence access. While the initial stimulus for our hospital was a major redevelopment, opportunities on a smaller scale have continued to arise. These include unit-level renovations, service reviews, business planning and accreditation, a peer-based assessment of performance against established standards.

3. Involve consumers and local staff in service auditing to identify barriers and solutions. To facilitate auditing we

have developed accessibility checklists based on an American tool (Self Help for Hard of Hearing People, 1993) and adapted this to the local context. For example, an audit of our hospital auditorium found that the original audioloop met existing regulations but in practice very few seats received an acceptable signal. When the unit required replacement, technical expertise was sought and the loop selected provided wider coverage which was confirmed by improved consumer satisfaction. Engagement of consumers is also valuable in education. Feedback from staff in our organisation consistently indicates that consumers' reporting on their experience of a service is a powerful tool in motivating change.

4. Seek out partnerships. For example, the Audiology Department and Princess Alexandra Support Services (including interpreter services, switchboard, enquiries and admissions) established a partnership in recognition that Deaf people face barriers in accessing health services similar to those from culturally and linguistically diverse backgrounds. Working together has resulted in the development of resources including desktop communication signs for outpatient clinics and communication alert stickers for the patient chart. An extensive training program for frontline staff has been conducted covering topics such as working with an interpreter and communication strategies. More recently in an alliance with Queensland Health Multicultural Services a ward communication tool was designed including words in common use in hospitals presented pictorially in Australian Sign Language (Auslan) and numbers and the alphabet in finger spelling.

Future directions

The hospital is currently trialling a communication kit for Deaf and hearing impaired patients that has been developed in consultation with consumers and staff. The aim in producing the kit was to address some of the communication issues commonly encountered during a hospital stay. Examples of items in the kit include Auslan ward words, a visual pain scale, a staff information brochure on managing hearing aids and cochlear implants, a communication alert sign, and a pad and pen. A feedback form in words and pictures has been developed to facilitate consumer evaluation of the kit. The vision for the future is to have the kit available in a web accessible format to facilitate statewide distribution.

The commencement of the trial also highlighted an area for further investigation. As there is no comprehensive system in place to identify patients with special needs, it was difficult to issue kits efficiently to all patients who may benefit from its use. The elective admission process currently identifies patients who are Deaf and require sign language interpreters. There is no identification process for those patients with a hearing impairment who do not identify as Deaf. It is important for the future that systems are in place so that appropriate services or technology can be made available when required.

The provision of real-time captioning for patient consultations remains a focus. Real-time captioning, the instant translation of the spoken word into text, is required when verbatim conversation is essential to effective communication. It is routinely available in our hospital for meetings involving consumers. It is rarely available for individual patient appointments apart from cases where the Audiology Department is involved in the long-term

management of a patient. Increasing access to portable e-health systems and the ability to deliver real-time captioning remotely holds promise for the future.

There is also new work to be done in evaluating patient educational materials so that we are meeting the level of literacy of our consumers. Finally we need to investigate other ways that patients receive education to ensure that those with special needs have equitable access.

In summary, over the last ten years it has been both challenging and rewarding to play a part in creating a hospital environment where people who are Deaf or have a hearing impairment have equitable access to the services and facilities they need.

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1. Deaf with a capital D refers to culturally Deaf people who belong to the Deaf community through sharing values, beliefs and the use of sign language (Auslan).

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What's the evidence?

Communicatively accessible healthcare environments

Robyn O'Halloran and Tanya Rose

Speech pathologists working in the acute hospital setting work within a medical model. The medical model proposes that a patient's difficulties can be explained by the nature and severity of the patient's impairments. This perspective can make it difficult for speech pathologists working in the acute hospital setting to find support for the development of a more communicatively accessible health-care environment. This edition of "What's the evidence?" draws on Speech Pathology Australia's Code of Ethics and Scope of Practice documents to consider a broader role for speech pathologists working in the acute hospital setting. It then demonstrates how the current evidence base may be used to support the development of more communicatively accessible healthcare environments.

Scenario

Clinical situation

You are a speech pathologist working in an acute hospital stroke unit. You want to make the stroke unit a more communicatively accessible environment for inpatients with communication disabilities. You speak to your manager about this. She says that it's a nice idea but she's not sure that it is a high priority for the acute hospital setting. She adds that considering patients are only there for such a short period of time it might not make a difference to patient care anyway. You are not sure why your manager has responded in this way and you want to find out if there is any evidence to support the development of a more communicatively accessible stroke unit.

Response

The manager's response reflects the fact that all healthcare providers, including managers, who work in the acute hospital setting work within a medical model. The medical model places primary value and importance on identifying the underlying physical cause/s of the patient's medical condition. Treatment is directed towards remediating the underlying cause/s (Fulford, 1996). By assessing the patient and determining the nature and severity of the patient's communication and/or swallowing disorders, speech

pathologists make an important contribution to understanding the patient's medical condition.

However, patients also need to be able to communicate with their healthcare providers when they are in hospital. In fact the Speech Pathology Australia Code of Ethics states that "The speech pathology profession recognises the rights of individuals to possess an effective form of communication" (Speech Pathology Australia, 2010, p. 1). Assessing a patient for communication and/or swallowing disorder/s within the medical model assists the speech pathologist and the broader healthcare team to understand the patient's underlying medical condition, but it does not ensure that the patient has an effective form of communication. Our Code of Ethics points to another important role for speech pathologists in the acute hospital setting: to ensure that every patient in hospital has an effective (as possible) form of communication.

The speech pathologist's manager does, however, raise some important points. Patients are often in the acute hospital setting for a short period of time and it may not be feasible for speech pathologists to assess every patient admitted into hospital to ensure that he or she has an effective form of communication. Alternatively, it may be that by improving the communication environment alone many patients might be able to communicate effectively with healthcare providers. This could be achieved in a variety of different ways. For example, one way to help create a more communicatively accessible environment in hospital might be to ensure that any patients with pre-existing communication disabilities are identified on admission (O'Halloran, Worrall, & Hickson, 2009); other ways include providing the patient's communication partners (that is, healthcare providers) with the necessary knowledge and communication skills to communicate with patients with communication disabilities (Kagan, Black, Duchan, Simmons-Mackie, & Square, 2001), ensuring that written information is available in accessible formats (Rose, Worrall, & McKenna, 2003), and developing systems for the maintenance of assistive listening devices on the ward (Roper, 1995). A more communicatively accessible hospital environment would not only benefit patients with communication disabilities in hospital now but may also benefit patients with communication disabilities who are admitted into the hospital in the future. Thus, improving the communication environment can be a very efficient way to ensure that many patients are able to communicate effectively when they are in the acute hospital setting (O'Halloran, Hickson, & Worrall, 2008).

Robyn O'Halloran (top) and Tanya Rose

Table 1: Concept map to generate keywords			
Patient group search terms	Intervention search terms	Comparative intervention	Outcomes
Possible search terms: aphasia dysphasia "acquired language disorder" NB: search terms of three words or longer are written in quotation marks so the search engine recognises the term as a whole phrase.	Possible search terms: "modif* (by including the asterisks the search will include the terms modify, modified, modifying) written information" "access* (search will include accessible, accessibility) written information" aphasia friendly patient education health education "consumer health information"	No particular search terms used. Interested in effect of the intervention only	No particular search terms used. Interested in any outcome

Is this within our scope of practice? Speech Pathology Australia's scope of practice (Speech Pathology Australia, 2003) states that speech pathology services aim to improve the communication abilities of clients, facilitate access and participation in a range of different programs, prevent communication disability, and improve the communication environment. Therefore, modifying the communicative environment of the hospital to enable patients to communicate more effectively is well within our scope of practice.

The final issue the manager raises concerns whether creating a communicatively accessible environment makes any difference to patient care. This is a critical issue. Having argued that patients need an effective form of communication in hospital and that modifying the communicative environment may be an efficient way to achieve this for many, it is important to determine what, if any evidence is available that indicates that environmental modifications are effective. In order to answer this question, it needs to be refined further.

Developing an answerable clinical question

The PICO mnemonic is a useful way to explore questions about a clinical issue more clearly (Del Mar & Hoffmann, 2010). PICO stands for:

P: Patient, problem or population;
I: Intervention, diagnostic test or prognostic factor;
C: Comparison, and
O: Outcome

The PICO mnemonic has been used to explore this clinical issue further.

Patient, problem, or population

"Patient, problem or population" directs us to clarify who we are interested in. Are we concerned about all patients with communication disabilities in hospital? Are we interested in a specific subgroup of patients, such as those with aphasia, dysarthria, cognitive communicative impairment, or hearing impairment? Are we interested in patients with complex communication needs or communication difficulties secondary to medical interventions such as tracheostomy?

Interventions

"Interventions" requires us to think about the types of interventions we are interested in. Are we concerned about the effect of any interventions? Are we particularly interested to know the effect of a specific intervention on the environment such as enhancing the knowledge and skills of healthcare providers? Providing aphasia-friendly written information? Increasing staffing levels? Enhancing the acoustics on the ward? Or creating new administrative policies?

Comparison

"Comparison" directs us to think about whether we are interested in comparing the effect of one environmental modification versus another on an outcome.

Outcome

"Outcome" focuses our attention on specifically what we want to make a difference to. Do we want a communicatively accessible environment to make a difference to patients' knowledge about their healthcare condition? Their level of satisfaction with their healthcare in hospital? Their ability to communicate about their healthcare in hospital? The quality of healthcare they receive in hospital? Or, do we want to make a difference to their overall health outcomes?

By exploring the question in this way it becomes clearer that looking for the evidence for "does creating a communicatively accessible environment make a difference?" actually covers a vast range of more specific questions that need to be asked. One question has been constructed from this list of potential questions, which is: "For people with aphasia (patient group), does providing accessible written healthcare information (intervention) compared with standard written healthcare information (comparison) have any beneficial outcomes (outcomes)?" This question is investigated in more detail below.

Searching for the evidence

Table 1 outlines the concept map used to identify the keywords that were searched to find any literature that might be relevant to answering this question. Medline, CINAHL, Embase, and Scopus databases were searched. In order to find any systematic reviews or previously appraised articles on the topic, two pre-appraised databases; Cochrane library and speechBITE™ were also searched. The "patient group" keywords and "intervention" keywords listed in Table 1 were searched separately and then the results of each of these searches were combined to identify any relevant articles.

Searching these databases with these keywords yielded over 400 articles; however, by reading the article titles alone it became evident that only 18 articles were relevant to the topic. Reading the abstracts of these 18 articles indicated that 12 were specific to people with aphasia. Of these 12 articles, 7 were concerned with understanding the nature of the problem of providing written information to people with stroke and aphasia, one investigated the effect of modifying the reading level of written information and four investigated the effect of modifying written information on people with aphasia. No systematic reviews or articles from the speechBITE™ database that had already been appraised were found.

The National Health and Medical Research Council (NHMRC) states that different research questions require different kinds of supporting evidence (NHMRC, 2009). The issue here concerns the evidence around an intervention, that is, the effect of modifying written information for people with aphasia; therefore the NHMRC intervention hierarchy (NHMRC, 2009) was used to evaluate the 4 articles identified. Table 2 describes the level of evidence of each of the four articles and table 3 provides a critical appraisal of one article in more detail.

Table 2: Research articles identified

Articles identified	Purpose	Level of evidence (NHMRC, 2009)
Rose, Worrall and McKenna (2003)	Investigated the effect of aphasia-friendly written health information on people with aphasia	Level III-2
Egan, Worrall and Oxenham (2004)	Investigated the effect of an accessible training package to help people with aphasia learn how to use the internet	Level IV
Worrall and Brennan, McKenna (2005)	Investigated the effect of specific features of aphasia-friendly written information on comprehension for people with aphasia	Level IV
Worrall and colleagues (Worrall, et al., 2005)	Provides a summary of these three studies	N/A

Clinical bottom line

The clinical bottom line was drawn from all the research literature searched and secondary sources. The speech pathologist could present this information to her manager to argue the value of a communicatively accessible healthcare environment.

There is a need for accessible information

People with aphasia want to receive written information about their health (Rose, Worrall, Hickson, & Hoffmann, 2010). Family members of people with aphasia also want information about aphasia (Avent et al., 2005). Despite this, many people with aphasia are not adequately informed about their stroke and/or aphasia (Eames, McKenna, Worrall, & Read, 2003; Knight, Worrall, & Rose, 2006; Parr, Byng, Gilpin, & Ireland, 1997; Rose, Worrall, McKenna, Hickson, & Hoffmann, 2009). Those people with aphasia who do receive written health information often state that the information they receive is too complex (Rose et al., 2009).

Accessible healthcare is multifaceted

For healthcare information to be accessible it needs to be easily obtainable (Worrall, Rose, Howe, McKenna, & Hickson, 2007) and repeatedly provided throughout the continuum of care (Rose et al., 2010). It also needs to be available in a range of different formats such as written information and appropriately formatted DVDs and videos (Rose et al., 2010).

Table 3: Critically appraised article

Article title	The relationship between specific features of aphasia-friendly written material and comprehension of written material for people with aphasia: An exploratory study
Citation	Brennan, A., Worrall, L., & McKenna, K. (2005). The relationship between specific features of aphasia-friendly written material and comprehension of written material for people with aphasia: An exploratory study. *Aphasiology, 19*(8), 693–711.
Design	Case series pre test post test
Level of evidence	IV
Participants	9 people with mild to moderately severe aphasia
Experimental group	People with aphasia given 90 different paragraphs to read. Each set of 5 paragraphs were at a different level of complexity and had different aphasia-friendly features.
Results:	Participants' comprehension at grade 6 level was increased when paragraphs had a) simplified vocabulary and syntax or b) had large print or c) increased white space or d) all four aphasia-friendly features (simplified vocabulary and syntax, large print, increased white space and pictures). Participants' comprehension of grade 5 and grade 7 level paragraphs was not enhanced with any modifications to the text. The authors suggested that this may have been due to ceiling effects at grade 5 level and self-selection bias at grade 7 level where many participants did not complete reading all the paragraphs.
Summary:	People with aphasia understood significantly more information when reading paragraphs that were modified.

Accessible healthcare makes a difference to the comprehension of a person with aphasia

There is evidence that using simplified vocabulary and syntax, large print, increased white space and pictures can improve comprehension of written information for people with aphasia (Brennan et al., 2005; Rose et al., 2003). However accessible written information may have other benefits as well. People with aphasia have also reported feeling more confident responding to health questions after reading aphasia-friendly patient education materials, compared to standard written information (Rose et al., 2003).

People with aphasia need a choice

Rose and colleagues (2003) found that although aphasia-friendly information assisted people with aphasia to comprehend information, not all people with aphasia liked the aphasia-friendly health information. For example, some people with aphasia commented that the inclusion of several Microsoft ClipArt images and black and white line drawings in written health information was disrespectful (Rose et al., 2003). Therefore, wherever possible people with aphasia need to be given a choice regarding the type and format of

the healthcare information they receive (Worrall, Howe, & Rose, 2006).

Conclusion

This article demonstrates how evidence can be used to respond to a clinical challenge such as trying to make an acute stroke unit communicatively accessible for inpatients with aphasia. The evidence based practice framework allows speech pathologists to develop a clinical question, find and critique the relevant literature, and then use this information to draw a clinical bottom line that could be presented to a manager or health service. Review of the literature has highlighted that aphasia-friendly material is effective and can improve the accessibility of information for healthcare consumers.

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Communicatively accessible healthcare environments

Ethics and informed consent

Deborah Hersh and Melanie Breese talk to Suze Leitão

Suze

When most clinicians reflect on the topic of informed consent, they tend to think about it in the research context. The topic of this issue of *ACQ* – Communicatively Accessible Healthcare Environments – made me reflect on the role that informed consent plays in making healthcare environments accessible for our clients. It reminded me that informed consent is also critically important in making decisions, for example, about treatment.

Deborah

Informed consent for treatment is "not a discreet event but a process of information exchange and autonomous decision making" (Berglund, 2004, p. 79). It involves sharing and understanding the details, including benefits and risks, and choices about treatment, making a voluntary, competent decision, and being able to express that decision. However, we know as speech pathologists that it is precisely a difficulty with elements of that process which often prompts a person to seek our services in the first place. Informed consent for treatment can be a difficult area when judging whether someone has decision-making capacity, whether to rely on a family member as a proxy or to refer for guardianship. For those with capacity but with communication disorder, speech pathologists may need to be creative about how to make information truly accessible.

So when we think about informed consent for treatment, it is useful to look beyond the classic choice between two medical procedures or signing on the dotted line of a consent form (important as those may be) to also consider how we might enable our clients to be more fully informed and involved in negotiations about intervention. Body and McAllister (2009) point out that access to meaningful information is important for health, and reduces client and carer stress. The timing, format, and manner of delivery are all important. Information may need to be shared regularly and reviewed over time.

Suze

Yes, there is a responsibility for us, as speech pathologists, to make sure our healthcare environments and the assessments and interventions we offer within them, are as accessible as possible. We need to ensure we present information in a clear and concise manner. We have to remember that our clients, and their families, may not being making a fully informed decision about the therapy process.

Sometimes, I think we assume that "implied consent" is the same thing as "informed consent".

Deborah

Speech pathologists know about the importance of presenting oral and written information in accessible ways, using alternative and augmentative communication, involving family members appropriately, adapting the environment effectively to promote communication and checking for feedback that information has been understood. In addition, ethical principles can help guide the process such as through respecting autonomy, veracity or telling the truth, and beneficence or doing the best one can to bring benefit to the client. However, it is also worth stating the obvious – that the quality of the relationship and the level of trust between clinician and client have a contribution to making information accessible. Obtaining informed consent for treatment is not just giving information but involves sharing information, something which is more effective when two people understand each other well. Perhaps it is also worth adding that if the speech pathologist is viewed as accessible (easy to talk to, someone who really listens, someone who is available to answer questions and provide reassurance), then it is more likely that the information provided will be accessible too.

Suze

I agree. On a number of occasions, family members have talked to me about their experiences with other therapists. Sometimes, they have not really felt comfortable with what was going on in therapy for their loved one, and have not really understood the reasons behind it. However, this has been difficult for them to tackle because of the assumption that the therapist is the expert and must know what he or she is doing. One of the suggestions I talk through with them is to try to make an appointment to sit and talk through the therapy process with the speech pathologist, and ask questions about the goals, the reasons underlying the approach, and the process itself. It seems as though in these cases, the clinician has not been viewed as "accessible".

Melanie, in your clinical practice, how do you deal with consent for treatment in people with dementia and cognitive damage who have already been judged as "lacking in competence"?

Deborah Hersh (top), Suze Leitão (centre) and Melanie Breese

Melanie

I try to consider several ethical principles in these cases:

1. Respect for human life and dignity.
2. Respect for individual's right to self determination/ autonomy, which includes informed consent, disclosure of information to the patient, duty of confidentiality.
3. Beneficence and non-maleficence, which includes treatment that is in the patient's best interest, evidence based best treatment, and duty of care.
4. Justice, which includes fairness in allocation and use of resources, and the greatest good for the greatest number of people.

The right to autonomy (principle 2) can come into conflict with treatment which is in the patient's best interest (principle 3), as in the following example.

An 80-year-old gentleman who is on an inpatient ward following a stroke has a swallowing disorder diagnosed by the speech pathologist and requires a modified diet and thickened fluid in order to avoid the risk of aspiration. He has a background of cerebrovascular disease with a known "Mini-Mental" (Folstein) score of 15 /30, consistent with a moderate dementia (likely vascular dementia). He becomes agitated on the ward, refusing to drink any thickened fluid, and demanding a cup of tea. The speech pathologist tries to explain the risks of aspiration to the patient but is unsuccessful in persuading him from his position. Following this, the psychiatrist is called to assess the patient's competence.

She deems the patient to be lacking in decision-making competence. In this instance, since the patient lacks competence, consideration needs to be made of:

- what is in the patient's best interest. This would be to continue the speech pathology recommendations of thickened fluid and a modified diet. If these recommendations are not followed there may be a risk of aspiration and subsequent death.
- whether the patient has an "Advance Healthcare Directive" ("Living Will") on his file with a statement of values in which he favours quality of life, and ability to eat and drink what he chooses, over prolongation of life.

This is where the ethical principles above of 2 and 3 come into conflict, and the "Advance Healthcare Directive" reflecting the patient's wishes would have to be followed at the expense of medically acting in the patient's best interest. However, the directive would be upheld only if the patient had been sufficiently specific about what treatment he would refuse. If there is no directive, other paths need to be considered, including:

- whether the patient (when competent) has nominated someone to have "Power of Guardianship". If he has then that person will have the decision-making capacity on behalf of the patient.
- whether a family member is prepared to be a proxy decision-maker. This is the commonest outcome, but can be problematic.

A potentially difficult scenario may be the proxy decision-maker. There may be conflict between family members about who is to be the proxy decision-maker, and each family member may have different ideas about what is in the patient's "best interest "– and each person has a right to self-determination. I often have relatives saying things like: "But he just loves his cup of tea, surely you can't take that simple pleasure away from him, when he has so little else in life".

So, in practice, there is discussion with the patient's decision-maker about the risks of not adhering to speech pathology recommendations. After explanation, the decision-maker usually understands the risks, and then helps to persuade the patient to take the recommended modified diet and thickened fluids. If not, we return to principle 2 "in the patient's best interests". This produces more possible scenarios:

1. If the patient is at the end stage of his illness (which is often the case), then deeming him of "palliative" status would allow him to consume whatever diet and fluid he wishes. This may be considered to be in his "best interests". Even in this case, the decision-maker has to agree with the palliative status, and all discussions and actions would be fully documented. If the decision-maker does not agree to palliative status, we would continue to attempt to get the patient to accept modified diet and fluid if possible.
2. In the case of the non-palliative patient, the speech pathology recommendations are still in the patient's medical "best interest", and would therefore be upheld. In this case if the patient still refuses modified diet and fluid, or the decision-maker allows the patient to drink cups of tea (as a way of exercising the patient's right to self-determination), this would be documented in detail to avoid liability on the part of the health authority, in the event of the patient's health status declining, or of these actions causing the patient's death.

Suze

Thank you, Deb and Melanie, for sharing your thoughts on this very important aspect of ethical practice. We must be mindful of the need to ensure that the people we work with understand that they are partners in the therapeutic process. They should be fully informed about the assessments and interventions we offer them, and we need to make our information, ourselves as clinicians, and our healthcare environments as accessible as we can.

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Webcam Lidcombe Program treatment

Kylie Farnsworth

Kylie Farnsworth

For large, sparsely populated countries like Australia, providing speech pathology services to all who need them is a challenge. Researchers are currently striving to improve accessibility of such services using information and communication technologies. These technologies include the telephone, internet and desktop videoconferencing. This form of service delivery not only has the capacity to allow clients to be assessed and treated in their own homes or communities, it also has the potential to maximise functional outcomes by optimising the timing, intensity and sequencing of interventions, as well as facilitating generalisation of treatment effects within the client's everyday environment (Theodoros, 2008).

This technology is now being used in a number of medical and allied health fields. There are various examples in the literature of speech pathology assessments and treatments being conducted via telehealth with positive outcomes. These include: the assessment of apraxia of speech in adults (Hill, Theodoros, Russell, & Ward, 2008), the treatment of hypokinetic dysarthria (Theodoros et al., 2006), and the treatment of adults and children who stutter (Carey, et al, 2010; Lewis, Packman, Onslow, Simpson, & Jones, 2008).

In the current study, the Lidcombe Program of Early Stuttering Intervention is being trialled using videoconferencing. The Lidcombe Program is a behavioural

treatment for young children who stutter. Essential components of the treatment include parents or carers delivering verbal contingencies for stuttered and stutter-free speech in the child's everyday environment. Measurement of stuttering is also a critical part of the program. Parents learn how to do the treatment during weekly consultations with a speech pathologist. The Lidcombe Program is conducted in two stages. During stage 1, stuttering is either eliminated or reduced to an extremely low level. The aim of stage 2 is to keep stuttering away while the child and parent attend the clinic less frequently and treatment is gradually withdrawn.

During the past 15 years, independently replicated clinical trials have established evidence for the efficacy of this treatment. The Lidcombe Program has emerged as the evidence based, best practice treatment for early stuttering (Onslow, Jones, Menzies, O'Brian, & Packman, in press; Jones, et al 2005). In a recent clinical trial, researchers adapted the program for delivery over the telephone (Lewis et al 2008). Although the results of this trial showed clinically significant reductions in stuttering, these gains required around three times more resources than the standard delivery.

Researchers at the Australian Stuttering Research Centre (Sydney) and the Murdoch Childrens Research Institute (Melbourne) are conducting a Phase I trial of the Lidcombe Program using webcam as an alternative to standard face-to-face clinic visits for preschool children who stutter. Families receive the treatment at home and do not attend the clinic. They require access to a computer with suitable broadband internet connection, webcam and audio software. The software application utilised in this trial is Skype, as it allows the users to make voice calls and participate in videoconferencing over the internet for free. The main concepts of the Lidcombe Program are unchanged. As noted above, the families have weekly consultations with the speech pathologist, treatment is delivered by parents and the stage 1 and 2 criteria remain the same. The weekly sessions themselves are conducted in much the same way as they are in the traditional clinic setting, though the family's toys and resources are employed rather than the clinician's. Three families are currently participating in the trial, living at various locations around Australia. To date, all three children have met Lidcombe Program treatment benchmark improvements since starting treatment over the web.

It is anticipated that the results of this Phase I trial will justify a randomised controlled trial of the webcam and traditional Lidcombe Program methods. Plans are underway to conduct this trial at La Trobe University in Melbourne. We anticipate disseminating the results of the Phase I trial through conference presentations and publications in professional journals in the near future.

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Webwords 38

Universal design

Caroline Bowen

Universal design is for everyone. It has nothing to do with intelligent design, creationism or creation science, and everything to do with the intelligent use of creativity. As a philosophy, it embraces the ideal of designing products, buildings and environments that are not only aesthetically appealing but also usable, as far as is possible, by all individuals irrespective of age, ability, or life status. For designers, architects, builders, manufacturers and end users it takes the design discussion beyond codes, standards and specifications into the realm of equal opportunity of access to our worlds as a basic human right.

All of us experience changing needs and capabilities as life unfolds, and as participants in society, we derive benefits from having good and comfortable access to products and places. By planning considerately, flexibly and universally, for children, adults young and old, and people of all ages with disabling conditions, designers and those who advise them do not have to confine themselves to thinking about separate groups. Instead their palette is the broad, ever-changing spectrum of human engagement with the environment.

The process called "design thinking" has seven dynamic stages: define, research, ideate, prototype, choose, implement, and learn (Simon, 1969), displayed in the box.

The stages are non-linear and each may be repeated as often as necessary. Design thinking can be applied or adapted in the pursuit of any universal design solution including attractive, comfortable apparel that is easy to put on and take off, bright and appropriate lighting including task lighting, ramp access to swimming pools, smooth ground surfaces in entranceways without stairs, wide interior doors and hallways, closed captioning on TV networks, readily recognisable icons as well as text labels, and appropriate signage.

Caroline Bowen

Labels, signage and participation

A disability is any condition that restricts a person's mental, sensory or mobility functions. One in five Australians (nearly 4 million people) has such a condition. Disabilities can be due to accidents, disease, heredity or trauma, and may be transient or permanent, complete or partial, lifelong or acquired, obvious or subtle. Among Australians who are of working age (15 to 64 year olds), 2.2 million have a disability;

The seven stages of design thinking (Simon, 1969, p. 55)

Define	Research	Ideate	Prototype	Choose	Implement	Learn
Decide on the issue you are trying to resolve.	Review the history of the issue, remembering any existing obstacles.	Identify the needs and motivations of the end-users of the design.	Combine, expand and refine ideas.	Review the objective.	Make task descriptions.	Gather feedback from the consumer.
Agree on who the target audience is.	Collect examples of other attempts to solve the same design issue.	Generate as many ideas as possible to serve these identified needs.	Create multiple drafts.	Set aside emotion and ownership of ideas.	Plan tasks.	Determine whether the "solution" met its goals.
Prioritise this project in terms of urgency.	Note the project supporters, investors and critics.	Log your brainstorming session.	Seek feedback from a diverse group of people, including the end users.	Avoid consensus thinking.	Determine resources.	Discuss what could be improved.
Determine what will make this project successful.	Talk to the end-users (potentially the source of the most fruitful ideas for later design).	Do not judge or debate ideas.	Present to the client a selection of ideas.	Remember, the most practical solution is not always the best.	Assign tasks.	Measure success; collect data.
Establish a glossary of terms.	Take into account the opinions of leading thinkers and "thought leaders.	In brainstorming sessions have one conversation at a time.	Reserve judgement and maintain neutrality.	Select the powerful ideas.	Execute.	Document.
					Deliver to client.	

while around 50% of people over 55 years have problems with mobility, hearing or vision. The effects of disability impinge on the one-in-five and also on their families, friends, colleagues, the wider community and ultimately society.

Viewed through lenses that are socially and culturally constructed, the labels "disability", "impairment" and "special needs" connote images of clunky grab rails, unsightly ramped entries tacked on and inconveniently tucked away at the rear of buildings, and oversized and ugly plumbing. The accompanying signage amounts to unintentional symbols of separateness: the semiotics and markers of lives that are considered to be out of the ordinary and less competent.

While assistive technology and safe access solutions are essential components of universal design, it comes to us with a deliberate shying away from the concept of *removing* barriers and providing special concessions for certain populations. Instead, its objective is to find practical ways to meet the environmental needs of all people. In that sense, universal design is not a synonym for "accessibility" with its air of catering to the needs of someone special; someone who fits in a category of difference. The emphasis is on lifespan design for children and adults who may or may not be cast as "different" or "disabled" at any point in the journey from birth to death. The overriding message from universal design enthusiasts is one of "we *all* should be able to access this or that product or building or environment" as opposed to "*they* should be able to access them".

Information technology

From the time of the inception of the **world wide web**, the **web accessibility initiative**[1] and universal design on the Internet2 have been constant preoccupations for those involved in information and communication technology, and resources are plentiful. For one excellent example, there are the **DO-IT**[3] pages from the University of Washington with its many universal design resources. Adobe and Apple offer straightforward accessibility tutorials and Windows makes it easy to master the accessibility settings for 7, Vista and XP step-by-step. In each instance the accessibility settings are particularly helpful to people with visual difficulties, hearing loss, discomfort in their hands or arms, or reasoning and cognitive issues. Features include speech recognition, screen magnifiers, text-to-speech narrators, captions, on-screen keyboards, mouse keys, shortcuts, sticky keys (e.g. one key stroke for Ctrl, Alt, Delete), filter keys and visual notifications instead of sounds.

One priority of the Education Services section of the National Library of Australia is its commitment to formulating and reviewing policies that advocate for, and ensure the best and most equitable possible access to, library services for people with disabilities. In keeping with this goal the **Disability Awareness Kit**[4] provided by the State Library of Victoria is a training resource for public library customer service staff. It covers a range of topics including print disability, hearing impairment, physical disability, intellectual disability and psychiatric disability. Each section of this well organised site contains core information and handouts, training activities, and resources. Similarly, the **Australian Library and Information Association**[5] has guidelines on library standards for people with disabilities, that make for interesting and informative reading.

Bête noire

Unsurprisingly, the topics of libraries and access bring us the Webwords' *bête noire* of the poor access to professional literature that is the lot of many a speech-language pathologist. It is true that members of the speech-language pathology professional associations in Australia, Canada, the UK, the US and elsewhere receive their associations' publications, as hard copies or electronic copies, or both, as a member benefit. Speech Pathology Australia members receive the *International Journal of Speech-Language Pathology* and *ACQ*, RCSLT members receive the *International Journal of Language and Communication Disorders* and the *Bulletin*, ASHA members receive four journals and the *ASHA Leader*, CASLPA members receive the *Canadian Journal of Speech-Language Pathology and Audiology*, SASHLA members get the *South African Journal of Communication Disorders*, and so forth. It is also the case that **International Affiliate**[6] members of ASHA have access to electronic copies of every issue of all the **ASHA journals**[7] and other publications for a reasonable annual fee.

These member and affiliate member benefits are worthwhile and value for money, but they provide an incomplete solution for the SLP engaged in any form of research, such as the individual clinician seeking in-depth and current information about syndromes and conditions that affect people on his or her caseload. It is tantalising to know, from freely available journal abstracts and alerts, that the information exists. Frustration mounts with the realisation that it is in one or more of the 24 journals for the speech pathology discipline listed in the **ERA 2010 Ranked Journal List**[8] or in the journals of early childhood, education, evidence based practice, genetics, health, hearing, linguistics, medicine and psychology that abound. But unless we are affiliated, personally or through work, with an institutional library these essential resources are out of reach for most of us.

Access to journals

The **phonologicaltherapy**[9] discussions hold many examples of frustrated speech pathologists desiring access to journals such as *Aphasiology*, the *British Medical Journal*, *Child Language Teaching and Therapy*, *Clinical Linguistics and Phonetics, Evidence-Based Communication Assessment and Intervention*, *Folia Phoniatrics et Paedia*, the *Journal of Child Language*, the *Journal of Medical Speech-Language Pathology*, *Seminars in Speech and Language*, *Topics in Language Disorders*, and others. Quite rightly, copyright restrictions prevent the sharing of wanted articles by members who do have access to them so many one-off requests for papers are unfulfilled.

The members of the discussion group who are employed by the New Zealand Ministry of Education and in special schools are more fortunate in this respect than most speech-language practitioners in public service and in private practice worldwide. Speech-language therapists working for the ministry Specialist Education Services (SES), and before that the NZ Department of Education, have always had library access. In the early 1990s SES created its own library, and the comprehensive services now provided by the **Ministry of Education Library**[10] (established in 2006) were built on this foundation. They were, and continue to be, further developed and moved wherever possible into an online environment.

Today, the ministry's three hundred or so speech-language therapists and special education SLTs have free access to the key journals for our discipline. The library services the entire ministry, with loans and document delivery; new resources alerts comprising two online monthly bulletins of new journal articles and new catalogue additions; literature searches by expert reference librarians; access to online resources and reference tools; and effective searching workshops (e.g. for newly employed NZMINEDU SLTs). The library has twelve journal subscriptions specifically for SLTs, and the SLTs also have online access to other publications in special and general education.

Sounding justifiably proud of this valuable service, Ministry of Education Library Manager Hilary Rendell writes,

The nature of our service makes for a very busy and interesting time for the library staff. We cover a wide range of disciplines and subject matter and this can be a challenge for us in terms of collection development. We have separate ways of delivering our services within the Ministry of Education and to our external library users, launching online services internally via the Ministry's intranet, and using our Education Library web platform for external clients.

It all sounds like a dream come true and there should be more of it! We cannot do our jobs without legal, inexpensive, uncomplicated, electronic access to research evidence, and we need to say so. It is time for employers to be pressed to organise privileges with institutional libraries, and employees to agitate to ensure journal access as a condition of employment.

Reference

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Links

1. http://www.w3.org/WAI
2. http://www.isoc.org/briefings/002
3. http://www.washington.edu/doit
4. http://www.openroad.net.au/access/dakit/welcome.htm
5. http://www.alia.org.au/policies/disability.standards.html
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7. http://journals.asha.org
8. http://www.arc.gov.au/era/era_journal_list.htm
9. http://health.groups.yahoo.com/group/ phonologicaltherapy
10. http://library.education.govt.nz

Webwords 38 is at http://speech-language-therapy.com/ webwords38.htm with live links to featured and additional resources.

Quality assurance

A private practice perspective

Katherine Osborne

This paper reports an attempt at conducting a quality assurance survey in a private practice pathology practice. The mothers of 33 children receiving speech pathology services were surveyed. The purpose of the survey was to improve the service provided. A 44-item survey covering 11 topics was given to parents, who returned the surveys anonymously. Results indicated high levels of satisfaction in relation to the quality of service provided and validated parent involvement in assessment and treatment. Findings also revealed the need for explicit discussion regarding anticipated length of time in therapy, for increased teacher consultation and for cancellation policies to be made explicit. Finally, some of the difficulties implementing this quality assurance project are presented.

Katherine Osborne

Quality assurance could be defined as the steps taken to evaluate a service to ensure the service is of a sufficiently high quality to meet industry standards. Quality assurance can be achieved through interaction between the consumer and the supplier. Involving consumers in evaluating the service promotes empowerment, ownership, and accountability (Nilson, Myrhaug, Johansen, Oliver, & Oxman, 2006). Parents, as consumers, can be used as a significant resource for change (Andrew, Andrews, & Shearer, 1989)

Is there a need to engage in quality assurance in private practice? After all, it is reasonable to assume that when consumers pay for a private service, they are satisfied with it. Is satisfaction a sufficient goal? Determining whether a service is satisfactory is important but determining *how* satisfactory a service is, is quite different. Conducting quality assurance checks could improve a service from mediocre or merely satisfactory to excellent (Grela & Illerbrun, 1998; Hammond, 2008).

Client and clinician service evaluation data are necessary for the provision of satisfying and appealing services (Hammond, 2008; Nelson & Steele, 2006). Without feedback from consumers, a mismatch between therapists' intentions and actual service may exist (Donaldson,

McDermott, Hollands, Copley, & Davidson 2004). For example, Donaldson and colleagues conducted interviews with parents and their child's therapists (including speech pathologists and occupational therapists) regarding their report writing. They found that while the clinicians felt they were writing reports that met the parents' needs, a mismatch existed between the clinicians' intentions and actual practice.

There are few studies concerning parent satisfaction with speech therapy services in the private sector. However, one such study was conducted by Mirabito and Armstrong (2005). They interviewed seven Australian mothers attending private therapy with their children aged 3 to 7 years. These researchers found overall responses were positive though participants had all volunteered to participate in the study. They suggested that the involvement and motivation of these mothers may have been exceptional, possibly leading to results that could not be considered representative. Nevertheless, all parents reported feeling the experience was collaborative though they regarded themselves as observers in the sessions and coaches beyond the clinic setting. Time limitations and child behaviour were identified as barriers to involvement.

Hammond (2008) conducted an extensive review of both quantitative and qualitative studies of client satisfaction with speech and language services. These studies concerned both specific services such as aphasia therapy and general satisfaction with speech and language services. Hammond's review of the qualitative research suggested some client dissatisfaction with regard to the length of therapy, discharge protocols, client–clinician interaction, activity choice, task appropriateness, clinician behaviours, functionality of tasks, explanation of therapy, likely outcomes, and goal choices.

The current quality assurance study sought the opinions of mothers regarding many of the aspects of service identified as sources of client dissatisfaction in Hammond's study as well as satisfaction with assessment process, reporting, fee schedule and health rebates. Quantitative and qualitative data collection in the form of open-ended questions was used. Open-ended questions allow more detailed information to be collected and used to improve a practice (Liamputtong & Ezzy, 2005).

Method

Survey items and format were developed following perusal of the ASHA Consumer Satisfaction Survey (ASHA, 1989), Frattali's 1991 paper discussing the merits of both

quantitative and qualitative data, Grela and Illerbrun's 1998 parent questionnaire, Hollands, van Kraayenoord, and McMahon's (2005) paper outlining levels of satisfaction and the national survey conducted by Watts Pappas, McLeod, McAllister and McKinnon (2008). The resulting survey covered 11 areas – initial phone contact, assessment process, parent support, intervention planning, parent and child satisfaction, cost of service, report, speech language pathologist qualities, therapist–teacher consultation, satisfaction with health fund rebates, and cancellation policies. An introductory paragraph at the head of the survey informed parents that their responses would be used for publication and discussion with colleagues.

The survey was given to all mothers of children who were currently on the caseload and had received at least six weekly or fortnightly therapy sessions of 30–40 minutes duration. The six-session cut-off was used as it was deemed a reasonable period for a child–therapist relationship to develop, for some goals to be met, and for some change to be perceived. The mothers were asked to take the survey home, complete it as best they could and place their survey anonymously into a sealed box in the clinic waiting area at their earliest convenience. The clinician reminded mothers over a period of a few weeks to complete their surveys. Mothers were encouraged to be as honest and critical as they liked in order to better meet their needs and improve the service. The box was opened once all mothers had indicated they had returned their surveys.

Of the 44 items, 37 were statements which mothers were asked to rate according to their level of satisfaction. Satisfaction was measured using a Likert scale of 1–5 where 1 was *very dissatisfied*, 2 was *somewhat dissatisfied*, 3 was *satisfied*, 4 was *very satisfied* and 5 was *extremely satisfied*. The number of items within each topic area varied. For example, one statement pertained to the initial phone contact while 9 items were presented in the assessment process section. Survey forms were distributed and returned between September and December 2008. In addition, there were 7 open-ended questions. (Refer to the appendix for a copy of the survey.)

Participants

A total of 35 mothers were given survey forms. The mothers were of middle-class backgrounds and all except one were native English speakers. Twenty-two mothers worked full- or part-time. Five mothers had tertiary level education. The children involved in this study ranged in age from 2 to 12 years of age with a mean age of 5.6 years. Types of disorders treated were: speech (2 children), speech-language impairment (4 children), autism spectrum disorder (4 children), intellectual impairment (5 children), language and literacy difficulties (3 children), speech and language delay (14 children), and stuttering (1 child). The children attended therapy weekly, fortnightly or monthly. A parent always attended with the child (most often the mother, though occasionally the father). Some children had been receiving therapy support for a number of years while others had recently commenced therapy and had received the minimum 6 sessions.

Nature of the practice

The predominantly paediatric practice is operated by a sole practitioner and adopts family-friendly principles (Watts Pappas & McLeod, 2008) with regard to appointment scheduling, involvement in assessment and goal-setting,

focus on parent skill acquisition, and child enjoyment. Parents are asked to observe each session and are invited to participate in the child's activities. Such involvement can assist to develop parents' confidence in their abilities and set expectations for the child as to how he will be practising at home. Parents are advised to seek another speech pathologist (SP) if an assessment cannot be scheduled within a period of a term. There is, therefore, no waiting list for assessment and no waiting time for therapy following assessment. Children may attend sessions weekly, fortnightly, or monthly depending on parent schedules, cost factors and the nature of the child's communication difficulties. Therapy sessions cost $70.00 per 30–40 minute treatment session.

Results

Thirty-three surveys out of a total of 34 were returned (94% return rate).

Initial phone contact

As part of the initial phone contact, a detailed case history is taken, as is a description of the child's communication problem and its effects. Contact details are noted. Hence the first phone call is usually lengthy. The fee schedule is explained and parents understand payment for service is required on the day. Most mothers (32/33) stated they were satisfied (3), very satisfied (11) or extremely satisfied (18) with the initial phone contact.

Assessment process

Parents reported high satisfaction levels across most areas of the assessment process with the exception of two areas– *anticipated length of time in therapy and agreement regarding test findings*. In particular, three mothers indicated some dissatisfaction with parent–SP agreement regarding test findings.

Parental support/involvement

Watts Pappas, McLeod, McAllister, and Simpson (2005, p. 67) stated that parental involvement in speech therapy sessions has been shown "to increase intervention outcomes, specifically with respect to the level of gain". Findings in this study validate the process of parent involvement as all parents indicated satisfaction with their involvement in their child's sessions, i.e. satisfied (2), very satisfied (7) and extremely satisfied (24). All parents indicated their knowledge and skills had increased, with 14 mothers indicating they were very satisfied, 18 mothers indicating extreme satisfaction and 1 mother indicating satisfaction.

Intervention planning

Mothers indicated high levels of satisfaction with their involvement in therapy planning which includes prioritisation of concerns, goal selection, and transfer strategies, i.e. satisfied (3), very satisfied (14) and extremely satisfied (14).

Satisfaction with therapy (outcomes and home practice)

Results from this survey indicated on average, high levels of parental satisfaction, with 4 mothers being satisfied, 8 mothers being very satisfied and 21 mothers being extremely satisfied with therapy outcomes. One parent was very dissatisfied with regard to her child's enjoyment of home practice, but the parent noted that her child progressed with therapy and she indicated her satisfaction with therapy outcomes. Most mothers reported their child enjoyed the

home practice (6 satisfied, 14 very satisfied, 11 extremely satisfied, and 1 somewhat dissatisfied).

Cost

No participant expressed any dissatisfaction with the cost of therapy and one parent was somewhat dissatisfied with the cost of the initial assessment ($200.00 per hour).

Reporting

One mother was somewhat dissatisfied with the reporting process. One mother was satisfied, 7 mothers were very satisfied and 17 mothers were extremely satisfied. There was a group of mothers for whom a written report was not applicable due to cost factors or minor nature of the communication problem.

SP qualities

Most mothers (32) were extremely satisfied with the therapist's interpersonal skills in relation to themselves, the therapist's competency and professionalism. No parents expressed any dissatisfaction.

Teacher consultation

Regarding teacher consultation, similar satisfaction levels were reported across the three levels, i.e., 9 mothers expressing satisfaction, 7 being very satisfied, and 8 being extremely satisfied. One parent was somewhat dissatisfied. Hence, this is an area that could be improved upon. Eight mothers either left this section blank or wrote N/A.

Health rebates

Parents claimed rebates either through their private health fund or through the Australian government's Medicare Enhanced Primary Care program which provides rebates of $49.00 for each of five sessions. Six parents expressed dissatisfaction with rebates they received while 25 parents expressed satisfaction. Nine parents were extremely satisfied with their rebates, 4 were very satisfied and 11 were satisfied.

Cancellation policies

While no parents indicated any level of dissatisfaction with cancellation policies, 4 parents did not respond to this section of the survey. Fewer parents expressed high levels of satisfaction compared with other sections of the survey, i.e., 11 parents were extremely satisfied and 9 parents were very satisfied. Prior to this project, parents were usually though not routinely asked to give reasonable notice if they were unable to attend.

Overall satisfaction

Results indicated most mothers (23) were extremely satisfied with the service they received. Eight mothers were very satisfied and 2 expressed satisfaction. No parents expressed any level of dissatisfaction.

Open–ended statements

Twenty- five mothers completed this section of the survey. Analysis of qualitative responses supported the current approach being used with regard to listening to parent opinion, as 9 parents wrote they liked that the therapist "listened to my input". Parents also wrote they liked the "positive approach", that their "skills had improved" and that their child "had fun while learning". The qualitative comments also supported the need for parent–teacher consultation. For example, mothers indicated they would like the SP to develop "more integration with schools", and to provide a "brief report to school".

Discussion

This quality assurance study investigated parent (mother) satisfaction concerning 11 aspects of service delivery, with the intention of using the results to enhance the speech-language therapy service provided. Results indicated the majority of mothers gave an overall satisfaction rating of extremely satisfied. No mothers expressed dissatisfaction. While this is a pleasing result, useful information can be gained by examining the 11 result areas individually to tease out areas of weakness, as well as noting which procedures were appreciated.

Most mothers expressed high levels of satisfaction with the initial phone contact. Perhaps the length of time spent during the initial contact and the amount of information shared helps build rapport and trust. From the clinician's perspective, this in turn reduces non-attendance.

The assessment process is one such area where changes can be made based on parent responses. The assessment process used by the author includes many of the family-friendly features described by Watts Pappas and McLeod (2008), such as explaining jargon, explaining the therapy process, asking whether it is okay to speak about the child in front of the child, asking whether parents agree with the findings, giving feedback immediately after testing, and giving a prognosis. Survey results validate the assessment process used, as most respondents (32/33) indicated they were satisfied (3), very satisfied (10) or extremely satisfied (19). However, results indicated that *anticipated length of time in therapy* is an area that could be discussed more openly and routinely with parents, possibly with examples from previous cases. As in a study conducted by Crais and Belardi (1999), there was also some dissatisfaction (three mothers) with regard to *agreement about test findings*, although no mother made mention of this in the open-ended section of the survey. In order to rectify this, parents could be offered a checklist to complete as a way of gathering more information to support test findings or show evidence contrary to test findings (Crais and Belardi, 1999). Crais and Belardi also suggest giving parents the chance to view assessment reports before their finalisation. This step may be adding to the assessment/reporting process to raise the status of parents in the partnership and to ensure agreement.

Parental involvement and support in planning are critical to achieving outcomes in this clinic. Parents like to feel they have been listened to and their concerns given due consideration (Watts Pappas & McLeod, 2008). Mirabito and Armstrong (2005) stress the important contribution parents make to the intervention process through collaborative relationships, especially in terms of making activities relevant and meaningful for the child, assisting in the generalisation of skills, and monitoring progress. Parental responses in the current study indicated high levels of satisfaction, with most parents stating they were more than satisfied that their knowledge and skills had increased (14 mothers very satisfied, 17 mothers extremely satisfied). Most also felt that they could transfer therapy into everyday settings (10 very satisfied, 21 extremely satisfied) and most felt involved in their child's sessions (8 very satisfied, 22 extremely satisfied). Qualitative responses from the open-ended statements also supported these quantitative results with parents writing that the therapist "assisted me to learn" and that "practical activities" were used.

Satisfaction with therapy outcomes and the child's enjoyment are key goals for any paediatric SP. Most mothers

expressed high levels of satisfaction with therapy outcomes and most indicated their child enjoyed practising activities at home. The reporting process of this practice was supported as only one parent expressed dissatisfaction. Report templates are not used. Extensive recommendations are written. Reports are provided for parents within two weeks of the initial assessment and consultation.

A fair and appropriate fee for service can be difficult to determine. As no parents expressed any dissatisfaction with the cost of therapy sessions, the current fee will continue. The cost of the initial assessment will also continue to be applied as only one mother indicating she was somewhat dissatisfied.

It is not unusual for the parent's feelings, needs and concerns to go unnoticed or be unaired especially in the initial stage of intervention, when the focus of attention is on the child (Glogowska & Campbell, 2000). For example, the results of the interviews Glogowska and Campbell conducted with parents clearly demonstrated the need for recognition of the parent perspective, and discussion and acknowledgement of their perceptions and concerns. Results of the current study supported these findings as most mothers (32) felt the speech language pathologist displayed empathy and was supportive and approachable.

Results concerning teacher consultation indicated less satisfaction than in other areas. More regular contact with teachers and child-care workers either by phone, visit, or child's speech therapy scrapbook should raise levels above satisfaction. Parents are now given a letter to pass on to the child's teacher or child-care worker, asking for preferred contact details and giving reasons for regular dialogue to occur. Eight mothers did not comment or wrote "not applicable" for teacher consultation. For these mothers, it may have been that their children did not attend day care or an educational facility. There were also two mothers who did not want formal contact between therapist and teacher, perhaps to preserve privacy or due to the minor nature of the child's difficulties.

Health rebate satisfaction was one area that showed pleasing results for speech pathologists in private practice, with most mothers (25) indicating they were satisfied or more than satisfied with their health fund rebates. In the open-ended section, only one mother indicated that she was dissatisfied with the health cover rebate.

Finally, cancellation policy data was an area in which fewer mothers were "extremely satisfied" and the four mothers who did not comment in this section may not have been aware that a policy existed due to the therapist's oversight. In order to raise satisfaction levels, some changes have been implemented. Policies are now made verbally explicit at the initial consultation, an A4 size notice is referred to which states the full fee will be applied for failure to give notice of cancellation, and written policy is given to parents as part of a welcome pack.

Conclusion

Conducting a quality assurance project in a private clinic is a difficult undertaking for a number of reasons, including a lack of guidelines regarding ethical approval procedures for private practitioners, issues with preservation of anonymity and possible perceived effects of non-participation or negative comments. The reporting of demographic information presents another ethical consideration as in this study it was collected verbally at the time the survey was given out, with a stated intention that it could be used in the study. A consent form addressing these issues would have avoided any potential breach of ethics. Also, due to the limited number of participants (mothers only) in this single practice, results cannot be generalised to other private speech pathology practices. However, it is hoped that this study demonstrates the value in carrying out quality assurance in private practice. While the process can be confronting for the service provider, the outcome can potentially lead to an enhanced service that is more than satisfying for both the consumer and the practitioner.

Acknowledgement

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Appendix. Quality assurance survey

Dear Parent,

I would value your feedback regarding the speech therapy service you and your child receive. Your responses will be anonymous unless you wish to sign this survey form. The results from this survey will be collated and used to improve the service I provide. I hope to present these results at the next national speech therapy conference, and submit for discussion in one of our speech therapy publications.

Please rate honestly how you feel about the following by ticking the appropriate column.

	Very dissatisfied	Somewhat dissatisfied	Satisfied	Very satisfied	Extremely satisfied
1. Initial phone contact (discussion of my child's problem, appointment convenience, fee schedule)					
2. Initial consultation (made to feel welcome)					
3. Therapist's interaction with my child (how at ease my child felt, therapist's responsiveness to my child)					
4. The assessment of my child (length of testing, explanations of test use)					
5. The therapist's interpretation of the assessment findings					
6. The therapist was able to answer my questions					
7. The therapist asked if I agreed with her interpretation					

	Very dissatisfied	Somewhat dissatisfied	Satisfied	Very satisfied	Extremely satisfied
8. The therapist's explanation of results was in language I understood (jargon was explained and not assumed)					
9. The cost of the initial assessment session was appropriate					
10. The report (if applicable) was promptly posted to me					
11. The report (if applicable) was comprehensive					
12. The report (if applicable) was clearly written (jargon explained)					
13. The report (if applicable) was accurate					
14. The therapist's recommendations were specific and practical					
15. Therapy goals were planned with my input (the therapist asked about my main concerns and goals)					
16. I was involved in my child's sessions					
17. The therapist explained what activities were to be done, why and how					
18. The resources used in the therapy session were appropriate (fun, maintained my child's attention)					
19. Homework was explained to me					
20. Homework was the right amount					
21. My child enjoyed the homework (fun, motivating)					
22. My child progressed with therapy					
23. The anticipated length of time needed for therapy was discussed with me					
24. My child's teacher was informed of assessment results and how to help (report or phone or scrapbook or via me)					
25. The cost of the therapy session was appropriate					
26. The therapist was competent					
27. The therapist behaved in a professional manner					
28. The therapist's interpersonal skills were appropriate (supportive, approachable, displayed empathy)					
29. The therapist helped me transfer my child's therapy into everyday contexts (made suggestions)					
30. I feel my skills and knowledge have increased					
31. The therapist's cancellation policy is displayed					
32. The cancellation policy was discussed					
33. I agree with the cancellation policy					
34. The therapist's qualifications are displayed					
35. The therapist's therapy resources are adequately maintained (clean, in working order)					
36. My satisfaction with therapy outcomes					
37. My satisfaction with health rebates					

What I expected of speech therapy

Any barriers to my child's progress (therapist? family? other?)

What I like/d about my experience of speech therapy

What I don't /didn't like

I would like to see improvements in

Any other comments, questions, issues

Overall satisfaction rating					

Clinical insights

Implementing effective stuttering therapy within a school setting

Malathi Ferdinando and Luana Stone

Malathi Ferdinando (top) and Luana Stone

Speech pathology service delivery at the Catholic Education Office Melbourne (CEOM) incorporates an agent training philosophy, involving the explicit training of parents (or an alternative agent) to complete follow-up practice tasks. Agent training occurs in a number of different ways across all areas of speech therapy. In the area of stuttering, the Lidcombe and Intensive Fluency Programs were considered to be agent training programs. This article examines service delivery at the CEOM for students who stutter and provides a discussion of the challenges faced with implementing time-intensive stuttering therapy in a busy school-aged model.

Philosophy of service delivery at CEOM

The speech pathology service at the Catholic Education Office Melbourne (CEOM) was developed in 1995 with an agent training philosophy. Its aim was to provide an evidenced based best-practice speech pathology service resulting in positive student outcomes and a time- and cost-efficient service. The philosophy was to involve parents (or an appropriate agent) to work with children to complete the practice required between treatment sessions as described in Roberts, Ferdinando, and McCusker (2000). Speech language pathology intervention provided with family involvement has been found to be as effective, if not more effective than intervention provided with no family input. For example, Eiserman, Weber, and McCoun (1992) investigated the outcomes of children with speech disorders using a home parent training program and a clinic-based, low parent involvement program. In all areas of speech and language functioning, the home parent group performed at least as well as the clinic-based group one year post intervention. In another study, Dodd and Barker (1990) indicated that in the area of communication skills, significant improvement was evident when students were trained in their own communication environments compared to training in a clinical setting.

As part of implementing this service delivery, it was important that support be provided to parents regarding how to create a good learning environment for the child and how to implement and better understand the activities in the program (Tetreault, Parrot, & Trahan, 2003). These features were incorporated into the CEOM agent training process, where therapy sessions might include individual therapy sessions or group training courses along with home and school based programs. All forms of service delivery however, had the underlying philosophy of agent training.
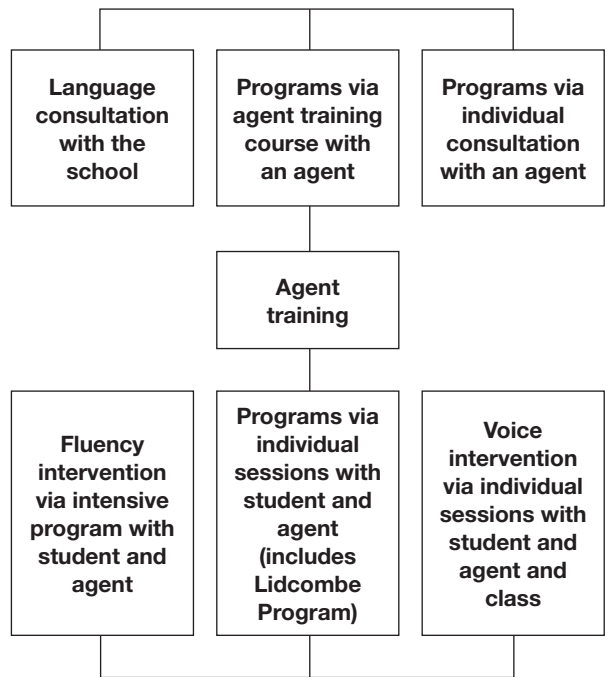

Figure 1. Agent training service delivery model

In the area of fluency, the Intensive Fluency Program and the Lidcombe Program are both considered to be agent training programs. Parents are trained to do home practice (or activities) with their child and progress is reviewed by the speech pathologist at regular intervals.

The first fluency support program which the CEOM implemented was the Intensive Fluency Program. The implementation of this program and the outcomes achieved are described below. In more recent years the Lidcombe Program has been incorporated into CEOM's service delivery. The process through which this was implemented and the outcomes achieved are described in the subsequent sections of the article.

The Intensive Fluency Programs
Implementation

In 1996, following consultation with Dr Susan Block at La Trobe University and a consideration of the research available in the area of fluency, the decision was made to run an Intensive Fluency Program for secondary school students who had moderate to severe stuttering. The activities in the sessions were based on the intensive programs being run at La Trobe University (Block, Onslow, Packman, Gray, & Dacakis, 2005; Block, Onslow, Packman, & Dacakis 2006). The Intensive Fluency Program was conducted over a week. This included an instatement phase which was the explicit teaching of smooth speech strategies such as gentle onsets and linking. Once students had mastered the technique, transfer tasks in real-life situations were implemented in the program. Parents were present throughout each day of the program and were trained to identify dysfluencies and provide appropriate feedback. At the end of each day, home practice tasks were required to be completed. Follow-up maintenance sessions were then provided at each participant's school to aid generalisation of skills. Parents were expected to attend all sessions. The close involvement of parents within the program and with the home practice tasks supported the CEOM agent training service delivery philosophy.

Initially at CEOM, Intensive Fluency Programs were only run for secondary school-aged students. Over the years the programs were extended to include primary school-aged students. These programs were run during the school holidays. This ensured minimal impact on existing high caseloads of speech pathologists during the peak periods of the school term. This timing also avoided the issue of students missing five days of school.

Ongoing data six months post fluency intensive programs was available for 32 students. These results revealed a positive gain in students' stuttering outcomes, with an average reduction of 7.8% syllables stuttered in secondary students and of 4.9% syllables stuttered in primary students. The average number of speech pathology hours required for the intensive program and maintenance sessions was 29 hours.

Table 1. Summary of Intensive Program speech data (%SS)		
	Secondary students	Primary students
Number of students commencing program	17	15
Mean pre treatment	10.91%	8.88%
Mean post intensive	1.49%	3.89%
Mean gain post intensive	7.87%	4.99%
Mean number of SP hours	29	29
Mean age	14	9.5

Challenges

The Intensive Fluency Programs conducted by the CEOM speech pathologists indicated poorer outcomes for primary school-aged students compared to secondary school-aged students. This may not have been due to the age of the students involved in the treatment but rather to the selection process. In many instances primary school-aged children were referred for Intensive Fluency Programs when everything else seemed to have failed. In comparison, secondary school-aged students who undertook the Intensive Fluency Programs tended to be recommended for these as a next logical step in fluency support after initial assessment.

Qualitative data regarding the factors that appeared to influence outcomes for the primary school-aged population was collected from the clinicians involved in the Intensive Fluency Program. These factors included: internal locus of control (the desire in the individual to achieve change), strong parental support and the presence of ongoing social or emotional factors such as trauma experienced as a refugee or family break up.

The Lidcombe Program
Implementation

In more recent years, given the growing body of evidence of the effectiveness of the Lidcombe Program of Early Stuttering Intervention with school-aged children (Lincoln, Onslow, Lewis, &Wilson, 1996), it was felt that this program needed to be incorporated into the CEOM service delivery model. During the Lidcombe Program, at stage 1, weekly sessions with the parent and child occur where the focus is on training the parent to implement verbal contingencies and accurately provide severity ratings. These verbal contingencies and severity ratings are implemented daily within the home environment. Once consistent low levels of stuttering are achieved, students move onto stage 2 which no longer requires weekly sessions and the focus is the maintenance of fluency. The modelling of activities for parents and the monitoring of implementation of activities in the sessions were seen to be effective forms of agent training that integrated well with the agent training philosophy of the CEOM speech pathology service.

As part of the implementation, the Lidcombe Program Training Consortium was contacted. Dr Elisabeth Harrison and Ms Stacey Sheedy came to Melbourne and worked with the 20 speech pathologists at the CEOM over three days. This resulted in 2 full days of training in the Lidcombe Program of Early Intervention, half a day training in Management of Stuttering in School-age Children and half a day to discuss ways of incorporating this model into existing CEOM service delivery with the challenges of high caseloads.

Of the 80 students who were offered the Lidcombe Program only 22 (27.5%) commenced the program. There were a number of reasons for this and these are summarised in table 2.

Table 2. Involvement in the Lidcombe Program	
Students commencing the Lidcombe Program	27.5% (n =22)
Students not commencing the Lidcombe Program	72.5% (n =68)
Reasons for not commencing the Lidcombe Program:	
Still deciding	22.4%
Good progress, thus not necessary	17.2%
Commitment	13.8%
Student compliance	3.4%
Other treatment priorities	6.9%
Older student	22.4%
No agent	8.6%
Receiving private speech pathology treatment	1.7%
Other: Parent choice	1.7%
Private speech pathologist recommendation	1.7%

Students who participated in the Lidcombe Program tended to make positive gains, with an average reduction of 4.4% syllables stuttered. These results were consistent with the range of improvement reported by Lincoln, Onslow, Lewis, and Wilson (1996). Koushik, Shenker and Onslow (2009) in a school-aged study with the Lidcombe Program, however, achieved more positive outcomes reporting a mean reduction of 7.3% syllables stuttered.

At CEOM, the number of weekly sessions required in stage 1 showed considerable variation, sometimes resulting in more than 20 weeks of weekly treatment. The average amount of speech pathology hours required to date is 10.4; however, as many of these students are still on existing caseloads, it is anticipated that this number will rise considerably. Lincoln et al. (1996) reported a range of 4–39 sessions for the Lidcombe Program with the school-aged population. While this was consistent with the CEOM implementation of the Lidcombe Program, Koushik et al. achieved better results in fewer sessions with a range of 6 to 10 clinic visits.

Table 3. Summary of Lidcombe Program speech data (%SS)	
Number of students commencing program	22
Mean pre treatment	6.2%
Mean post treatment	1.8%
Mean gain post treatment	4.4%
Mean number of SP hours	10.4
Mean age	9

Given the increased time required for a student receiving the Lidcombe Program compared to other students on the speech pathology caseload, it was necessary to ensure that the students offered the Lidcombe Program were those where both parent and child were prepared to commit to both regular attendance at sessions and daily home practice. A contract was created that both parent and child were asked to sign. The contract stated that both parent and child agreed to attend sessions, complete daily rating scales, do daily home practice and bring rating scales to weekly sessions. The contract also stated that if these requirements were not met, the Lidcombe Program may cease and alternative supports for stuttering management may be provided.

Challenges

A variety of strategies were implemented to enable the trial of the Lidcombe Program at CEOM. Fitting regular, weekly one-hour sessions into very high caseloads was a challenge and continues to be so. One strategy involved one speech pathologist conducting the Lidcombe Program while other speech pathologists assumed some of her new referral caseload to free her to implement the Lidcombe stage 1 sessions. Another strategy involved asking parents to travel with their child to a centrally located school so several Lidcombe sessions could be run back to back rather than having the speech pathologist travelling to each school. It was not possible to have numerous students at stage 1 on an existing high caseload so in some instances students who were stuttering were provided with preliminary strategies and placed on a waiting list until students currently

on the caseload in stage 1 moved to less time-intensive stage 2.

Research regarding alternative delivery of the Lidcombe Program has been reported (Lewis, Onslow, Packman, Jones, & Simpson, 2008) with further research into group delivery and telehealth delivery currently under investigation. The results of these investigations are of interest and will be considered in planning for future service provision. The results of Koushik et al. study which resulted in more positive outcomes in a shorter period of time is also of interest and further studies replicating these results will be of value.

Outcomes

The preliminary results reveal that both the Lidcombe Program and the Intensive Fluency Programs are time intensive for speech pathologists. The parent and child contract was found to be a very useful step in the process of establishing the Lidcombe Program as it enabled identification of the families who are most likely to participate fully in the Lidcombe Program. It also ensured parents were made aware of their role in the program prior to it commencing. With Intensive Fluency Programs it is necessary to ensure that careful consideration is paid to the suitability of candidates for inclusion in the program. Factors to consider in this process would be locus of control in the individual, strong parental support, and consideration of any significant social or emotional factors that may impact on focus on therapy. It may also be useful to implement a contract with students and parents doing Intensive Fluency Programs.

In a busy school based setting there continue to be many challenges in implementing support and treatment for stuttering. However, time factors are obviously not the best indicator of success nor should they be a primary factor when determining service provision. It is important to ensure that gains (in this case reduced stuttering) are being made by students and that evidenced based best practice is undertaken. Realistically, however, in a funded clinical setting, time factors and high caseloads are often logistic considerations.

Conclusion

It was reassuring to note that good progress with fluency was evident with both the Lidcombe Program (for primary students) and the Intensive Fluency Programs (for secondary students). Each program targeted a different age population and was successful in reducing stuttering with the target group. The results indicated that each program was an effective form of intervention. If it were possible to implement either of these programs with improved results or shorter time frames, it would be of interest.

The data collected thus far have been useful in the preliminary establishment of a management plan for stuttering treatment to students at CEOM. Ongoing collection and evaluation of data will occur. Emerging research in this area will also continue to be monitored. The CEOM management plan asa result will be a dynamic document which will be modified as more data and research became available.

Acknowledgment

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Speech language hearing services in Japan

Jun Katsuki-Nakamura and Junichi Fukaura

Demographics

The population of Japan has been in decline since its peak in 2004. As of 1 November 2009, the total population of Japan is estimated to be 127.5 million people (approximately 6 times that of Australia) living in an area of 370,000 km² (less than 5% of Australia). The nation is rapidly ageing having both the longest average life expectancy in the world (79.29 years for men, ranked 4th place in the world; 86.05 for women, ranked 1st place) and a low birthrate (1.37) (Honkawa, 2010a, 2010b). Children under the age of 14 account for only 13.3% of the population, while senior citizens who are 65 years and older, 22.8%. Almost 11% of the population is over 75 years old (Ministry of Internal Affairs, 2010).

Religion

Most Japanese people do not identify themselves with any particular religion, but they follow the family religion for worshipping ancestors. They also participate in a variety of annual events and festivals which have a religious origin. An average home has both Shinto and Buddhist altars. Influences of Confucianism, Taoism, and Christianity can be also found in Japanese culture (The Kodansha Encyclopedia, 1999, pp. 476–499).

Language

Japanese is used as the official language and taught in schools as the "national language". Only 1.3% (1.72 million) of the population is non-Japanese, of which Chinese and

Korean persons constitute 55%, followed by those from Brazil (14%) and the Philippines (9.5%) (Ministry of Justice, 2010). English is taught as the first foreign language in public high schools from 7th grade (age 12). Recently primary schools have begun introducing English to their pupils in the name of "international cultural experience".

Education

The Japanese school year (as well as the fiscal year) runs from April to March. Compulsory education for persons of Japanese nationality is provided for 9 years from 6 to 15 years of age. This consists of 6 years of primary school and 3 years of junior high school. Almost 98% of 15-year-olds enter senior high school and 50% of high school graduates go on to college (Ministry of Education, Culture, Sports, Science and Technology (MEXT)), 2008) .

For students with disabilities, what is termed "special needs education" is offered. This provision was first implemented in 2007 throughout the country. Depending on the nature and severity of their disabilities, these students receive their education in resource rooms or special classes in regular schools, or in schools named "schools for special needs education". Unlike the previous special schools that each specialised in one kind of disability, schools for special needs education can accept students with any of several types of disability and so can meet the needs of children with multiple disabilities. Children with developmental disabilities without obvious intellectual impairment (learning disabilities including developmental dyslexia and dysgraphia, ADHD, etc.) used to be excluded from the previous special education system, but an increasing number of them are now receiving support under the special needs education system (MEXT, n.d.).

Health policies

The major causes of death are lifestyle-related diseases including cancer, heart disease and stroke. There is a low infant mortality rate and long average life expectancy, despite the relatively small number of medical staff (per 1,000 persons): 2.24 doctors, 0.78 dentists, 2.10 pharmacists, 10.37 nurses (Ministry of Health, Labour and Welfare, 2008a, 2008b), 0.65 physical therapists (PTs) (Japanese Physical Therapists Association (JPTA), 2010a), 0.37 occupational therapists (OTs) (Japanese Association of Occupational Therapists (JAOT), 2010) and 0.14 speech-language-hearing therapists (SLHTs) (Japanese Association of Speech-Language-Hearing Therapists (JAS), personal communication, 2010). The nation-wide shortage of medical staff and their uneven distribution have gained much attention recently. Some medical schools increased enrolment or have given preference to local residents to replenish the future supply of doctors.

Since 1961, all residents of Japanese nationality join either the Health Insurance Union or the National Health Insurance program. With the rapidly ageing society, medical and other social security expenditures are growing. In order to control the cost and maintain the universal health insurance program, the insurance premium paid by employers and contributions paid by individuals have both increased. The mean length of hospitalisation has been shortened by allowing hospitals with shorter average length of stay to collect higher fees. In order to maximise the outcomes of rehabilitation, intensive rehabilitation wards that start rehabilitation soon after the onset of disease or after surgery were ranked mainly by the staff size and qualifications, and received recognition accordingly in the medical service fee system in 2000. Also, "long-term care insurance" was established in 2000, in an effort to deal with the needs of the increasing number of elderly persons who need assistance in daily living after their acute and sub-acute medical conditions are treated. Health policy-makers also focus on the prevention of diseases, dementia, and other age-related problems to keep the population as healthy and active as possible.

History of the speech therapy profession

The history of speech therapy in Japan can be traced back more than 50 years. In 1958, the National Training Center for the Deaf, which later became the National Center for Speech and Hearing Disorders, was established to treat people with problems in hearing, voice, speech and language. In 1971, the first educational program for speech and hearing specialists was established at the National Rehabilitation Center for Persons with Disabilities near Tokyo, where 20 students per year with college degrees received a one-year intensive training.

Although the need for a national licence for speech therapists to work in medical settings was recognised quite early, it was not until the end of 1997 that the licence law was finally passed. This was 32 years behind the law for physical therapists and occupational therapists. The first national examination was given in 1999 and recognised 4,003 "speech-language-hearing therapists", or *gengochoukakushi*, which is the Japanese name for these licensed professionals. The licence bears the signature of the Minister of Health, Labour and Welfare.

In January 2000, the Japanese Association of Speech-Language-Hearing Therapists , a national professional and scientific association, was established. It has just celebrated its 10th anniversary and currently has 9,086 members. As of March 2010, there are 17,315 SLHTs. The gender ratio is 19% male and 81% female, the percentage of females being much higher than for PTs and OTs. There are 64 accredited

SLHT educational programs which are offered at tertiary level institutions across the country, including 17 four-year colleges and 10 graduate schools. Of JAS members, 30.5 % hold diploma or associate degrees, 60.1 % bachelors, 8.1% masters, and 1.4% doctoral degrees. The curriculum to be completed before taking the national examination includes linguistic and phonetic sciences, cognitive behavioural sciences, medical sciences, clinical medicine, social welfare and education, speech pathology and audiology (diagnostics, intervention, clinical practicum). For more detailed information about the curriculum, please refer to the JAS website at http://www.jaslht.or.jp/enlglish/e_education.html

Current size and scope of practice

According to the member statistics of JAS as of March 2009, 74% of the members work in medical settings, 9% in welfare, and 8% in nursing homes and facilities for the elderly. Within a hospital, SLHTs usually work in departments related to the rehabilitation of neurogenic disabilities. Only 2% of JAS members work in schools, probably because the teacher's licence, which is required to work in schools, is obtained through a separate training system under the Ministry of Education, Culture, Sports, Science and Technology. Other members work for companies such as manufacturers/dispensers of hearing aids, research institutes, or educational programs for SLHTs.

Although our SLHT licence allows us to work with both adults and children, the nature of the workplace greatly influences the types of clients each SLHT sees in practice; some JAS members work with all ages and virtually all types of disorders, but others work with subgroups of clients. In terms of clinical areas, most JAS members work with adult language and cognition (74%), closely followed by feeding/swallowing (73%) and speech and voice (65%). Relatively fewer JAS members work with child language and cognition (29%) and fewer still with hearing (14%). Paediatric speech and language services are largely for preschool children, and school-aged children are, regrettably, underserved. Also, since there are relatively few SLHTs in facilities for the elderly who are receiving services based on long-term care insurance, there are more needs related to ageing such as dementia, dysphasia, and presbycusis, than are currently being met.

Recent achievements of JAS

JAS was established in 2000 as a voluntary organisation but one of its mid-term goals was incorporation. On 13 September 2009, JAS held an extraordinary general meeting to become incorporated, which is a necessary step towards the establishment of a public-service corporation in the future. Incorporation of the association is a prerequisite to catch up with other related professional organisations with longer histories and larger memberships (for example, the Japanese Physical Therapy Association established in 1966 has 59,586 members (JPTA, 2010b)) so as to receive greater social recognition and to conduct more effective promotion of activities that benefit not only persons with disabilities but the general public as well.

Since its establishment, JAS has endeavoured to have our service fees raised in medical settings and to establish a staffing requirement for SLHTs to be included in rehabilitation facilities. SLHTs fees under the medical insurance system are now comparable to those for PTs and OTs. Rehabilitation facilities are ranked by the number of professional staff including SLHTs because the Ministry of Health, Labour and Welfare considers the number of professional staff to be an indication of the quality of service. For example, as of April 2010, hospitals and clinics which have at least one full-time doctor and more than three full-time SLHTs can charge 2,450 yen per 1 unit of therapy (20 minutes) whereas facilities with more than one full-time doctor and one full-time SLHT can charge only 1,000 yen per unit. Under the long-term care insurance system, SLHTs are also recognised for their services in day programs and home-visit rehabilitation.

JAS also puts a lot of energy into activities for professional development of its members. It holds an annual congress (11th Japanese Congress of Speech-Language-Hearing, a two-day conference, in June 2010 was held in Saitama Prefecture), and offers seminars for the basic and specialised stages of continuing education programs. Seminar topics to be covered in the next year or so include developmental disorders, dementia, and home-visit rehabilitation. There are also advanced programs run by JAS leading to the specialty recognition in two areas: dysphagia and aphasia/higher cognitive disorders. Advanced programs in other areas such as speech and language delay, voice and speech disorders, hearing disorders, will be added in the near future. JAS also publishes a professional journal, *Japanese Journal of Speech, Language, and Hearing Research* (in Japanese with English abstracts) three times a year.

Challenges and needs of the profession

Our scope of practice is expanding to non-medical settings. New opportunities for SLHTs have been developing in areas such as follow-up evaluation and intervention after (almost universal) newborn hearing screening, early detection and intervention of developmental disorders with and without intellectual impairment, evaluation and intervention in special needs education, early detection and prevention of dementia. To meet the changing needs of Japanese society,

ACQuiring knowledge in speech, language and hearing

we need to increase the qualified SLHT workforce as well as to improve public awareness of our roles. To commemorate the day when our licence law was enacted, we designated 1 September as "Speech and Hearing Day" to promote public awareness and understanding of SLHTs and better speech, language, hearing, and swallowing.

In 2012, there will be a comprehensive review of both medical and long-term care service fees, which will then set the financial foundation for the next few decades. We need to demonstrate with evidence that our services do make a difference in order to win favourable results and keep moving forward. Therefore, the next couple of years are critical for the future of our profession in Japan and for the future of our young members in their 20s and 30s, who constitute almost 80% of our association.

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Our top 10 resources for creating communicatively accessible healthcare settings

Kathryn McKinley, Shauna Poole, and Melanie White

Speech Pathology Department, Austin Health

Austin Health is a large tertiary health network in Melbourne's north-eastern region. There are three campuses – Austin Hospital (acute), Heidelberg Repatriation Hospital (subacute), and Royal Talbot Rehabilitation Centre. There are two speech pathology departments with 27 speech pathologists (full-time and part-time) and two allied health assistants. All three clinicians have a keen interest in making the hospital environment communicatively accessible.

1. Inpatient functional communication interview

By O'Halloran, R., Worrall, L., Toffolo, D., Code, C., & Hickson, L. (2004). *IFCI: Inpatient functional communication interview*. UK: Speechmark Publishing Ltd. Available from www.thebrainary.com/shop for $164.95.

The inpatient functional communication interview assesses how a patient is coping with the communication demands of being in hospital. Particular strategies that facilitate communication for a patient can be identified and passed on to other staff members working with the patient. It is useful for patients with and without specific communication impairment.

2. The communication access toolkit

By Parr, S., Wimborne, N., Hewitt, A., & Pound, C. (2008). *The communication access toolkit*. London: Connect – the communication disability network. Available from www.ukconnect.org for £500 (approx. A$900), includes toolkit and 2-day training course.

The Communication Access Toolkit is a new resource designed by Connect in the UK. We use the toolkit training, including the Powerpoint presentations, videos and resource material regularly when providing training and in-servicing to colleagues and students. The resource is up to date and has the potential to be used in health, community, and disability settings. The toolkit is sold as part of a 2-day training course, run by trainers at Connect, titled 'Making Communication Access a reality'.

3. Picture-based resources

The Boardmaker Australia Version 6 for Windows is available from www.spectronicsinoz.com for $599, including GST and postage.

Picture This is available from www.spectronicsoz.com for $132, including GST and postage.

The Aphasia Institute (2004), Pictographic Communication Resources Binder is available from the Aphasia Institute for US$295 (approx. A$330). For ordering details, see www.aphasia.ca or email aphasia@aphasia.ca.

Additionally, free images that can be downloaded and used can be found at: www.sclera.be

We use lots of different picture-based resources when making communication aids and developing accessible written information for our patients. We use programs such as Boardmaker and Picture This, picture-based resources from the Aphasia Institute and there are a few websites where you can download and use pictures for free. We also have a digital camera and a scanner which are used regularly.

4. ICU Communicator

Available from Austin Health Speech Pathology Department, phone: (03) 9496 5549, for $120.00 plus postage.

The ICU Communicator is a double-sided perspex communication board designed to meet the needs of most ICU patients. It includes Board maker pictures for basic needs/orientation, alphabet for pointing, blank space for whiteboard writing, and a pain scale and body diagram. It is durable, able to be cleaned to hospital standards and self-explanatory.

5. Augmentative communication strategies for adults with acute or chronic medical conditions

By Beukelman, D., Garret, K. & Yorkston, K. (2007). *Augmentative communication strategies for adults with acute or chronic medical conditions*. Baltimore, MD: Paul H. Brookes Publishing Co.;available from www.borders.com.au for $100.95 including postage.
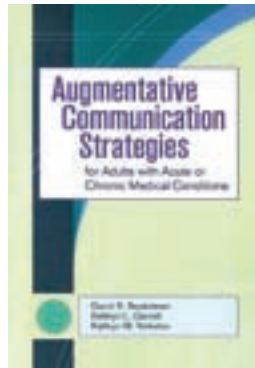
This text, including CD-ROM, provides AAC strategies for adults with a range of conditions, such as brainstem impairment, spinal cord injury, traumatic brain injury, multiple sclerosis, Parkinson's disease, severe aphasia, Huntington's disease, dementia, amyotrophic lateral sclerosis, and head and neck cancer. It includes assessment and intervention tools.

6. Cue cards in community languages

Transcultural Services at Eastern Health developed these pages of images with words in English and 62 other languages. They can be handy when an interpreter is not available. We have them printed out in the most commonly needed languages. They are free to download in 4x5 cell format or a larger version with 2x2 cells at www.easternhealth.org.au

7. Communication Resource Centre

See: http://www.scopevic.org.au/index.php/site/resources#Communication

SCOPES' Communication Resource Centre has a number of online resources that we regularly use and refer to in our practice. The 'Easy English writing style guide' is available online as well as 'Images for Easy English' and there are also a number of fact sheets about communication access, AAC, and communicating with people with communication difficulties.

8. Assistive listening devices

The Bellman Audio Maxi is available from Word of Mouth Technology www.wom.com.au for $279.

We have a good supply of devices, which are invaluable for loaning to patients when their hearing aids are unavailable/

not working – or if the patient is very hearing impaired and has never acquired hearing aids. The latest model is the Bellman Audio Maxi (digital communication aid). This model has a built-in microphone and headphones. We have tried the earbuds and stethoclip but found the best sound quality is with the headphones.

9. Hearing aid maintenance kit

Our allied health assistant has assembled this kit which is handy for emergencies. It contains spare batteries, cleaning brushes, lubricating gel for when a poor seal results in constant feedback, and an airball for drying out a wet earmould.

10. Interpreters

We are lucky to have interpreters employed by the hospital who speak several of the most commonly spoken languages of our patients. Interpreters for less commonly spoken languages are outsourced to agencies. We try to book as many interpreters as possible for patients at ward rounds and for multidisciplinary assessments, as well as for individual assessment and therapy sessions.

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Around the journals

Hospital experience for older parents of people who cannot speak

Hemsley, B., Balandin, S., & Togher, L. (2007). Narrative analysis of the hospital experience for older parents of people who cannot speak. *Journal of Aging Studies*, 21, 239–254.

Nerina Scarinci

Caring for a child with cerebral palsy and complex communication needs (CCN) is a lifelong commitment for parents, and when there is a need for hospitalisation their role as carer extends to this environment. Although there is a plethora of research available on the experiences of parents of children with developmental disability in hospital, there is little information regarding the needs and experiences of older parents who care for their adult dependants in hospital. This study fills a gap in the literature by investigating the experiences of older parents in supporting their adult child with cerebral palsy and CCN in hospital.

Eight parents aged 60 years and older participated in individual in-depth interviews about their roles in hospital and the impact of caring for their adult son or daughter on their own health and well-being. These participants provided care for their son or daughter in hospital for extended periods of time, ranging from 10 to 77 days, with an average of 30.5 days. Most participants spent the majority of the day in hospital providing care, being present either 24 hours per day or from early morning until late at night. Clearly, participants had a high level of commitment to providing care for their adult son or daughter, despite the presence of nursing staff.

Analysis of the interviews identified a common narrative in the hospital care experience and a several areas for improvement were suggested by participants so that the hospital experience could be better for all involved. Participants discussed a number of areas relating to their hospital experiences including: their history in providing care for their child in hospital, admission procedures and their imperative to care, the communication difficulties faced by their dependent child in hospital, the negotiated process of care when working with hospital staff, being an advocate for their child in hospital, and the challenges of transition from hospital back into the community.

Of significance to speech pathologists are the reported communication difficulties of the adult with CCN during the hospital stay. Parents noted that as their adult children did not have any functional speech, when they were not present to assist with communication, their sons and daughters were not able to communicate with hospital staff. Participants also perceived that the hospital staff did not have enough knowledge or experience in working with adults with disability, and staff were unwilling or unable to take instruction directly from the adult with cerebral palsy. Despite assurances for the parent carers that their adult child was able to understand speech, staff appeared to prefer interacting with the carers rather than attempting to communicate with the adult patient who could not speak.

Overall, the article highlights the potential role of speech pathologists in facilitating communication for people with CCN in hospital. Future research is indicated to explore the potential for hospital staff education in the area of CNN and AAC systems, and in the development of policies and procedures for people with disability in the hospital, including aspects such as pre-admission planning, involvement of paid disability support staff, availability of adapted equipment, and improved discharge planning.

Leading by example: Communication access at Connect, UK

Parr, S., Pound, C., & Hewitt, A. (2006). Communication access to health and social services. *Topics in Language Disorders*, *26*(3), 189–198.
Pound, C., Duchan, J., Penman, T., Hewitt, A., & Parr, S. (2007). Communication access to organisations: Inclusionary practices for people with aphasia. *Aphasiology*, *21*(1), 23–38.

Kyla Brown

Communication access is an essential ingredient for an inclusive society. This is a key message of these two articles describing initiatives for improving communication access undertaken by the voluntary sector organisation for people with aphasia, Connect – The Communication Disability Network, located in the UK (www.ukconnect.org).

In the first article, "Communication access to organisations: Inclusionary practices for people with aphasia" the authors describe how they have addressed communication access within their own service. They describe the communication support methods used to implement projects for people with aphasia in the roles of 1) recipients of services, 2) co-facilitators of services, 3) as trainers in courses for service providers, and 4) as employees within Connect. In each instance different levels and layers of communication support are detailed. A useful table is included, which gives examples of materials used to support communication access and lists some of the behind-the-scenes processes involved. The authors note that in order to provide communication access that promoted authentic involvement, they needed to spend more time and work "around the edges", for example, in preparing support materials (Pound et al., 2007, p. 35). However, they argue that the additional time and resources have provided individuals with aphasia increased confidence and opportunities to demonstrate their competence, and led to many improvements in Connect services.

The article also discusses some of the challenges Connect faced in order to improve user inclusion and access. These included: resistance to change, using time differently (through reflecting on priorities and reallocating time and resources), the need for new skills and creativity, and revising

notions of competence (both professionals' views on the competence of individuals with aphasia, and the changing views of people with aphasia with respect to their own competence). The practical suggestions and insights provided will challenge clinicians to implement changes to their own services in order to make them more accessible.

The second article, "Communication access to health and social services", describes a project in which individuals with aphasia worked together with staff at Connect to design a training program to enable service providers, particularly those in health and social services, to audit and improve communication access to their services. Individuals with aphasia were involved in all stages of developing the project, with the project team including one person with aphasia, as well as the support of an advisory panel of six people with aphasia.

The simple framework described in the article for addressing communication access could easily be adapted for any organisation wanting to improve their services. The framework describes three phases of a user involvement with a service: a beginning phase (e.g. making an appointment), a middle phase (e.g. the encounter with a service), and an end phase (e.g. a follow-up from the service, or leaving the service). At each phase, three components of communication access can be considered: documents (e.g. appointment letter, website), interactions (e.g. phone calls, interacting with a receptionist), and environments (e.g. physical arrangements in the waiting room). The authors also suggest that one of the most powerful tools for educating service providers about the importance of communication access is the use of real-life stories (e.g. a video of a person with aphasia describing their experience in accessing a service). Real-life stories encourage service providers to put themselves in the role of service user, and to reflect on the impact of not being able to access a service because of a communication disability.

Underlying both of these articles is a strong thread of user involvement that demonstrates Connect's commitment to an inclusive organisational culture and values. The authors describe how the social model of disability has influenced their approach to communication access. A basic tenet of the social model is that "lack of participation and involvement of people with disabilities is often more a function of the barriers in society than it is a result of inabilities on the part of people with impairments...if people with impairments were given equal access, they would not be disabled" (Parr, Pound, & Hewitt, 2006, p. 190). Parallels are drawn between physical and communicative access, with the authors arguing that just as a ramp can provide access for people with motor impairments, communication access can provide individuals with communication difficulties the ability to access and engage with organisations and services. The authors also make the point that communication access means much more than just making a few documents accessible. They suggest that in order to make authentic rather than tokenistic improvements to communication access, an explicit focus on organisational values and sustainable whole systems changes are needed.

While this may make communication access sound like an impossible hurdle to jump within our already

time- and resource-stretched services, one of the strengths of these articles is the concrete examples they provide on how communication access can be broken down into manageable chunks. The second article in particular provides a structured approach to enable service providers to reflect upon their service, evaluate, and make changes to communication access.

For individuals with aphasia and other communication disabilities, the importance of communication access cannot be underestimated. Alan Hewitt (staff member with aphasia at Connect, and co-author of these two articles) describes its significance succinctly: "If it's not clear I can't take part. Nor can lots of others who have aphasia. Communication access is the way in to real involvement ... not just involvement around the edges" (Pound et al., 2007, p. 33). Speech pathologists who read these two articles will find it difficult to resist the inspiration to take a second look at how communicatively accessible their own services are, to initiate processes to make changes (however small), and to begin spreading the word on communication access to others. Well worth a read!

Access for persons with neurogenic communication disorders

Threats, T. (2007). Access for persons with neurogenic communication disorders: Influences of personal and environmental factors of the ICF. *Aphasiology*, *21*(1), 67–80.

Brooke Grohn

This article provides the reader with an insight into the meaning of access for people with neurogenic communication disorders in relation to the Environmental and Personal Factors of the World Health Organization's International Classification of Functioning Disability and Health (ICF; WHO, 2001). It also highlights the complexities associated with the issues of access both within the clinical and research fields.

The author begins the article by providing definitions of access and the Environmental and Personal Factors of the ICF. This is followed by a comprehensive discussion of the issues related to research surrounding environmental factors and access. Key points highlighted by the author are that research has tended to focus on the barriers to access rather than the facilitators and that there are few tools available to reliably measure environmental factors. Despite this, the author describes the rehabilitation framework The Life Participation Approach to Aphasia (LPAA) and the work by Connect – The Communication Disability Network as examples of where some progress has been made. The author also challenges the profession by considering whether clinicians are potential barriers and/or facilitators to access and suggests that clinicians need to reflect on their role in promoting access for people with communication disorders.

The role of personal factors in supporting a client's access is also explored. For example, the author describes the role of the speech pathologist in promoting the client's self-advocacy and highlights a number of key personal factors such as personality traits and past experiences that should be considered when facilitating access. A variety of scenarios are provided to highlight the intricacy of such considerations. For instance, one example illustrates the potential adjustments that could be made to intervention as a result of considering an individual's copying style and response to communication disability.

Working with clients to improve their access through addressing environmental and personal factors may seem daunting. This article, however, is a good point to begin such reflection.

Hospital access for families of injured children: A multi-ethnic perspective

Arlidge, B., Abel, S., Asiasiga, L., Milne, S.L., Crengle, S. & Ameratunga, S.N. (2009). Experiences of whanau/families when injured children are admitted to hospital: A multi-ethnic qualitative study from Aotearoa/New Zealand. *Ethnicity & Health*, *14*(2), 169–183.

Clare McCann

This highly relevant and informative qualitative study forms part of a larger multi-ethnic investigation of the perceptions of injured children, their families and healthcare providers, in order to understand the impact of injury and the barriers and facilitators to recovery following injury. This paper focuses on the experiences of families when a child is admitted to a hospital following an unintentional injury.

The authors are well regarded for their research into health inequalities for Maori and Pacific peoples so it is no surprise that they begin this article by outlining the relative overrepresentation of these minority groups in the healthcare systems as a consequence of colonisation and lower socioeconomic status. They go on to challenge the conventional methodology of research *on* Maori and Pacific peoples rather than *for* and *by* Maori and Pacific peoples. One is reminded of the concept of "user involvement" now being promoted in the aphasia literature and so eloquently presented by Carole Pound at the Speech Pathology Australia conference in Melbourne in May 2010. After discussing their findings, the authors conclude with their recommendations for improving health services and policy.

Twenty-three families representing Maori, Pacific and Pakeha (New Zealand European) were interviewed. Culturally appropriate practices were employed for the qualitative interviews including the option for families to be interviewed in their own language. The flexible, narrative approach to the interviews allowed families to tell the story of their child's injury and the stages of care and recovery (within hospital and at home). The data were analysed and coded into main themes. Despite many families praising the dedication of staff and expressing their satisfaction with overall care, four main themes revealed their concerns with the health services provided. The themes were 1) inadequate communication and information, 2) difficulty negotiating the hospital environment, 3) stress of conflicting demands and 4) issues relating to ethnicity and cultural miscommunication. Each of these themes was discussed in detail and supported by illustrative quotes from the participants. These findings highlight important implications for the delivery of healthcare services.

While relatively few speech pathologists work in an acute paediatric hospital setting, the culturally appropriate methodology of this study and the finding of the four themes must surely resonate for us all. In particular we are challenged to reflect on our intercultural communication with clients and their families, the appropriateness of the information (written and verbal) that we provide to them, and the support we give them in dealing with the competing demands of living with a communication impairment and coping with everyday life (work, other children, family expectations).

ACQuiring knowledge in speech, language and hearing

Speech pathology resources

Gollan, S. (2009). *Sign baby*. Sydney: SignBaby
Australia; A$29.95. Available at ABC stores or direct
from www.signbaby.com.au

Nicole Watts Pappas

Presented by popular playschool presenter Sofya Gollan, *Sign Baby* is an introductory DVD for parents who wish to teach their baby/ young child to sign. The DVD uses Auslan (Australian Sign Language) and covers 200 everyday signs suitable for use for young children. An introductory section briefly explains the benefits of using signs and shows video clips of young children signing with their parents. Some information is provided regarding how to start using signs with a baby or toddler.

The DVD runs for 126 minutes and includes 10 tutorials of approximately 3 minutes each, covering 15–18 signs. The tutorials are organised into functional groups of signs such as "playtime", "bath and bedtime", and "food and drink". The first tutorial, "baby's first signs" is an excellent starting point and includes the signs "drink", "milk", "more", "finished", "book", "teddy", "sleep", "no", "yes", "nappy", "poo", "wet", "where?", "hello", "goodbye", and "kiss". Later tutorials include more advanced signs and concepts such as numbers, the alphabet, and colours. An interesting tutorial entitled "manners and concepts" includes signs such as "vomit", "fart" and "burp", sure to be a favourite with young boys. The last tutorial includes seven popular nursery rhymes, as Sofya says, "just for fun".

Each sign is presented clearly twice by the presenter and is paired with the verbal and written words. My own 11-month-old son enjoyed watching the tutorials and learnt many of his signs directly from the DVD. However, it is also a clear way for parents to learn individual signs to use with their child. The DVD also includes interviews with three professionals, an early childcare teacher, a sign linguist, and an excellent interview with speech pathologist, Sarah Starr. My only criticism is that the interviews were quite lengthy (43 minutes in total) and while the information included was excellent it may have helped to include a brief summary of the key points, especially the fact that using signs does not delay the emergence of spoken language.

Clinically, this is a useful resource to recommend to parents of children with delayed speech and language skills as well as typically developing children. It would also be a wonderful resource for sharing with hearing parents of hearing impaired children who are learning to sign. The use of Australian Sign Language is an advantage of this DVD over other similar resources. First, it enables the child to converse with other sign language users in the community.

Second, if the child goes on to require special education they will not be required to learn a new set of signs. Overall, this resource represents a quick and easy way for parents to learn to use signs with their child and would be a helpful addition to the list of resources that is recommended to parents of young children with speech and language delays.

Shprintzen, R.J., & Golding-Kushner, K.J. (2008).
Velo-cardio-facial syndrome, Vol. 1. San Diego, CA:
Plural publishing. ISBN10: 1 59756 071 5 (includes media
DVD), ISBN13: 978 1 59756 071 9; pp. 289; US$89.95;
www.pluralpublishing.com

Maeve Morrison
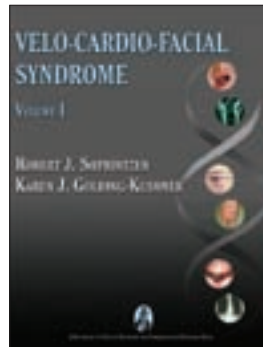
This book provides a comprehensive description of the multiple anomaly disorder, velo-cardio-facial syndrome (VCFS), also known as Deletion 22q11 syndrome. The clinical management of many of the anomalies is discussed with an emphasis on the need for transdisciplinary care. The authors have successfully blended scientific knowledge with their extensive clinical experience to give the reader an up-to-date account of this complex syndrome. The book comes with a DVD with 19 clinical video clips that are referenced throughout the text. Many of the video clips will be of particular interest to those involved in the management of speech in VCFS.

The interesting history of the syndrome is covered in the first chapter. The second and longest chapter is dedicated to a description of the anomalies associated with VCFS, including a clear explanation of the speech and language disorder which is typically complex and often difficult to treat. The third chapter covers the genetics of VCFS which serves as an introduction to the subject of genetics, using simple language, as well as discussion around genetic counselling. Chapter 4 covers the clinical management over time of individuals with VCFS and the final chapter covers growth and feeding, and includes weight and height charts.

This book is a welcome contribution to the literature. It will be of interest to clinicians working across many fields in the care of individuals with VCFS including speech pathologists, paediatricians, cardiologists, plastic surgeons, otolaryngologists and geneticists. It aims to give the reader insight from many professional perspectives so as to promote true transdisciplinary care. It is easy to read as the majority of the book is written by the two main authors so the language and structure of the content are consistent throughout. The inclusion of the DVD with video clips gives the clinician an additional learning tool.

While the book does not claim to be based solely on scientific research, there is inconsistency in the degree and range of referencing across the chapters with some

controversial topics presented without reference to the literature. In the surgical management of speech the authors advocate pharyngeal flap as the surgical procedure to address velopharyngeal dysfunction. There is no mention of pharyngoplasty which is another surgical option frequently used successfully in many cleft centres. In the section on speech disorder the authors discount the presence of verbal dyspraxia in VCFS, while more recent research confirms that dyspraxia can be part of the speech disorder. In the final section on feeding and growth the authors suggest too many children with VCFS are unnecessarily tube fed. While this might be the case for some children with VCFS, there are children with VCFS who require tube-feeding because of unsafe swallowing. There is a concern that clinicians reading this section might put children at risk if they were to avoid introducing tube-feeding or stop tube-feeding when it may be unsafe for the child to swallow food and doing so may risk aspiration. These areas of controversy will hopefully promote further research and thus encourage clinicians to provide better treatment. Another limitation was the poor quality of some of the video clips on the DVD, in particular poor sound quality.

On balance this book is an excellent text and will be read by clinicians and scientists across many disciplines, including speech pathologists. The authors have succeeded in providing a wealth of information in a concise readable format. It will also serve as a reference book with a good index and many useful figures, including photos, which may aid the clinician in the recognition and diagnosis of VCFS.

Velo-cardio-facial syndrome, Vol, 2: *Treatment of communication disorders*, by the same authors, is due for publication and will hopefully prove to be a good follow-up and another useful text in this Genetic Syndromes and Communication Disorders series.

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lingWAVES Voice Clinic Suite Pro. Germany: WEVOSYS, www.wevosys.com. Available in Australia through Multimedia Speech Pathology, 14A Miami Shore Parade, Miami, Qld 4220, phone: 0407 293579, fax: 07 5578 6373, email: mmsp@tpg.com.au, or go to www.mmsp. com.au. Available at A$4,950 plus GST. Other lingWAVES speech pathology clinic sets for voice and speech are available from $1,100 plus GST.

<div align="right">Jennifer M. Oates and Cameron Grant</div>
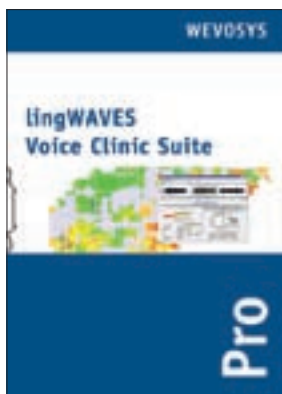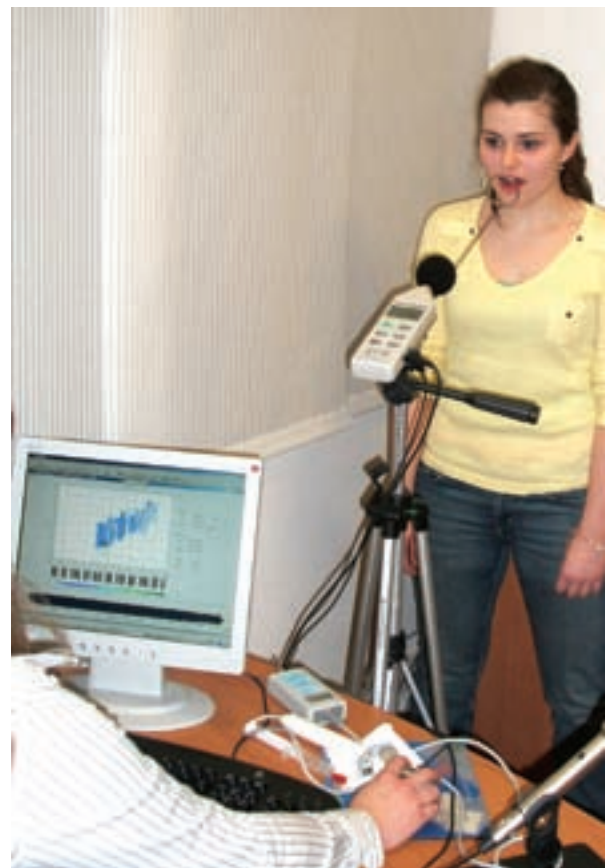

The lingWAVES Voice Clinic Suite Pro is a comprehensive digital system for speech and voice evaluation, visual biofeedback and client documentation developed in Forchheim, Germany. The overall lingWAVES system comprises different modules that can be combined and added to at any time. The lingWAVES Voice Clinic Suite Pro is a specialist suite at the high end of the lingWAVES system and comprises all of the available modules with the exception of electroglottography software and hardware.

The software included in this suite allows a wide range of speech and voice evaluation functions. Unlike many alternative programs, lingWAVES Voice Clinic Suite Pro provides the user with the software tools required to undertake all aspects of voice and speech analysis from the basic tasks of voice and speech recording, editing of the recordings, managing client data and producing client reports, through to a wide range of basic and more advanced voice and speech analyses. The software also includes a highly motivating visual biofeedback module for use in therapy with both children and adults (TheraVox). The software modules are accompanied by a high-quality sound level meter microphone and tripod. A comprehensive manual is provided, both in hard copy and via the WEVOSYS website. The key components of the manual are also available on-screen when the suite is in use. Additional user support is available via email from the product manager, Ingolf Franke, and remote support direct to the user's computer can also be obtained. For Australian users, the distributors, Multimedia Speech Pathology, provide a knowledgeable and efficient source of additional support.

The range of voice and speech analyses available within lingWAVES Voice Clinic Suite Pro is comprehensive and, as far as the reviewers are aware, not matched by any other commercial product. The following measures are available within this suite:

- standard acoustic measures such as fundamental frequency, intensity, jitter, shimmer and glottal noise energy (GNE) analyses – the latter is related to the harmonic-to-noise ratio measure familiar to Australian clinicians, although Wevosys claims that GNE is a more robust measure;
- basic spectrograms along with a more advanced formant tracking capability;
- aggregate acoustic measures of voice quality (irregularity, noise and overall severity) that have been shown to correlate well with the perceptual features of roughness, breathiness and hoarseness;

- dysphonia severity index;
- voice range profiles (Phonetograms) for both speech and singing, including the singer's formant;
- fast fourier transform, linear predictive coding, cepstrum and autocorrelation;
- motor speech disorder measures such as diadochokinetic rate (DDK) and DDK jitter as well as articulatory measures such as syllable length;
- voice disorder index, a 12-item self-report measure of the impact of the client's voice on their everyday life;
- vocal loading test, automated real-time processing of intensity and fundamental frequency for evaluation of a client's vocal ability under demanding vocal conditions.

There are many positive aspects of the lingWAVES Voice Clinic Pro suite. The highlights for the reviewers are the sound level meter microphone obviating the need to calibrate the system for intensity, the efficient client-management system that avoids the need to save to a separate database for patient records, the facility to undertake a very wide range of voice and speech analyses from basic to complex levels, the very fast analysis tools, the facility to compare voice evaluation results from separate assessments on-screen, the good graphics (particularly in the TheraVOX biofeedback module), the facility to simultaneously analyse voice range profiles and acoustic measures of voice quality, the real-time analyses, and the very good support provided by Wevosys and Multimedia Speech Pathology. Despite the many positive features of this product, there are some aspects that may frustrate the user. For clinicians without strong technology skills, some ICT assistance is likely to be required to install the software, set up the sound level meter microphone and run the myriad of analysis tools. In addition, some parts of the product manual are not sufficiently detailed or clearly expressed. Further, the sources of the normative data used within lingWAVES are not provided in the manual and references to literature associated with the voice and speech measures are similarly absent. The product manager did, however, provide references to the reviewers without hesitation.

The lingWAVES Voice Clinic Suite Pro has been developed for clinical diagnostics and intervention as well as clinical research. The present reviewers recommend it very highly for clinical work. Its potential for research is also strong, but further technical evaluation and direct comparison with similar commercial products would increase confidence in lingWAVES as a research tool.

National Research Council and Institute of Medicine. (2009). *Preventing mental, emotional, and behavioural disorders among young people: Progress and possibilities*. **Washington DC: National Academies Press. ISBN-13: 978 0 309 12674 8; pp. 562; http://www.nap.edu/catalog.php?record_id=12480**

Andrea Murray

This book is a report put together by a committee formed under the auspices of the National Research Council and Institute of Medicine in Washington DC. The committee focuses on the prevention of mental illness and substance abuse among children, young people, and young adults with particular attention given to research advances and promising interventions in this area.

A key rationale behind the report was the committee's intention to highlight the importance of mental health and ill health in young people and the need for government,

education, and health services to prioritise the prevention of mental, emotional, and behavioural disorders in young people. A strong emphasis is placed on the importance of prevention and early intervention rather than on the provision of intervention once difficulties become entrenched. While acknowledging the legitimacy of providing timely intervention, the report argues that there is currently a disproportionate emphasis on the treatment of existing mental health and substance abuse conditions and a critical need for a more proactive and preventative focus. In keeping with this view, the report contains information about the development of mental health disorders in young people and provides a cost analysis of a promotion and prevention and early intervention approach compared to the intervention model. Research around risk and protective factors is referred to and areas for further research are highlighted. The report examines a range of existing mental health promotion and prevention programs and outlines the efficacy, benefits and barriers of these programs. It also explores the use of developmental frameworks utilising a neuroscience perspective.

With worldwide trends showing an increased focus on health promotion and the early years, this book serves as a useful reference for clinicians and managers alike.

Swinburn, K., & Byng, S. (2006). *The communication disability profile*. **London: Connect Press. ISBN 978 0 9536042 6 5; £125 + postage. Available from http://www.ukconnect.org/publications_27_125.aspx**

Fiona Hinchliffe and Janet Sheehy

The Communication Disability Profile (CPD) is a unique assessment that offers a systematic, self-report approach to exploring, quantifying and understanding the impact aphasia has on a person's everyday life and identity. Developed in collaboration with people with aphasia, the CPD is a means of appraising language disability from the perspective of the person living with aphasia. As such, this tool positions the person with aphasia as central to the development of intervention priorities and goals that are relevant to their needs and sensitive to their life experiences. Developed through a multistage process of consumer consultation and trial, the CPD has emerged as a valuable adjunct to a traditional test battery limited to measuring the presence and severity of language impairment.

The CPD consists of four sections designed to explore and measure the relative impact of issues associated with aphasia: (a) facility with communication activities, (b) ability or limitations of social participation, (c) external influences (barriers and facilitators) that affect participation, and (d) the emotional impact of aphasia. The CPD uses an interview format to allow the person with aphasia to express their views and experiences with or without the use of words. Each section contains a series of questions and three of the four sections are rated using a pictorial rating scale,

whereby the person with aphasia selects the picture that is most representative of their response to the question. The available pictorial scales differ in gender, age and race to enhance the cultural sensitivity of the tool. Ratings are translated into numerical scores that are totalled and converted to percentages for the purpose of comparison across the sections. Analysis of the results allows for informed conversation and the collaborative identification of the priority areas for intervention focus and goal development.

For the purposes of this review, the CPD was trialled with people attending an outpatient aphasia rehabilitation clinic. Clinicians found the test to be easily administered and the pictorial rating scale to be an effective means of quantifying responses. The complete administration is lengthy and full administration was not always considered appropriate. This is acknowledged by the authors who advocate the use of sensitivity and clinical judgment in the timing and/ or modification of the administration. It is imperative that the administrator is sensitive to the person's stage of acceptance or adjustment to aphasia. The CPD is best administered when a person has reached a chronic stage of recovery, when there is a comfortable relationship between the person with aphasia and the administrator, and when the administrator has established an understanding of the person's cognitive abilities, social support and emotional strength.

The CPD is powerful and potentially confronting tool, capable of eliciting strong emotional responses. When used by an experienced clinician, it has the capacity to evoke valuable material to form the basis of meaningful intervention for communication strategies and environmental change. This assessment tool is recommended for use with people wishing to mitigate the limitations and disabilities arising from chronic aphasia.

Hixon, T., Weismer, G., & Hoit, J.D. (2008). *Preclinical speech science: Anatomy, physiology, acoustics, perception*. San Diego, CA: Plural Publishing. ISBN: 978 1 59756 182 2; pp. 642; US$149.95; http://www. pluralpublishing.com

Natalie Ciccone

In the authors' words this text addresses preclinical speech science which "encompasses speech production, speech acoustics, speech perception, and swallowing" (Hixon, Weismer, & Hoit, 2008, p. 1). The authors have written the text for students and clinicians.
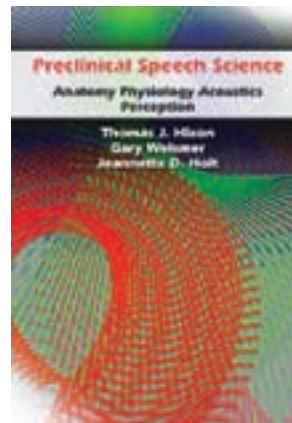
The text examines the physical structures used in speech production and swallowing by breaking the overall system into the following subsystems: breathing, laryngeal function, velopharyngeal-nasal function and pharyngeal-oral function. The chapters present information on each subsystem including: anatomy, movement, neural control, function in relation to speech production and swallowing, development of the subsystem, impact of ageing, the impact of gender differences, methods of assessment, disorders of the subsystem and professionals involved in the management of the disorders. Additional chapters are also written on acoustics, acoustic theory and vowel and consonant production, speech acoustic analysis, provision of acoustic phonetic data and speech perception. Although the text is comprehensive, it is designed as a preclinical text and so students would need additional texts addressing the clinical management of the areas discussed.

The information provided integrates the authors' knowledge with relevant research as well as theories on how the various systems are thought to operate. They successfully present complex information in a way that could be understood by students but present it with a depth that means practising clinicians will find the book to be a useful reference text.

This is a large text and the amount of information is initially daunting. However, the text includes a large number of quality illustrations. The authors worked with one illustrator who produced most of the illustrations. These do add to the text and provide views of anatomical structures and present information on how the various systems operate. Additionally the authors add interest and clinical application through the addition of 'sidetracks', boxes of text that present less formal information that is designed to support the main text. Just under half of the chapters also start and end with a clinical case that demonstrates the clinical relevance of the information being provided within the chapter.

Overall the text is comprehensive and meets its objective of being a preclinical text which students and clinicians would find beneficial.

ACQ notes to authors

ACQuiring Knowledge in Speech, Language and Hearing is a major publication of Speech Pathology Australia and provides a professional forum for members of the Association. Material may include articles on research, specific professional topics and issues of value to the practising clinician, comments and reports from the President and others, general information on trends and developments, letters to the Editor and information on resources. Each issue of *ACQ* aims to contain a range of material that appeals to a broad membership base.

ACQ is published three times each year, in March, July and November.

Issue	Copy deadline (peer review)	Copy deadline (non-peer review)	Theme*
July 2011	6 December 2010	1 February 2011	Assessment issues in swallowing and communication disorders
November 2011	14 April 2011	30 June 2011	Working with culturally and linguistically diverse populations
March 2012	3 August 2011	15 October 2011	Professional issues

* articles on other topics are also welcome

General

Material submitted must be your original work. Any direct quotations or material used from other sources must be credited in full. If copyright clearance is required to use material included in your article, please supply evidence that this has been obtained.

With rare exceptions, we do not publish material that has already been published.

Articles will be checked by a copy editor to ensure consistent presentation and standard of English.

Length

Articles should not usually exceed 3500 words (including tables and references). This is equivalent to approximately 11 double-spaced pages. Longer articles may be accepted, at the discretion of the editors. For further information go to http://www.speechpathologyaustralia.org.au

Format

The article should be submitted electronically via email (as an attachment). One hard copy and a copy on disk (preferably in Microsoft Word) is required if the article contains symbols (e.g., phonetic font).

The title page should contain the title of the article, the author's name, profession, employer, contact phone number and correspondence address, as well as a maximum of five key words or phrases for indexing.

The format must be double spaced with 2.5 cm margins, in a serif face (such as Times or Courier), each page numbered sequentially.

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