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Professional issues

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From the editors

Kerry Ttofari Eecen and Marleen Westerveld

IT IS EXCITING TO PRESENT THE FIRST ISSUE OF THIS JOURNAL

(formerly known as *ACQuiring Knowledge in Speech, Language and Hearing*) under its new name *Journal of Clinical Practice in Speech-Language Pathology (JCPSLP)*. It is fitting that the change of name is introduced in the “Professional issues” edition of this journal. We believe the new name, *Journal of Clinical Practice in Speech-Language Pathology*, reflects the changing nature of this publication over time, from a magazine to its current format of a “journal”, and reinforces its clinical relevance. Caroline Bowen, in her longstanding column “Webwords”, gives us an insight into the history of the journal and the evolution of its name.

Whether our speech pathology background brings us to work clinically, in research, in academia, or in management, professional issues are relevant and impact all of us. Speech Pathology Australia is an invaluable resource with its website, publications, and various documents and position statements. You can find more information about the Association’s resources in this edition’s “Top 10” column.

A range of professional issues are highlighted in the peer-reviewed articles. Lincoln starts by discussing the 10 key challenges facing our profession in regards to clinical education and universities. Ciccone, Priddis, Lloyd, Hersh, Taylor, and Standish continue with the theme of clinical education by presenting a paper on interprofessional clinical placements. The three peer-reviewed articles that follow deal with “assessment”, another important professional issue. Swift, O’Brian, Onslow, and Packman focus on the assessment of fluency using parent questionnaire, whereas Cimoli and Sweeny address service delivery models and approaches to training in relation to the assessment of swallowing. The final peer-reviewed article (by May and Williams) reports on a study investigating the assessment of the first language of English language learners.

Professional issues are highlighted in every edition of our journal in the two regular columns of “Ethical conversations” and “What’s the evidence?”. In this edition’s “Ethical conversations” the Ethics Board of Speech Pathology Australia lists a number of professional and ethical issues for us to consider and states that “[it] is the specifics of the current financial situation, the changing world economy, and the fast emerging newer types of technology that influence the current emerging issues” (p. 33). The “What’s the evidence?” column by Cartwright follows on from the “Ethical conversations” column by seeking “to review the current evidence for ‘evidence translation’ and to equip clinicians with some ideas for demonstrating and proactively addressing evidence-practice gaps in practice” (p. 37).

The *JCPSLP* prides itself on publishing up-to-date, evidence based, and clinically relevant information. It is also a forum where a wide range of members of the profession can publish their work. All papers undergo a stringent review process, either by double-blind peer review or by the editors. At all times we welcome feedback from the readers on papers or columns published. In this issue the *JCPSLP* publishes a discussion on the language assessment of Indigenous children. This includes two letters to the editor addressing some issues raised in a paper published in the last edition of this publication (November 2011) as well as a response to the letters by one of the authors.

The assessment of clients from culturally and linguistically diverse backgrounds is definitely a professional issue that requires further discussion and research within our profession. In addition to the last edition dedicated to working with culturally and linguistically diverse populations (November 2011), the peer-reviewed paper in this issue by May and Williams deals with the assessment of the first language of English language learners (mentioned above). Furthermore, Coleman presents some clinical insights on service delivery for Aboriginal people and Parsons gives us a research update on university students working in rural and remote areas.

We would like to thank all the authors for their contribution to the first edition of the newly named *Journal of Clinical Practice in Speech-Language Pathology*, one of many issues to come. Furthermore, we would like to acknowledge the peer reviewers for 2011 whose names are listed in this edition; we appreciate your constructive feedback on papers in the area of your expertise, which enables us to publish quality, evidence based, and clinically relevant articles.



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The diversity challenge for universities and clinical educators

Michelle Lincoln

KEYWORDS

CLINICAL
EDUCATION

DIVERSITY

SPEECH
PATHOLOGY

THIS ARTICLE
HAS BEEN
PEER-
REVIEWED



Michelle Lincoln

This paper aims to integrate information about current drivers in higher education and clinical education in Australia and explore the interface between speech pathology workforce needs and the aspirations of current and future speech pathology students. Viewing the future of our profession from these different perspectives will reorientate the thinking of members of the profession and further harmonise the efforts of universities and clinical educators. Ten immediate key challenges facing the speech pathology profession are identified and discussed. These challenges reflect an overarching theme of increasing diversity. It is argued that students, clients, educational experiences including clinical education, speech pathology work roles, academic work roles, and academic content in speech pathology are becoming increasingly diverse. While the immediate implications of this diversity appear somewhat overwhelming the long-term implications are interesting and exciting, and depict a meaningful future for our profession.

Change and diversity

The only constant in the health and education sectors is change. Speech pathologists and speech pathology educators work in environments that are constantly changing. New graduates enter a work landscape that may have significantly altered from when they began their university qualifications. Coupled with this rapid change is increasing diversity at all levels of the health and education sectors. Speech pathologists are well prepared to work with cultural and linguistic diversity in clients and families; however, in this paper a much broader view of diversity that encompasses students, education, workplaces and work roles is taken. Some of the challenges associated with constant change and increasing diversity are explored. Challenges for universities, workplaces, and clinical educators are addressed in an attempt to facilitate mutual understanding and support for each other.

Universities have both internal and external drivers that may have direct and indirect impact on speech pathology curricula. These drivers are at the Commonwealth and state levels as well as the university and faculty/school/division levels. Speech pathology curricula are also heavily influenced by Speech Pathology Australia (SPA), in particular through the Competency Based Occupational Standards (Ferguson, 2006; SPA, 2011) and accreditation processes. Speech pathology university programs must also attend to the views of other stakeholders such as employers, multidisciplinary colleagues, students, and clients. The following challenges are presented as a starting point in a profession-wide discussion about how universities and the profession can best work together to meet the challenges.

Ten contemporary challenges in speech pathology education

Challenge 1: Increasing numbers of speech pathology students to meet Australia's future workforce needs

In 2012 in Australia the number of places in undergraduate speech pathology courses will no longer be capped (Australian Government, 2009). Universities will be free to enrol as many students into undergraduate courses as they believe they have the resources to support. Uncapping of university places is consistent with the Commonwealth government's aim of 40% of Australians aged between 25 and 34 years having a university degree by 2025 (Australian Government, 2009).

At the same time Health Workforce Australia (HWA), a Commonwealth government statutory authority, has as its major goal to "meet the future challenges of providing a health workforce that responds to the needs of the Australian Community" (HWA, 2011). Achieving this goal implies growth in the number of health professionals given Australia's growing and ageing population. From the universities' perspectives speech pathology is often a high demand course that attracts students with relatively high Australian Tertiary Admission Ranks (ATAR) and employment prospects for graduates have been strong. Increased recognition of the important contribution the profession makes to health outcomes, together with a growing professional membership, also raised the profile of speech pathology. The above forces have resulted in a growth in speech pathology courses from 10 in 2005 to

15 in 2011, with 3 new courses due to open in 2012. It is estimated that presently there are approximately 2,000 students enrolled in speech pathology courses in Australia. When this figure is added to the approximate 4,500 current members of SPA it is apparent that the size of our profession is growing rapidly.

Rapid workforce growth is likely to continue and with it comes many benefits including increased industrial power; a stronger, larger professional association; expanding workforce; increased diversity in members of the profession; potentially more services for clients; and the growth of the private sector. More speech pathologists may move into roles such as project and case managers, consultants, and educators. The above outcomes effectively increase the sphere of influence of our profession. As with all rapid growth this situation presents a number of challenges for universities and the profession. One major challenge discussed later in this paper is providing appropriate clinical education experiences for this growing number of students.

Challenge 2: Increasing university participation levels of Indigenous, culturally and linguistically diverse, and low socioeconomic background students

The Commonwealth government also has a second objective to increase the number of students from low socioeconomic (SES), culturally and linguistically diverse backgrounds, and Indigenous backgrounds completing university degrees (Australian Government, 2009). Speech pathology university programs have not recruited and graduated many Indigenous speech pathologists, and the proportion of students from low socioeconomic backgrounds and culturally and linguistically diverse backgrounds remains relatively low. The Australian National Census in 2001 showed that 0.1% of the speech pathology workforce were Indigenous Australians. While the figure is now outdated, it is worth noting that at that time only 4 people in all of Australia identified themselves as Indigenous speech pathologists (Australian Health Workforce Advisory Committee, 2004). The Australian government also reports that the participation of low SES background students in university studies has remained static at 15% for the past twenty years (Australian Government, 2009). Consequently, university speech pathology programs are faced with the challenge of finding ways to recruit more Indigenous, culturally and linguistically diverse, and low SES background students into their degrees. Once in the degrees it is possible that some of these students may require different support or learning and teaching approaches to facilitate their learning both academically and clinically.

Challenge 3: Capturing and holding Generation Y's interest in speech pathology

Today's 20-29-yr-olds are the next generation of speech pathologists. As a group they are referred to as Generation Y the "net generation" or "digital natives" as this group grew up with computers, the internet, and mobile phones (Prensky, 2001). Generation Y is the most educated generation ever and many believe they are more interested than previous generations in work-life balance, social justice, and global issues (Dodd, Saggars & Wildy, 2009). They are also likely to take career breaks to work overseas and seek jobs with "positive organisational cultures" (Dodd

et al., 2009, p. 217). Ryan and Patterson (2010) suggested that Generation Y students are "easily distracted, bored with knowledge and wish to be active in their learning" (p. 24). If it is possible to characterise an entire generation of people, then the above suggests that new recruitment messages for speech pathology may be required and that retaining graduates in speech pathology may be particularly challenging.

Every year universities play a major role in attracting and recruiting the future members of our profession. University marketing personnel in collaboration with speech pathology academics craft descriptions of our profession and speech pathology courses designed to provide accurate, interesting, and exciting perspectives on our profession. Often academics experience tension between wanting to attract and match the aspirations of this new generation of students and the realities of day-to-day clinical work in overstretched health, disability, or education sectors. Given the known aspirations of Generation Y and our rapidly growing workforce, perhaps it is time to widen our view of where and how speech pathologists will work in the future and that broader view needs to be reflected in recruitment, university curricula, clinical education experiences, and our professional identity.

Challenge 4: Including international perspectives on speech pathology practice and service delivery in curricula as well as developing an understanding of global health issues

Universities are increasingly striving to become "global". This has several implications. University courses must ensure that curricula attend to international contexts as much as to Australian ones. Graduates must be explicitly prepared for employment in international contexts. Further, academics are expected to work collaboratively with international colleagues in research and learning and teaching. Global universities also create and foster an international climate on campus (Murdoch-Eaton, Redmond, & Bax, 2011). Accepting international students into Australian universities is part of creating an international climate which values and respects diversity and develops and promotes cross-cultural competence. In tandem with international students coming to Australia is the promotion of international exchange or experience for Australian students.

The globalisation of speech pathology curricula is challenging in the context of already overcrowded curricula with a high clinical education component (Lincoln, 2009). While students currently learn about international research as part of evidence based practice they are less likely to learn about global health issues and international health care systems. However, if we are to truly prepare our students for international employment then this challenge needs to be addressed.

Challenge 5: Finding space for international exchange in 4-year undergraduate curricula and 2-year masters curricula

This focus on internationalising curricula and student experience is also congruent with the aspirations of Generation Y. In the past it was common for young speech pathologists to work after graduation in the UK but now graduates are more likely to aspire to work in a developing

country (for example, Stevens, Peisker, Mathisen, & Woodward, 2010). Speech pathology students also expect that they will have the opportunity to have an international experience during their university degree. One of the most frequently asked questions on university open days is “Can I work overseas with this degree?”, followed by “Can I do an overseas placement or semester?” Giving students international experience may be achieved via six-month exchanges to an overseas university, an overseas placement, and exposure to international visiting academics and international students.

Challenge 6: Preparing international students for clinical experience in the Australian health, education, and disability sectors

Australian universities also have a social responsibility to provide education to students from countries where equivalent university degrees may not yet exist. Speech pathology graduates from Australian universities have populated the health, disability, and education sectors of Singapore, Hong Kong, and more recently Malaysia, Korea, India, and parts of Africa and the Middle East.

Recent research suggests that at least some international students may find developing competency in the Australian context difficult (Attrill, Lincoln, & McAllister, 2011). Hence the challenge here is to prepare both international students and clinical educators to work together successfully to ensure clinical competency development.

Challenge 7: Accommodating an increased diversity in clinical education experiences into the profession’s perceptions of new graduates’ competency

Uncapped university places and increases in numbers of courses in response to Commonwealth imperatives is putting pressure on the supply of clinical education placements for students. National speech pathology registration is not required in Australia. Therefore, accurate information about the size of our workforce is unavailable, so the existence of a mismatch between numbers of students, placements required, and the speech pathology workforce cannot be investigated. Lincoln (2009) estimated that on average in 2005 individual SPA members needed to provide 1.5 weeks per year of clinical education placement experience to meet the then clinical placement needs. This suggests that at least in 2005 there was some capacity for growth in the provision of clinical placements by the existing workforce.

University programs are juggling this pressure on clinical placements with the aspirations of students, research evidence about effective learning and teaching practices, and the needs of stakeholders as well as a desire to maintain or increase the quality of their courses. Universities have responded in various ways to this challenge and are increasingly picking up the entire cost of clinical education. In 2005 30% of all clinical placements nationally were provided by university clinics or external clinics funded by universities, and this is likely to have increased in the intervening years (Lincoln, 2009). Of course, in picking up these costs, university programs then have less to spend on other activities and resources related to providing an education in speech pathology. Universities have also invested in supporting innovative clinical placement models that may utilise non-traditional placement sites, place

multiple students in an organisation at one time, or use alternative supervisory practices (see further discussion in McAllister, Paterson, Higgs, and Bithell [2010]). In a recent study of international practices in speech pathology clinical education, Sheepway, Lincoln, and Togher (2011) found that Australian universities were more likely to adopt innovative or alternative clinical placement or supervisory models than their international colleagues. This study suggests that Australian university programs in speech pathology are actively implementing strategies to meet this challenge. It is likely that Australian graduates will experience an increasingly diverse range of clinical placements which will in turn mean they will bring a diversity of skills and experiences to the workforce.

Challenge 8: Using simulated learning effectively in speech pathology education to build students’ clinical competency

Another response to the current situation supported by HWA is the use of simulated learning to facilitate clinical competency development. Simulated learning comes in many different forms, for example, computerised simulations of clinical situations, the use of actors, or standardised patients (Hill, Davidson, & Theodoros, 2010), clinical case studies (McCabe, Purcell, Baker, Madill, & Trembath, 2009), or use of models and dummies for practising technical skills (Khan, Pattison, & Sherwood, 2011). The general aims of simulated learning experiences are to promote preparation of students for clinical experiences, reduce time spent in clinical placements, or to reduce safety risks for students or patients. Additionally, from the university’s perspective, greater control over student learning outcomes and the quality of learning experiences may be achieved. A recent report on simulated learning opportunities in speech pathology in Australia indicated that 4 out of 10 university programs involved used simulated learning in their courses and that “the integration of SLEs [simulated learning environments] into speech pathology education curricula is considered likely to reduce the current load on workplace clinical educators and potentially increase clinical education capacity for university programs” (Theodoros, Davidson, Hill, & McBean, 2010, p. 4). Consequently, university programs must also turn their attention to developing SLEs in speech pathology that will assist in easing the demand on clinical placements. It is also likely that a change in attitude of educators supported by research findings is needed about the acquisition of speech pathology competency via SLEs.

Challenge 9: Producing work-ready speech pathology graduates for constantly changing and increasingly diverse workplaces

University programs in speech pathology not only have to pay attention to Commonwealth government stipulations, the aspirations of students, and the requirements of Speech Pathology Australia, they must also keep in front of changes in the workplace. Presently, university curriculum developers are likely to be paying attention to issues such as inter-professional practice and teamwork, preventative practice, supervision of therapy assistants, ehealth and ehealth records, and telehealth, to name a few (McAllister et al., 2010). Given the two- or four-year time lag between entering a speech pathology course and entering the workforce, curricula are required to be increasingly adept in

anticipating changes in workforce needs and incorporating appropriate learning and teaching strategies that will produce work-ready graduates. This challenge implies that excellent communication and collaboration is required between universities and the profession to ensure that curricula remain relevant.

Challenge 10: Increasing the size of the speech pathology academic workforce

University speech pathology programs are also mindful of encouraging some graduates into research and academic careers. There is a shortage worldwide of speech pathology academics, particularly senior academics, and it is important for the future of our profession that the speech pathology academic community continues to grow. This challenge is magnified in the face of increased numbers of universities offering speech pathology programs in Australia. Just as in the health, education, and disability sectors, it is important that speech pathology academics move into senior organisational roles within universities so they are in positions of influence. Universities are the power houses of research that is strengthening the evidence base of our professional practice. An evidence base that demonstrates the effectiveness of our treatments and interventions is critical to the future of our profession. Hence recruitment of graduates into postgraduate study, such as PhDs, is vital to increasing the number of speech pathologists on the path to a career in speech pathology academia.

Up, up, and away – Leaders in health care

The above discussion suggests that new speech pathology graduates from across Australia will enter the workforce with increasingly diverse academic backgrounds and clinical experience. They will all have met the entry level CBOS requirements; however, their journeys for meeting them will be very different. Table 1 contains a range of examples of different speech pathology preparation pathways. Consider what each of the new graduates in Box 1 is likely to bring to their workplace.

Box 1. Exemplars of educational diversity in speech pathology graduates
A new graduate of a four-year undergraduate university program from a regional university that requires all students to engage in a multidisciplinary rural community development program focused on improving health care inequalities.
A new graduate from a two-year masters program who completed an undergraduate arts degree with a major in Indigenous studies.
A new graduate of a four-year undergraduate university program who spent a semester abroad at a European university that allowed the student to continue to develop a second language and study with leading researchers in a particular area relevant to speech pathology.
A new graduate from a two-year masters program who completed an undergraduate science degree majoring in anatomy and histology and worked for two years as a laboratory research assistant before commencing speech pathology.
A new graduate of a four-year undergraduate university program who completed a voluntary eight week placement in a South East Asian developing country as part of a multidisciplinary health care team.
A new graduate of a four-year undergraduate university program whose parents were refugees and who speaks two other languages in addition to English.

The diversity in academic backgrounds, knowledge bases, perspectives, skill sets, and frameworks that this new generation of speech pathologists will bring to bear on problems and challenges facing the Australian and global health, education, and disability sectors is exciting. They will also bring new and different attributes to advocacy and assessment and treatment for people with communication disorders. The challenge for educators is ensuring maintenance of the entry level competency requirements (SPA, 2011) as well as valuing and promoting a diversity of backgrounds and experiences. Making room for international exchanges and elective study in areas such as global health, Indigenous health, management, social policy, languages, and research methods is a challenge that all speech pathology curriculum developers are facing.

Not only will these new graduates “look” and “sound” different to previous graduates, they are also likely to take different career paths. I expect that some graduates who learn about global health issues and contexts and/or complete placements in developing countries will go on to fulfil roles in the World Health Organization (WHO) and government and non-government aid providers. Graduates in these contexts can advocate for the communication rights of individuals and the need for assessment and intervention for swallowing and communication difficulties. Similarly, graduates with knowledge and experience in working in Indigenous communities and Indigenous individuals who continue to work in this context not only will provide much needed services but will also be powerful role models who may encourage more Indigenous people to consider careers in speech pathology. Finally, if we embrace this new diversity, then we will increasingly see speech pathologists in influential management and leadership positions within organisations. It can only benefit our profession and clients to have people with speech pathology backgrounds in such influential positions, provided they remain convinced of the efficacy and importance of our profession.

Big picture implications

Given the above discussion it is apparent that the idea that there is a “typical” speech pathology student is now defunct. It is also likely that the idea that there is a “typical” speech pathology university course is also losing credence. In the future each course will produce a unique graduate with identified strengths based on the culture, strategic aims, and perhaps location of the university in which it is delivered and the strengths of the academic and clinical staff associated with each course. For example, regional universities aim to boost the rural workforce and to make university education more accessible for Australians living in rural areas. It is reasonable to assume that while all universities have a social responsibility to educate their students about rural health issues, regional universities may achieve more or higher level learning outcomes in this area. Similarly, graduates from research intensive universities may achieve higher level learning and have more practical experience in research. Both groups of graduates will have met the CBOS entry level requirements, perhaps in different ways, but will have additional areas of academic and clinical strength. The follow-on from students taking these different paths is that when they present on clinical placements in the workplace they are likely to be increasingly diverse. For example, some may bring a strong social justice and human rights perspective to their work, others may bring a

scientific focus, and others still may bring a client-focused, humanistic approach. Clinical educators are encouraged to embrace and celebrate this diversity. Our international assessment tool COMPASS® (McAllister, Lincoln, Ferguson, & McAllister, 2006) asks clinical educators to rate students' developing competency performance against behavioural descriptors, not against each other.

Educators need to resist the urge to "socialise" students towards what they believe is the "typical" speech pathologist. Professional socialisation is a well-documented phenomenon with clinical educators being particularly powerful role models (Webb, Fawns, & Harre, 2009). As argued earlier the idea of a "typical" speech pathologist is fast losing currency, as are traditional roles and workplaces for speech pathologists. So, as educators, how do we separate out our beliefs about what makes a "typical" or "good" speech pathologist and a competent one? Again the solution is to compare what students do and think to the COMPASS® (McAllister et al., 2006) behavioural descriptors, not to our own internal beliefs about speech pathology students.

Conclusion

While the above 10 challenges have many implications for our profession, students, and university programs, the first step is to embrace and celebrate our increasing diversity. A failure to do this will mean that speech pathology as a profession will not keep pace with an increasing proportion of its members and will not have members well prepared to meet the challenges ahead. This paper has not addressed how we could meet the 10 challenges because that alone is worthy of another paper and many long discussions with colleagues. However, it is vital that as a starting point universities and clinical educators in the workplace collaborate to support diversity of students and educational experiences while maintaining requirements for entry level competence.

References

Attrill, S., Lincoln, M., & McAllister, S. (2011, June). *Student diversity and implications for clinical competency development: A "snapshot" of domestic and international speech pathology students*. Paper presented at Diversity and Development, Annual Conference of the Speech Pathology Association of Australia, Darwin.

Australian Government. (2009). *Transforming Australia's higher education system*. Barton, ACT: Commonwealth Copyright Administration, Attorney-General's Department.

Australian Health Workforce Advisory Committee. (2004). *The Australian health workforce: An overview of workforce planning issues*. AHWAC Report 2006.1. Sydney: Author.

Dodd, J., Siggers, S., & Wildy, H. (2009). Retention in the allied health workforce: Boomers, generation X and generation Y. *Journal of Allied Health, 38*(4), 215–219.

Ferguson, A. (2006). Competency-based occupational standards: Influences on Australian speech pathology education. *Folia Phoniatrica et Logopaedica, 58*, 23–31.

Hill, A., Davidson, B., & Theodoros, D. (2010). A review of standardized patients in clinical education: Implications for speech-language pathology programs. *International Journal of Speech-Language Pathology, 12*(3), 259–270.

Health Workforce Australia (HWA). (2011). Welcome to Health Workforce Australia. Retrieved from <http://www.hwa.gov.au/home>.

Khan, K., Pattison, T., & Sherwood, M. (2011). Simulation in medical education. *Medical Teacher, 33*, 1–3.

Lincoln, M. (2009). A national snapshot of clinical placements in Australia. *ACQuiring Knowledge in Speech, Language and Hearing, Communication Disorders, 11*(3), 169–170.

McAllister, S., Lincoln, M., Ferguson, A., & McAllister, L. (2006). COMPASS®: *Competency assessment in speech pathology*. Melbourne: Speech Pathology Australia.

McAllister, L., Paterson, M., Higgs, J., & Bithell, C. (Eds.) (2010). *Innovations in allied health fieldwork education: A critical appraisal*. Rotterdam, The Netherlands: Sense Publishers.

McCabe, P., Purcell, A., Baker, E., Madill, C., & Trembath, D. (2009). Case based learning: One route to evidence based practice. *Evidence-based Communication Assessment and Intervention, 3*(4), 208–219.

Murdoch-Eaton, D., Redmond, A., & Bax, N. (2011). Training healthcare professionals for the future: Internationalism and effective inclusion of global health training. *Medical Teacher, 33*, 562–569.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon, 9*(5). Retrieved from <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>

Ryan, S., & Patterson, M. (2010). Trends in health professional education. Changing student populations. In L. McAllister, M. Paterson, J. Higgs and C. Bithell (Eds.), *Innovations in allied health fieldwork education: A critical appraisal* (pp. 17–28). Rotterdam, The Netherlands: Sense Publishers.

Sheepway, L., Lincoln, M., & Togher, L. (2011). An international study of clinical education practices in speech-language pathology. *International Journal of Speech-Language Pathology, 13*(2), 174–185.

Stevens, E., Peisker, M., Mathisen, B., & Woodward, S. (2010). Challenges and benefits for students participating in the Working with Developing Communities (WWDC) (Vietnam) Program. *ACQuiring Knowledge in Speech, Language, and Hearing, 12*(2), 90–93.

Speech Pathology Australia (2011). *Competency based occupational standards for speech pathologists – Entry level* (revised). Melbourne: Author.

Theodoros, D., Davidson, B., Hill, A., & McBean, N. (2010). *Integration of simulated learning environments into speech pathology clinical education curricula: A national approach*. Health Workforce Australia, Simulated Learning Project, Final Report. Retrieved from <http://www.hwa.gov.au/work-programs/clinical-training-reform/simulated-learning-environments-sles>.

Webb, G., Fawns, R., & Harre, R. (2009). Professional identity and communities of practice. In C. Delany and L. Molloy (Eds.), *Clinical education: Evidence, practice and understanding* (pp. 53–70). Chatswood, NSW: Elsevier.

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Interprofessional clinical placement involving speech pathology and counselling psychology

Two students' experiences

Natalie Ciccone, Lynn Priddis, Amanda Lloyd, Deborah Hersh, Ashleigh Taylor, and Georgina Standish

This paper examines the interprofessional learning of a speech pathology and counselling psychology student in an interprofessional placement within an institution of the Department of Corrective Services in Perth, Western Australia. The institution is a pre-release centre that promotes rehabilitation and community reintegration in which up to six women are able to have their children, aged 0–4 years of age, live with them. The students provided a program to the mothers to facilitate development of a healthy mother–child relationship and the children’s communication development. This paper utilised qualitative descriptive analysis to explore two examples of student learning and found perceived growth in the students’ clinical skills, their understanding of the other profession, and the concept of interprofessional collaboration. While students experience growth in a range of placements, the journey described in this paper is unusual in both the nature of the student collaboration and the placement itself. The research highlights the importance of joint clinical placements in the development of interprofessional collaborative relationships.

Introduction

Speech pathologists and counselling psychologists typically work together in primary and community health settings. However, information is not readily available on the experiences of students, from both professions, working together within interprofessional clinical placements. This paper brings deliberate, detailed focus on the experiences of a speech pathology and a counselling psychology student, in order to capture the impact on, and importance of, the placement for them, both during the placement and afterwards. In doing so, it explores the value of such placements in developing collaborative working practices.

Interprofessional education

Interprofessional working is considered important in providing “safer, more effective, more patient centred and more sustainable” (Dunston et al., 2009, p. 7) health services. To achieve this interprofessional education (IPE) has been identified as an important inclusion within higher education health courses in order to graduate students with interprofessional practice capabilities (Dunston et al., 2009). Educational institutions recognise the need for collaboration between health professions with the belief that greater collaboration during training will increase teamwork between professions within the health system. Shared learning is thought to reduce “rivalries and misconceptions about respective roles and responsibilities” (Cooper, Carlisle, Gibbs, & Watkins, 2001, p. 229) that can emerge when professions work together, and Lumague et al. (2006) reported IPE can facilitate students’ ability to work collaboratively. IPE aims to improve communication between health professionals, knowledge of other professions, and trust between, perceptions of, and attitudes towards professionals from different disciplines. Curran, Sharpe, Flynn, and Button (2010) highlighted the benefits of interprofessional education activities for pre-licensure health profession students. They reported that IPE increases students’ knowledge of other professions facilitates the development of a positive attitude towards other professions, and contributes to students’ ability to communicate and work with individuals from a different profession.

While systematic reviews suggest interprofessional clinical placements facilitate the development of interprofessional knowledge (Nisbet, Hendry, Rolls, & Field, 2008), the majority of undergraduate IPE learning opportunities involve small group teaching, case studies, problem-based learning, role play, self-directed learning, and experiential learning (Cooper et al., 2001). In a systematic review of interprofessional learning involving medical students and at least one other profession, Remington, Foulk, and Williams (2006) concluded individuals’ attitudes, knowledge, and skills, across a broad range of clinical areas, can be changed through participation within interprofessional experiences that involve both clinical training and teaching on interprofessional care. In a review of interprofessional literature on student-based IPE experiences, Davidson, Smith, Dodd, Smith, and O’Loughlan (2008) found only 25 articles that involved clinical education. Of these, the time within the clinical experience ranged from 2.5 hours to 9

KEYWORDS

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weeks with 2 weeks being the most common duration. The experiences involved a range of non-patient contact activities, such as presentations, seminars, and discussions as well as patient care related activities, for example, ward rounds, handover, and observing health professionals' assessment and treatment. This review showed that it was relatively infrequently that students had the opportunity to participate in extended interprofessional placements despite their recognised value.

The interprofessional clinical placement reported in the current paper provided two students with an opportunity to work closely together, to learn from and support one another within a 20-week clinical placement. The long placement provided the students with experiences in individual assessment as well as parent-child relationship assessment, ongoing treatment planning, client management, and implementation of treatment strategies. The notion of participating within an extended clinical placement is supported by Solomon and Jung (2011) who reported the experiences of an occupational therapy and a physiotherapy student in an interprofessional clinical placement. Their students found working "towards a common goal over a long period of time" (Solomon & Jung, 2001, p. 62) was a positive experience when compared to other non-clinical interprofessional experiences.

Although research has suggested students have a positive response to interprofessional activities, students' learning has predominantly been evaluated through "self reported changes in understanding and performance" (Nisbet et al. 2008, p. 58). To date the evaluation of many of these experiences has focused on student satisfaction, the development of clinical skills and knowledge in relation to specific client groups, and shifts in attitude towards other professions and interprofessional work (Nisbet et al., 2008).

Rather than evaluating the effectiveness of an interprofessional placement in changing attitudes, and increasing knowledge and skills, this study used a qualitative descriptive analysis (Sandelowski, 2000) to explore the students' perception of their learning within the interprofessional clinical placement. The focus of the study was to examine students' reflections on their learning, the development of new understandings about each other's profession across their clinical placement, as well as to gain insight into the collaborative process. Specifically the study asked: How did the students reflect and report on the value of this interprofessional placement?

Method

Description of the clinical context

Parent-focused early intervention is a priority for speech pathologists and counselling psychologists working within a paediatric clinical context as both professions work to facilitate healthy parent-child interactions. Speech pathologists facilitate communication between parent and child to support the child's language development. Counselling psychologists focus on building parents' awareness of and sensitivity to the mental states of their children since these are essential ingredients for developing healthy relationships and interpersonal resilience (Slade, 2005).¹

The clinical placement took place within a low security residential institution in the Department of Corrective Services. Services provided at the institution aim to promote rehabilitation and community reintegration for its women offenders. One program enables those women

who are mothers to have their young children live with them at the centre. At the time of this IPE experience, up to six women had their children, aged 0-4 years of age, living with them. These children are an underserved population as the Department of Corrective Services traditionally focuses on core service provision to the adult residents and not on the relationship with their resident children or the children's developmental outcomes.

Additionally, the children of women prisoners are at risk of adverse developmental outcomes. For example, a survey profiling women prisoners in WA identified that most were sole parents, were poorly educated, were unemployed, had mental health issues, and reported a history of abuse (Department of Justice, 2002), all features that place them in a high risk category for parenting problems. Many of these features correspond to those that have been identified as risk factors in childhood language delay, specifically "lower socioeconomic status, limitations in caregiver competence, inadequate language modelling by parents, lack of consistent and stimulating parent-child interactions, negative parental responses to child's behaviours, parental education, maternal depression, and parenting stress" (Perry Carson, Carson, Klee, & Jackman-Brown, 2007, p. 157).

Description of the clinical placement

The role of the students

The speech pathology and counselling psychology students participated in a 20-week placement, one day per week. Both students were in the final semester of their programs. Within this placement, the students' intervention aimed to build the relationship between mother and child by promoting a responsive, interactive style of communication and facilitating each mother's awareness of her child's mental state. The students provided a weekly group for the mothers and their children as well as individual therapy sessions for mother-child dyads as the need arose. The group ran for 90 minutes, once a week, and had been previously started as a "song time" by a separate not-for-profit organisation. The students further developed the group to include a greater range of activities to facilitate healthy mother-child interaction. After the first two weeks the group followed a set format: an extended song time where mothers interacted with their children; a craft activity for mothers and children to complete together; and a period of book sharing.

The students' roles were to support the development of the mother-child relationship. The students worked towards this by: building rapport with the mothers, and children and developing trust between themselves, the mothers and the children; facilitating positive interactions between mothers and children throughout the group session; encouraging face-to-face interactions between mother and child while singing songs; providing mothers with opportunities to preserve memories of their child; engaging mothers and their children in book sharing; and providing mothers with information on communication development. Within all activities the students themselves maintained a different but complementary focus on the mother-child interactions. The speech pathology student's focus was on the facilitation of communication between mother and child through modelling a responsive interactive style of relating to the child. The counselling psychology student's focus was on building the mother's awareness of and sensitivity to the mental states of her child.

Clinical supervision

There were two speech pathology and one counselling psychology staff involved in the project providing profession-specific clinical supervision. Each student met with their profession-specific supervisor(s) independently and had at least weekly contact with their supervisors through email or face-to-face meetings. The students emailed weekly plans prior to, and provided a weekly summary subsequent to the sessions. One of the speech pathology supervisors attended the clinic on five occasions to observe the student within the clinic context and the counselling psychology supervisor attended the clinic on two occasions to provide onsite feedback and facilitate discussion with both students around building parent-child relationships. Additionally, the students were supported on site by a staff member of the service and the students provided peer support to each other. In order to facilitate the interprofessional relationship, all supervisors and students attended four additional meetings. These focused on discussions about the roles of the two professions and problem-solving within the clinical context.

Finally, within the planning phase of the placement, meetings occurred between the supervisors, the not-for-profit organisation, the students, and the institution within the Department of Corrective Services. All students and supervisors were required to attend a corrective services induction session.

Data collection

The students' learning was investigated through an analysis of two questionnaire-based written reflections and the contents of an IPE conference presentation written by the students. The first reflection was completed prior to starting the clinical placement and the second on placement completion. The pre-placement questionnaire contained six open-ended questions addressing the students' initial reaction to the placement and the knowledge and skills they anticipated they would develop while working with the other profession. Post-placement, the students responded

Table 1. Questions contained in the pre- and post-placement questionnaires
Pre-placement questions
What was your first impression of the idea of working with a Psychology/ Speech Pathology student within this placement?
Why do you think you had this impression?
What problems do you anticipate in this collaboration?
What benefits do you anticipate in this collaboration?
What role do you think you will have?
What role do you think the other student will have?
Post-placement questions
What do you now know about the way Psychologists/ Speech Pathologists can work together with parent/child relationships?
How have you formed this impression?
What problems do you anticipate with this collaboration in the field?
What problems did you experience in the collaboration on this placement?
What benefits do you anticipate in this collaboration?
What was useful about the collaboration on this placement?
How did your view of the respective roles change over the duration of the placement?

to seven open-ended questions focusing on their reaction to the placement and the knowledge and skills they felt they had gained in working with the other profession. The questions asked within the questionnaires are contained in Table 1. The students completed the reflections individually on both occasions. The conference presentation was written in the fourth week of the clinical placement and involved considerable discussion about the learning opportunities offered by the placement.

Analysis

Our qualitative, descriptive analysis (Sandelowski, 2000) involved careful multiple readings of the data and initially coding line by line. We then merged similar codes into categories and then into broader themes. Rigour was enhanced through regular peer checking. All sources of information were analysed independently by the first and fourth authors who are both speech pathologists. The students then checked these themes for accuracy. The first author had been involved in the placement as a supervisor but the fourth author had no previous involvement in the placement.

Results

Four key themes emerged from the analysis of the reflections and the presentation: increased confidence in one's own professional knowledge; growth in understanding the other's role; clearer understanding of collaboration, and the importance of learning by doing.

Increased awareness of one's own professional knowledge

Despite the fact that a key focus of this placement was interprofessional learning, both students felt that the experience had strengthened their own clinical knowledge and had challenged them to apply their own skills creatively. For example, the counselling psychology student wrote that working with another profession: "strengthens own practice by affirming or questioning own methods/perspectives". Both students emerged from the placement with a sense that they had contributed positively to the program and a heightened awareness of their own role and practice. An example of this was the recognition of taken-for-granted aspects of discipline-specific knowledge such as use of jargon when describing client behaviours. The students were more aware of the need to be clear in their explanations and reasoning and that asking for clarification "means not being insecure about your knowledge but also not feeling threatened if one of us don't know or understand something" (counselling psychology student). Finally, they reported development in notions about their professional boundaries, and understanding their own roles in relation to others.

Growth in understanding of the other's role

Hand in hand with the first theme of understanding one's own knowledge was a growth in understanding as to what the other profession had to offer the clients. Prior to the placement, the speech pathology student appeared to have a stereotypical and limited view of what the counselling psychology student would offer. She reported that she thought that: "The psychology student would be dealing with the mothers and any emotional issues they would face..." As the placement continued, she found that the goals set by both of them were being integrated more

closely, that the counselling psychology student was working more broadly on strengthening the mother–child relationship, enhancing play, looking at behavioural strategies, and working constructively to support the language development through shared activities. At the end of the placement, she commented: “I gained more perspective of the role and realised it is not just about counselling about emotional problems and there is more within the psych scope than I knew”.

The counselling psychology student had a mature understanding of the general role of speech pathology prior to the placement and she recognised that the focus would include language development, communication between mother and child, and the promotion of these through play. However, she was less sure about how the speech pathology student would conduct her assessments and how their discipline perspectives would work together in context of the placement. Over the course of the placement, she became more aware of the flexibility and creativity of the speech pathology role, and the links between their broader goals including the importance of mother–child relationship issues for both professions.

Understanding of collaboration

In the pre-placement questionnaire, collaborative practice was not mentioned. At that point, the students were trying to predict each other’s role and to understand their particular contributions despite being in the same physical space. By the fourth week, within their presentation, they already used phrases like: “we have set our target as...” and “we have managed to integrate both professions’ goals and approaches”. After the placement both students commented on the complementary nature of the professions and had moved from simply being in the same *physical space* to a notion of *shared professional space*. For example the speech pathology student stated: “Psychs and SPs have a complementary focus on child attachment” and the counselling psychology student made a similar comment:

Now have some practical understanding of how these two fields complement each other, particularly the way a Psych/SP dyad can offer a level of intervention which both accesses clients through the relationship but focuses on different aspects of the client/s.

One aspect of the theme of collaboration was the two students did not simply complement each other but together adopted an entirely new joint goal of advocacy in the face of what they viewed as unhelpful practices within the institution. For example, they formed a united front to request a policy change in relation to allowing photographing of the children for the mothers. This was normally denied within the facility for security reasons, but both students felt that having a photographic record of the child, capturing moments in time that would otherwise be lost, was an important part of building the mother–child relationship. Their collaboration also precipitated the extension of activities from song time to craft. The combined perspectives of speech pathology and counselling psychology strengthened the base for the negotiation and inclusion of these program changes as well as the flexible and creative ways in which they were delivered. The nature of the placement, and the knowledge that the program offered an important opportunity for the mothers and children involved, seemed to strengthen the nature and outcomes of the collaboration between the students.

The importance of learning IPE by doing

This placement was a new opportunity for these students to move beyond a theoretical understanding of each other’s professions to a practical and nuanced understanding. They made discoveries about each other by *doing* the work together rather than simply by *knowing* about each other. For example, the counselling psychology student wrote:

Prior to our first joint session we were aware that we needed to transition in and out of the lead taking role, however we were unsure how this would be done. We discussed a rough plan of how the session was going to run, however we found when we were in the session, it came quite naturally. We found that this was best achieved through being aware of each others’ signals as well as following the clients’ lead.

This quote shows how issues causing concern were resolved “quite naturally” and that the rapport and understanding built up between the students allowed the collaboration, mentioned earlier, to occur. The students stressed the importance of flexibility, open-mindedness, avoiding dominating the other, and showing support. Their comments are evidence of self-awareness and professional competence.

Discussion

This paper has explored the experiences of two students undertaking an interprofessional placement. The findings from the analysis of student reflections suggested that it had provided a valuable learning experience for both, with growth in their knowledge of their own professional roles, greater understanding of the role of the other professional, a more mature sense of collaboration, and the building of practical experience through working together. Bridges, Davidson, Soule Odegard, Maki, and Tomkowiak (2011) highlight the importance of students exploring professional boundaries while working within a team which can lead to a greater understanding of their own and the other profession’s role.

An important finding in this study was the transition from the idea of each student having separate roles within the clinical placement to the notion of collaborative working. Across the placement the students developed a truly collaborative relationship. By combining their professional expertise they were able to argue for changes in the service offered to the mothers and children in the institution and a broader understanding of the importance of facilitating secure attachment.

This study provides an example of just one particular placement involving speech pathology and counselling psychology students. It supports the findings of Solomon and Jung (2011) and provides evidence and support for the importance of interprofessional clinical placements. The results suggest these placements should not be viewed as secondary in importance to the usual clinical opportunities as they provide a way for students to understand their own roles, those of other professions and the broader concept of collaboration. Although this experience led to significant student learning, the study involved just two students within a single placement. Further research is needed to explore the learning resulting from a variety of different clinical settings and with a greater number of students and professions.

This clinical experience provided a speech pathology student and a counselling psychology student with the

opportunity to work together within an interprofessional clinical placement, and to explore the broad application of their skills to clients who would not otherwise have been offered such a service. The experience of interprofessional learning within this setting has led to the students developing a nuanced and mature understanding of collaboration and interprofessional practice.

References

- Bridges, D. R., Davidson, R. A., Soule Odegard, P., Maki, I. V., & Tomkowiak, J. (2011). Interprofessional collaboration: Three best practice models of interprofessional education. *Medical Education Online*, 16, 6035. doi:10.3402/meo.v16i0.6035.
- Cooper, H., Carlisle, C., Gibbs, T., & Watkins, C. (2001). Developing an evidence base for interdisciplinary learning: a systematic review. *Journal of Advanced Nursing*, 35(2), 228–237.
- Curran, V. R., Sharpe, D., Flynn, K., & Button, P. (2010). A longitudinal study of the effect of an interprofessional education curriculum on student satisfaction and attitudes towards interprofessional teamwork and education. *Journal of Interprofessional Care*, 24(1), 41–52.
- Davidson, M., Smith, R. A., Dodd, K. J., Smith, J. S., & O'Loughlan, M. J. (2008). Interprofessional pre-qualification clinical education: a systematic review. *Australian Health Review*, 32(1), 111–120.
- Department of Justice, Community and Juvenile Justice Division, Western Australia. (2002). Executive summary: Profile of women. Retrieved from http://www.justice.wa.gov.au/content/files/profile_of_women_in_prison.pdf
- Dunston, R., Lee, A., Lee, A., Matthews, L., Nisbet, G., Pockett, R., ... White, J. (2009). *Interprofessional health education in Australia: The way forward*. Sydney: University of Technology, Sydney and The University of Sydney.
- Lumague, M., Morgan, A., Mak, D., Hanna, M., Kwong, J., Cameron, C., ... Sinclair, L. (2006). Interprofessional education: The student perspective. *Journal of Interprofessional Care*, 20(3), 246–253.
- Nisbet, G., Hendry, G. D., Rolls, G., & Field, M. J. (2008). Interprofessional learning for pre-qualification health care students: An outcomes-based evaluation. *Journal of Interprofessional Care*, 22(1), 57–68.
- Perry Carson, C. K., Carson, D. K., Klee, T., & Jackman-Brown, J. (2007). Self-reported parenting behavior and child temperament in families of toddlers with and without speech-language delay. *Communication Disorders Quarterly*, 28(3), 155–165.
- Remington, T. L., Foulk, M. A., & Williams, B. C. (2006). Evaluation of evidence for interprofessional education. *American Journal of Pharmaceutical Education*, 70(3), 1–7.
- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health*, 23, 334–340.
- Slade, A. (2005). Parental reflective functioning: An introduction. *Attachment & Human Development*, 7(3), 269–281.
- Solomon, P., & Jung, B. (2011). An interprofessional role-emerging placement in HIV rehabilitation. *International Journal of Therapy and Rehabilitation*, 13(2), 59–64.
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- 1 Counselling psychology is a field of specialist endorsement within the Australian Psychological Society. Postgraduate training includes three supervised long placements, a research dissertation, and advanced training in treatment of mental health disorders across the lifespan, as well as those problems that often underlie or lead to poor mental health outcomes.

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Checklist of parent Lidcombe Program administration

Michelle Swift, Sue O’Brian, Mark Onslow, and Ann Packman

KEYWORDS

CHECKLIST

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PRESCHOOL

STUTTERING

TREATMENT FIDELITY

THIS ARTICLE HAS BEEN PEER-REVIEWED

This article outlines the development of a checklist to document parent and child behaviours when implementing Lidcombe Program treatment during structured conversations. We present item development and reliability testing and instructions for use by speech pathologists. Finally, we present two case studies to demonstrate use of the checklist to aid clinical decision-making during Lidcombe Program treatment.

The Lidcombe Program is a commonly used treatment for early childhood stuttering. It has a large evidence base that includes a meta-analysis (N = 134) of four sources of randomised, controlled clinical evidence (Onslow, Jones, Menzies, O’Brian, & Packman, 2012). That analysis showed an odds ratio of 7.5, meaning that children treated with the Lidcombe Program have 7.5 more chance of being below 1.0 per cent syllables stuttered (%SS) post-treatment than children who receive no treatment.

Treatment fidelity refers to the degree to which a treatment is delivered as directed by the treatment manual, differs from another treatment or control condition, and is correctly applied by clients beyond the clinic environment (Bellg et al., 2004; Kaderavek & Justice, 2010). A fundamental treatment fidelity issue is the inclusion of core treatment components (Kaderavek & Justice, 2010). For treatments with strong efficacy research such as the Lidcombe Program, it seems logical to assume, until research informs us otherwise, that if treatment is presented as specified by the treatment manual it will contain all the core treatment components.

Studies investigating Lidcombe Program treatment fidelity have found that some clinicians do not strictly adhere to the Lidcombe Program guide (Packman et al., 2011)¹. Recurring issues have been shorter and less frequent clinic visits than prescribed in the guide, and use of adaptations such as combining Lidcombe Program treatment components with components of other treatments (Rousseau, Packman, Onslow, Dredge, & Harrison, 2002; Shenker, Hayhow, Kingston, & Lawlor, 2005). A recent study of the Lidcombe Program with the wider Australian clinical community found that some speech pathologists routinely met efficacy benchmarks for

treatment time and clinical outcomes, while others did not (O’Brian et al., 2011). Additionally, some of these clinicians did not conform to the Lidcombe Program guide available to them.

Reviews indicate that research focusing on *clinician* treatment fidelity is becoming more common for communication disorders, but research investigating *parent* treatment fidelity is scarce (for examples see Romski, Sevcik, Adamson, Cheslock, & Smith, 2007; Williams, 2006). Recently researchers used audio recordings of Lidcombe Program treatment during structured conversations with three parent–child pairs (Swift et al., 2011). They found that those parents did not always do the treatment as a speech pathologist might expect. For example, sometimes parents used incorrect verbal contingencies, such as praising stuttered speech. At other times parents gave contingencies or conducted activities that the children did not enjoy. A larger study with 40 parent–child pairs found similar results (Swift, O’Brian, Packman, Onslow, & Menzies, 2011). These results prompted the development of a checklist of beyond-clinic behaviours that parents might be advised to do during Lidcombe Program treatment in structured conversations. Speech pathologists could use this to aid problem-solving in the event treatment fails to progress to benchmark standards. In other words, the speech pathologist could use the checklist to identify and subsequently rectify what parents are doing incorrectly. Such a checklist could also be useful for preventing long-term problems developing in the first instance. This article outlines the development of the checklist and how its reliability was determined. We then demonstrate its use with two parent–child pairs.

Checklist development

Item development

The checklist was developed from a previous iteration of the Lidcombe Program guide (Packman, Webber, Harrison, & Onslow, 2008) and the Lidcombe Program clinical text (Onslow, Packman, & Harrison, 2003). The wording or inclusion of any of the checklist items is consistent with the current version of the guide (Packman et al., 2011). An initial 15-item version of the checklist was trialled by three independent speech pathologists experienced with the Lidcombe Program. Each completed the checklist for three beyond-clinic recordings of parents doing Lidcombe Program treatment during structured conversations. They



From top, Michelle Swift, Sue O’Brian, Mark Onslow, and Ann Packman

commented on any responses which were difficult to code. Absolute agreement between the three clinicians was 75%. This was calculated by dividing the number of responses which received an exact match between at least two of the speech pathologists by the total number of responses. Comments associated with each item were then used to refine the items and increase clarity of wording.

The refined checklist was trialled by two graduate-entry speech pathology students who had completed a Lidcombe Program clinic placement. In addition, the first author who had listened to over 350 recordings of parents conducting treatment at home with their children during the course of the checklist development made adjustments accordingly. This resulted in the addition of seven items. The guide (Packman et al., 2008) and clinical text (Onslow et al., 2003) were consulted to ensure that the new items were consistent with the manualised information.

Coding development

A three-category coding system was developed to capture the use of treatment components. Items could be coded as 1 (*almost never*), the treatment component is either not observed at all during the treatment session or is present but only in a limited number of instances; 2 (*sometimes*), the treatment component is used but is inconsistent or omitted enough times that a designation of “most of the time” is not applicable; and 3 (*most of the time*), the treatment component is used consistently during the vast majority or all of the treatment sessions.

Reliability

Three independent speech pathologists experienced with the Lidcombe Program each completed the updated checklist on three beyond-clinic recordings of treatment in structured conversations. The recordings ranged from 17 to 24 minutes in duration. The overall absolute agreement in ratings was 84%. The majority of items (12/22) had agreement above 80% and seven items had 78% agreement. The remaining three items related to the level of structure during the treatment conversation. Absolute agreement for these items was 22%, 67%, and 71%. A general item, *appropriate amount of structure applied to conversation*, attained 22% agreement only. Therefore it was removed from the checklist. Items attaining 67% and 71% reliability concerned whether the treatment conversation was understructured or overstructured, respectively. For these items, two of the speech pathologists showed exact agreement and the other speech pathologist designated the recording one category higher or lower. These items were retained.

In addition, the first author and a research assistant completed the checklist for 63 recordings from a larger multi-site study designed to investigate parent and child treatment behaviours during the Lidcombe Program. Recordings were selected to provide a cross-section from early, midway, and late in treatment, and the two treatment sites. Identical modal scores were obtained for 18 of the 21 items (86%). The remaining three items differed by one coding level.

Intra-judge reliability was calculated for the first author, who completed the checklist twice, at least one month apart, for 65 randomly allocated recordings. Identical modal scores were obtained for 18 of the 21 items (86%). The remaining three items differed by one coding level.

Clinical application of the checklist

When to use the checklist

Investigation of home treatment delivery should not occur until parents have been taught all key treatment components and have had time to develop their treatment skills. Research suggests that by the end of week 4 a 30% reduction of the median weekly severity rating score² occurs if treatment is progressing normally (Onslow, Harrison, Jones, & Packman, 2002). While this is a median value and some variation either side would be expected, for those parents and children who have not achieved a 30% reduction, the checklist could help identify if any treatment components are not being used as expected. These could be modified early in the treatment process before they cause any problems with treatment implementation.

How to use the checklist

The final checklist is printed in the appendix but as it contains abbreviated items speech pathologists are strongly encouraged to download the full version of the checklist which includes instructions from the Australian Stuttering Research Centre http://sydney.edu.au/health_sciences/asrc/health_professionals/asrc_download.shtml before using the checklist clinically. Table 1 also lists expanded versions of some of the checklist items. When using the checklist it is important to apply it to at least three recordings of home treatment sessions over a 2-week period because during the research it was noted that parents and children occasionally had treatment conversations which differed markedly from their usual ones. Behaviour patterns were defined as usual for a parent-child pair based on their modal checklist scores across multiple treatment recordings. Making clinical decisions on only one beyond-clinic recording is liable to result in biased conclusions and potentially inappropriate clinical responses.

Interpreting the checklist

When interpreting the results of this checklist it is important to remember that the Lidcombe Program is individualised for every family (Harrison, Ttofari, Rousseau, & Andrews, 2003). Hence the checklist needs to be interpreted differently for each family, in light of the following.

A designation of “almost never” most likely indicates a treatment error (unless the parent has been instructed otherwise) which may be having a deleterious effect on treatment efficacy or efficiency. If this is the case, the reasons for this coding need to be discussed and if appropriate the component taught again to the parent, with opportunities for the parent to observe the speech pathologist using the component, with practice in clinic before applying it at home. This component should be prioritised for remedial action.

A designation of “sometimes” indicates inconsistent use of a treatment component which may have a negative impact on the efficiency of the program. This component needs to be revisited with the parent in a timely fashion, with its importance emphasised.

A designation of “most of the time” indicates a treatment component which is being used appropriately by the parent. The parent should be informed of that success and no further attention to that treatment component is required at the present stage of treatment.

Case study profiles

In this section we present checklist profiles of two parent-child pairs from a larger research project to illustrate its use for clinical decision-making. These cases were chosen because they did not progress according to published benchmarks (Rousseau, Packman, Onslow, Harrison, & Jones, 2007) and it is possible that lack of fidelity in the application of treatment might have been a contributing factor. Upon completion of Stage 1 or withdrawal from the study, the checklist was completed for weekly beyond-clinic recordings across the course of treatment. Reported here are the modal scores on the checklist for all recordings across treatment. These are displayed in Table 1. The clinical implications of items designated as “sometimes” or “almost never” will be discussed.

It is arguable that if this checklist had been available and used early in treatment for these two families, some of the issues with treatment delivery could have been dealt with in a timely fashion, prompting a much more successful and expedient outcome for them.

Case Study 1

Demographics

This boy was 2 years 11 months old when treatment began. His average pre-treatment severity was 7.3 %SS from within- and beyond-clinic conversations with an average severity rating of 4 given within- and beyond-clinic by his mother, the speech pathologist, and a researcher. The within-clinic ratings were collected as part of routine clinical treatment. The beyond-clinic ratings were calculated from two 10 minute recordings, one with a familiar adult

and one with an unfamiliar adult, collected for the research project. Additionally, a typical rating for the previous week was given by the mother as part of the research data collection. He took 27 sessions and 36 weeks to complete Stage 1. At entry to Stage 2 his stuttering frequency within the clinic was 0.5 %SS and his speech pathologist gave a severity rating of 1. This concurred with his mother’s rating of 1 as typical of his severity for the week preceding Stage 2 entry.

Checklist profile

The majority of items, 17 of 21 (81%), received a modal score of 3, “most of the time.” Treatment duration was within the recommended 10 to 15 minutes for the majority of the weekly recordings of beyond-clinic treatment in structured conversations. If using the checklist to aid clinical decision-making, the speech pathologist would have encouraged the mother to continue administering these treatment components in that fashion.

However, Item 13, *non-invasive parent verbal contingencies appropriate to the conversation*, received a modal score of 1, “almost never.” Additionally, items receiving a score of 2 “sometimes” included Item 7, *variety in parent verbal contingency phrasing* and Item 8, *a range of parent verbal contingency types used*. The mother provided parent verbal contingencies at a rate that appeared invasive for the conversation. She praised every stutter-free utterance her son produced and this, combined with her lack of variation in phrasing and range of contingency types used, produced repetitive and monotonous feedback which was likely to rapidly lose any reinforcing properties. If that had been detected, the

Table 1. Modal scores for the two case studies

Checklist item	Case 1	Case 2
1. Parent verbal contingencies provided immediately after response	2	2
2. Parent verbal contingencies provided with a neutral, natural, non-punitive tone	3	3
3. Parent verbal contingencies provided by the trained parent only	3	3
4. Parent verbal contingencies applied to conversations rather than speech known to induce fluency, such as counting	3	3
5. Parent verbal contingencies clearly for stutter-free or stuttered speech and not another child behaviour	3	3
6. Parent verbal contingencies accurate for child response (e.g., parent verbal contingencies for stutter-free speech not given for stuttering)	3	3
7. Variety of parent verbal contingency phrasing	2	1
8. A range of parent verbal contingency types used	2	2
9. Only Lidcombe Program guide parent verbal contingencies used	3	3
10. More parent verbal contingencies for stutter-free than stuttered speech	3	3
11. Child appears to enjoy parent verbal contingencies for stutter-free speech	3	3
12. Parent verbal contingencies for stuttered speech are not received negatively by the child	3	3
13. Parent verbal contingencies non-invasive to the conversation	1	3
14. Treatment conversation is a positive experience for child	3	3
15. Primary focus of conversation is stuttering treatment, not correct pronunciation or the rules of the game	3	2
16. Parent and child engaged and focused on treatment, not distracted by others	3	3
17. Therapy given during an everyday activity a child and parent would conduct together	3	3
18. Activity results in an interactive conversation	3	3
19. Child stutters only occasionally	3	2
20. When the child responses range in length, parent verbal contingencies are primarily given for longer rather than shorter stutter-free utterances	3	2
21. Treatment duration 10–15 minutes (or as directed by clinician)	3	1

For Items 1 to 20, 3 = most of the time, 2 = sometimes, 1 = almost never. For Item 21, 3 = yes, 2 = no – shorter, 1 = no – longer.

speech pathologist might have encouraged the mother to use contingencies slightly less often and helped her to discover potential wording variations. Opportunities for speech pathologist and parent demonstration would have been provided in the clinic before the mother continued with the Lidcombe Program treatment at home.

The final item to receive a modal score of 2 “sometimes” was Item 1, *parent verbal contingencies provided as soon as possible after response*. This score indicates a delay or intrusion of parent speech between the child’s response and the contingency which, conceivably, could impair treatment efficiency. With such information, the speech pathologist might model contingency presentation again, and emphasise the importance of pairing the contingency promptly with a specific child response consistently throughout treatment.

Case Study 2

Demographics

This boy was 3 years 4 months old when treatment began. His average pre-treatment severity was 4.6 %SS within- and beyond-clinic with an average severity rating of 4.3 given within- and beyond-clinic by his mother, speech pathologist, and a researcher. Severity was determined in the same fashion as for Case Study 1. The child did not reach Stage 2. His mother withdrew him from treatment after 58 sessions and 89 weeks in Stage 1. At time of withdrawal the child’s stuttering frequency was 3.0 %SS and his speech pathologist gave a within-clinic severity rating of 3.

Checklist profile

Fifteen items (71%) received a modal score of 3 “most of the time.” Five items (24%) received a modal score of 2 “sometimes” and one item received a modal score of 1 “almost never”.

Item 7 *variety in parent verbal contingency phrasing* received a modal score of 1, suggesting it would have benefited from immediate investigation. The lack of variety in the mother’s phrasing of the parent verbal contingencies might have been because the child preferred a particular phrase or because the mother had developed a habit of using only the one phrase. Lack of variation in phrasing, combined with a lower range of contingency types used (Item 8), potentially might prompt a child to “tune out” and subsequently ignore the contingencies. Parent verbal contingencies being provided after a delay instead of immediately (Item 1) is also a potential impairment to the valence of the contingencies. A speech pathologist could respond to this similarly to Case Study 1 by explaining, demonstrating and helping the parent to problem-solve, then watching the parent demonstrate and providing appropriate feedback before the parent attempted treatment delivery at home during the coming week.

Receiving a modal score of 2, Item 19 *child stutters only occasionally* and Item 20 *parent verbal contingencies given for longer rather than shorter stutter-free utterances* indicate that the speech pathologist should address the level of structure during the conversation. The checklist indicated that the child’s speech sometimes contained more stuttering than is recommended (Item 19). On the other hand, although he also produced some longer stutter-free utterances his mother did not always provide contingencies for them and instead directed her contingencies to the shorter ones. Both under- and overstructured conversations

might hinder progress through Lidcombe Program treatment (Harrison et al., 2003). Speech pathologists faced with this checklist profile might demonstrate and provide feedback to parents about methods to achieve an appropriate level of structure. Conversational structure can be varied through the activity chosen and conversational forms used. Providing a range of activities in clinic with which to demonstrate treatment and asking the parent to explain the rationale for the activity chosen can also help the parent transfer these skills into the home environment (S. Lees, personal communication, 27 September 2010).

Finally, a modal score of 2 for Item 15, *primary focus of session is stuttering treatment*, indicated that the mother was not always focusing on stuttering during the treatment conversations. At times she insisted upon correct pronunciation of words and playing games by the correct rules, to a degree that these things took precedence over treatment. In order to receive what is thought to be an appropriate dose, it is important that stuttering treatment remains the focus throughout the entire 10–15 minute structured conversation. These issues might not be obvious during the within-clinic demonstrations because they often are shorter than at home and the clinic environment naturally provides a focus entirely on stuttering treatment. With this information about focus, a speech pathologist can discuss with the parent the purpose of the treatment during structured conversations.

Final comments

For treatments such as the Lidcombe Program, where the parent delivers the treatment in the natural environment, there is value in documenting how treatment is in fact being delivered. This is particularly the case because research suggests that not all community speech pathologists are achieving Lidcombe Program outcomes consistent with the available evidence base. A reason for this may be departures from the treatment guide which provides instruction about best practice delivery of the Lidcombe Program. This article has documented the development and application of a clinical checklist which can help speech pathologists to gain more information about how parents are conducting Lidcombe Program treatment. Future research using the checklist could include a comparison of parent treatment delivery during the within-clinic demonstration with that provided beyond the clinic, and an investigation into the clinical benefits of using the checklist with prospective cases. Clinically, this resource is now available for speech pathologists to use during their daily clinical practice from http://sydney.edu.au/health_sciences/asrc/health_professionals/asrc_download.shtml.

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References

Bellg, A. J., Borrelli, B., Resnick, B., Hecht, J., Minicucci, D. S., Ory, M., ... Czajkowski, S. (2004). Enhancing treatment fidelity in health behavior change studies: Best practices and recommendations from the NIH behavior change consortium. *Health Psychology, 23*(5), 443–451.

Appendix. Lidcombe Program Checklist: Treatment in structured conversations

Recording ID / Client name _____				
	Almost never	Sometimes	Most of the time	Comments
1. PVCs provided as soon as possible after response				
2. PVCs provided with a neutral, natural, non-punitive tone				
3. PVCs provided by the trained parent only				
4. PVC applied to conversations rather than fluency-inducing speech				
5. PVCs clearly for stutter-free (SF) or stuttered speech				
6. PVCs accurate for child speech (e.g. SF PVCs only given for SF speech)				
7. Variety of PVC phrasing				
8. A range of PVC types used				
9. Only use of PVCs listed in the LP manual				
10. More PVCs for stutter-free than stuttered speech				
11. Child perceives PVCs for SF speech as rewarding				
12. PVCs for stuttered speech are not received negatively				
13. Non-invasive PVCs appropriate to conversation				
14. Treatment is a positive experience for child				
15. Primary focus of session is stuttering treatment				
16. Parent & child engaged and focused on treatment				
17. Therapy in everyday environment				
18. Session is an interactive activity				
19. Child stutters only occasionally				
20. PVCs given for longer rather than shorter stutter-free utterances				
21. Treatment duration 10–15 minutes (or as recommended by clinician)	No – longer	No – shorter	Yes	

Harrison, E., Ttofari, K., Rousseau, I., & Andrews, C. (2003). Troubleshooting. In M. Onslow, A. Packman & E. Harrison (Eds.), *The Lidcombe Program of early stuttering intervention: A clinician's guide* (pp. 91–99). Austin, TX: Pro-Ed.

Kaderavek, J. N., & Justice, L. M. (2010). Fidelity: An essential component of evidence-based practice in speech-language pathology. *American Journal of Speech-Language Pathology, 19*, 369–379.

O'Brian, S., Jones, M., Iverach, L., Onslow, M., Packman, A., & Menzies, R. (2011, September). *Exploring the translation of Lidcombe Program research into Australian community clinics*. Poster presented at the 9th Oxford Dysfluency Conference, Oxford, UK.

Onslow, M., Harrison, E., Jones, M., & Packman, A. (2002). Beyond-clinic speech measures during the Lidcombe Program of early stuttering intervention. *ACQuiring Knowledge in Speech, Language and Hearing, 4*(2), 82–85.

Onslow, M., Jones, M., Menzies, R., O'Brian, S., & Packman, A. (2012). Stuttering. In P. Sturmey & M. Hersen (Eds.), *Handbook of evidence-based practice in clinical psychology*. Hoboken, NJ: Wiley.

Onslow, M., Packman, A., & Harrison, E. (Eds.). (2003). *The Lidcombe Program of early stuttering intervention: A clinician's guide*. Austin, TX: Pro-Ed.

Packman, A., Onslow, M., Webber, M., Harrison, E., Lees, S., Bridgman, K., & Carey, B. (2011). *The Lidcombe Program of early stuttering intervention treatment guide*. Retrieved from http://sydney.edu.au/health_sciences/asrc/docs/lp_manual_2011.pdf

Packman, A., Webber, M., Harrison, E., & Onslow, M. (2008, April). *Manual for the Lidcombe Program of early stuttering intervention*. Retrieved from http://sydney.edu.au/health_sciences/asrc/docs/LP_Manual_English_April_2008.pdf

Romski, M., Sevcik, R. A., Adamson, L. B., Cheslock, M., & Smith, A. (2007). Parents can implement AAC interventions: Ratings of treatment implementation across early language interventions. *Early Childhood Services, 1*(4), 249–259.

Rousseau, I., Packman, A., Onslow, M., Dredge, R., & Harrison, E. (2002). Australian speech pathologists' use of the Lidcombe Program of early stuttering intervention. *ACQuiring Knowledge in Speech, Language and Hearing, 4*, 67–71.

Rousseau, I., Packman, A., Onslow, M., Harrison, E., & Jones, M. (2007). An investigation of language and phonological development and the responsiveness of preschool age children to the Lidcombe Program. *Journal of Communication Disorders, 40*, 382–397.

Shenker, R., Hayhow, R., Kingston, M., & Lawlor, D. (2005). *Evaluation of clinicians' attitudes regarding treatment of stuttering following participation in the Lidcombe Program clinician training workshops*. Paper presented at the 7th Oxford Dysfluency Conference, Oxford, UK.

Swift, M. C., O'Brian, S., Hewat, S., Onslow, M., Packman, A., & Menzies, R. (2011). Investigating parent delivery of the Lidcombe Program. *International Journal of Speech-Language Pathology, 13*(4), 308–316.

Swift, M. C., O'Brian, S., Packman, A., Onslow, M., & Menzies, R. (2011, June). *The Lidcombe Program: Are parents really conducting treatment at home as we think they are?* Poster presented at the Diversity and Development Speech Pathology Australia National Conference, Darwin, Australia.

Williams, K. R. (2006). The Son-Rise Program intervention for autism: Prerequisites for evaluation. *Autism, 10*, 86–102.

- 1 The guide is downloadable free of charge from the Australian Stuttering Research Centre: http://sydney.edu.au/health_sciences/asrc/docs/lp_manual_2011.pdf
- 2 1 = no stuttering, 2 = extremely mild stuttering, and 10 = extremely severe stuttering

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Fibreoptic Endoscopic Evaluation of Swallowing (FEES)

Models of service delivery and approaches to training

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KEYWORDS

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EVALUATION OF
SWALLOWING
(FEES)

SERVICE DELIVERY
MODELS

TRAINING

THIS ARTICLE
HAS BEEN
PEER-
REVIEWED



Michelle Cimoli
(top) and Joanne
Sweeney

Fibreoptic Endoscopic Evaluation of Swallowing (FEES) is an instrumental swallowing assessment increasingly used by speech pathologists (SPs) in Australia. The Speech Pathology Australia (SPA) position paper published in 2007 reflected the growing use of the technique by SPs in Australia at the time. Evidence supporting the use of FEES for diagnostic and treatment purposes has continued to strengthen, and now demonstrates that FEES can provide important clinical information to guide management of dysphagia. Many models of FEES service delivery remain strongly influenced by historical attitudes to the use of endoscopy. Some of these models are expensive and impose a significant cost on health care providers in terms of paid time, as well as having an impact on how patients can access the procedure. This paper provides a brief overview of the relevant literature regarding FEES, including a discussion of some of the points of difference between videofluoroscopic swallowing studies (VFSS) and FEES. The paper also discusses service delivery models and approaches to training. A well-considered approach to training is an integral part of developing a sustainable FEES service to ensure safe, effective, and equitable access to patients.

Instrumental swallowing assessments

Speech pathologists use both clinical (non-instrumental) and instrumental techniques to assess swallowing function (American Speech-Language Hearing Association [ASHA], 2000; Carnaby-Mann & Lenius, 2008); College of Audiologists Speech-Language Pathologists of Ontario [CASLPO], 2007. In many instances, an individual patient's swallowing function is assessed using both clinical and instrumental assessments. Videofluoroscopic swallowing studies (VFSS) and fibreoptic endoscopic evaluation of

swallowing (FEES) are the most widely employed instrumental swallowing assessments used to evaluate oro-pharyngeal swallowing function. As instrumental swallowing assessments, both FEES and VFSS aim to achieve the same broad objectives. They can be used to discriminate between normal versus abnormal swallowing and where dysphagia is identified, to determine the level of function and impairment ([CASLPO], 2007 and [ASHA], 2000). Both FEES and VFSS enable judgements to be made about which textures, consistencies, volumes, rate, and methods of delivery maximise safety and efficiency of the swallow. Both examinations can also be used to evaluate the effectiveness of compensatory or rehabilitative interventions (Carnaby-Mann & Lenius, 2008; Leder & Murray, 2008).

VFSS and FEES

VFSS is the most widely used instrumental swallowing assessment. VFSS provides radiographic images of the upper aerodigestive tract, enabling observations to be made of the oral, pharyngeal, and upper oesophageal phases of swallowing, as well as the interplay between these various stages of swallowing (Martin-Harris & Jones, 2008). This view is generally regarded as providing the superior view of oral stage function (Langmore, 2001). It is also often the more appropriate examination when symptoms are vague, and an overview of swallowing function across the various phases is indicated (Langmore, 2001).

The value of the visual images provided by VFSS depends on the clinical question that needs to be answered for a particular patient's clinical management. There are also practical and logistical considerations that may limit access to VFSS for some patients.

FEES is not only an alternative instrumental assessment to VFSS. It is an examination that can provide unique information about swallowing function that, for some patients, may be more clinically relevant. FEES involves passing the flexible portion of an endoscope (nasendoscope/rhinolaryngoscope) through the nose while connected to a camera to enable audio-visual images to be captured. In the oro-pharynx, where the scope is positioned for the most part of the examination, ideally, the base of tongue and laryngeal vestibule are in full view. The scope can be advanced inferiorly to enable the sub-glottic region to be visualised.

Research has shown FEES to be a viable tool for identifying and characterising features of swallowing

function, with studies demonstrating its applications for specific populations such as those suffering from neurological disorders such as stroke (Seidl, Nusser-Muller-Busch, Westhofen, & Ernst, 2008; Warnecke et al., 2009a; Warnecke et al., 2009b), severe brain injury (Brady, Pape, Darragh, & Escobar, 2009), neurodegenerative and neuromuscular disorders (Coscarelli, Verrecchia, & Coscarelli, 2007; Warnecke, Duning et al., 2010; Warnecke, Oelenberg et al., 2010; Warnecke et al., 2008), recurrent laryngeal nerve paralysis (Perie, Roubeau, & Lacau St Guily, 2003), and tracheostomy (Hales, Drinnan, & Wilson, 2008).

Different fields of view

The fields of view obtained via FEES and VFSS are very different. Figure 1 shows a side-by-side comparison of the typical field of view for VFSS and FEES.

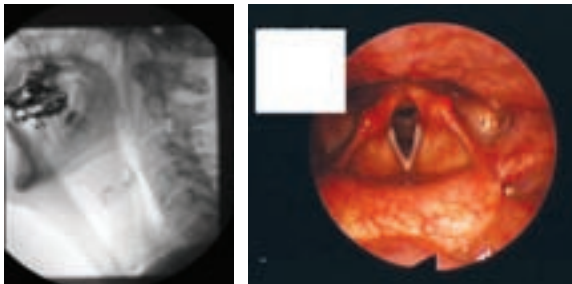


Figure 1. Radiographic image taken in the lateral plane during VFSS (left). Endoscopic image taken with endoscope positioned in the oropharynx during FEES (right)

As shown, the field of view obtained via FEES enables the surface anatomy of the pharyngeal and laryngeal structures to be visualised. In this position, the movement of these structures in response to swallowing can be evaluated. There is a brief moment at the height of the swallow when the visual image is interrupted due to contact made between the objective lens of the endoscope and surrounding tissue (Langmore, 2001; Leder & Murray, 2008). Although many may argue that this is a critical moment in a swallowing evaluation, and that aspiration during the swallow cannot therefore be observed, researchers have identified that aspiration during the swallow occurs much less frequently than aspiration before or after the swallow (Smith, Logemann, Colangela, Rademaker, & Pauloski, 1999). Through the use of ionising radiation, VFSS enables the submucosal structures of the entire upper aerodigestive tract to be visualised while a patient swallows a radio-opaque bolus. These views enable the oral, pharyngeal, and upper oesophageal phases of swallowing to be observed, including the dynamic interplay between the various anatomical structures of this region (Martin-Harris & Jones, 2008). These views enable the movement of the bolus to be observed as it moves from the oral cavity through the upper oesophageal sphincter.

FEES enables secretions to be *directly* visualised and the management of these secretions to be evaluated without the patient being required to ingest food/fluids, as shown in Figure 2. Significant predictive relationships have been identified between the presence of pharyngeal secretions and aspiration (Donzelli, Brady, Wesling, & Craney, 2003; Langmore et al., 1998; Linden, Kuhlmeier, & Patterson, 1993; Murray, Langmore, Ginsberg, & Dostie, 1996). Accumulation of pharyngeal secretions can sometimes be inferred with VFSS, when the ingested contrast-laden material adheres to these secretions. However, a

reasonable amount of contrast needs to be swallowed for these observations to be made. This may pose significant risk to patients where secretion management is an issue.



Figure 2. Endoscopic view showing secretions throughout the pharynx and larynx

Radiographic imaging via VFSS provides information about how atypical submucosal structures such as cervical osteophytes impact on swallowing function (Langmore, 2001). FEES provides a *direct* view of the surface anatomy of the pharynx and larynx (Rugiu, 2007). This view enables the impact of abnormal surface anatomy such as oedema, mucositis, as well the effect of the presence or reduction in oral secretions on swallowing function, to be examined. Reduced saliva production, xerostomia, and inflammatory processes has been found to be associated with an increased incidence of pain and discomfort associated with swallowing (Ku et al., 2006; Logemann et al., 2001; Wu, Hsiao, Ko, & Hsu, 2000) and to negatively affect the ability to satisfy nutritional requirements orally (Scully, Epstein, & Sonis, 2003; Worthington et al., 2010).

Judgments regarding pharyngeal residue, or penetration and aspiration can be influenced by the type of instrumental swallowing examination used (Kelly, Drinnan, & Leslie, 2007; Kelly, Leslie, Beale, Payten, & Drinnan, 2006). Researchers have shown that observers rate pharyngeal residue, penetration, and aspiration as more impaired when evaluating swallowing via FEES compared to ratings made via VFSS (Kelly et al., 2007; Kelly et al., 2006). These differences are likely to be associated with the indirect versus direct nature of the images provided by VFSS and FEES, respectively. Radiographic imaging provides *indirect* views of the food/fluid bolus being swallowed, and indirect information about the anatomy and physiology of swallowing functions (Rugiu, 2007). In contrast, FEES provides *direct* views of food/fluid bolus and residue within the hypopharynx (Rugiu, 2007). Figure 3 attempts to illustrate how the source of the visual images can affect the judgements made about pharyngeal residue (Rugiu, 2007). Although these images have not been taken from the same patient, they still provide a useful comparison. The image on the left is taken from a VFSS. This picture shows post swallow residue localised mainly to the valleculae, with a lesser amount in the pyriform fossae. The image on the right is taken from a FEES. Similarly, it shows post swallow residue localised mainly in the valleculae with a lesser amount in the pyriform fossae.

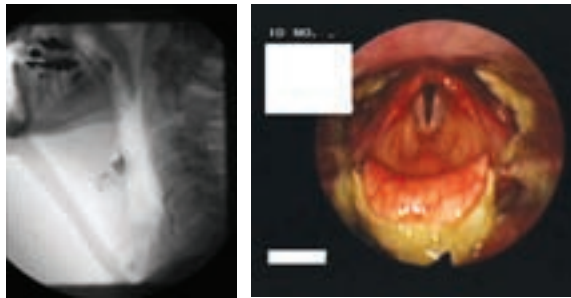


Figure 3. Lateral radiograph (left) showing residue in the valleculae. Endoscopic view (right) showing residue in the valleculae

In some instances, FEES may provide better visualisation of aspiration or penetration. Figure 4 depicts how FEES is able to identify penetration, where a lateral VFSS image may not have permitted such vision (the pooling in the pyriform fossae would obscure the contrast in the laryngeal vestibule). VFSS, however, is the most suitable examination when the proportion of a bolus that is aspirated needs to be quantified (Langmore, 2001).

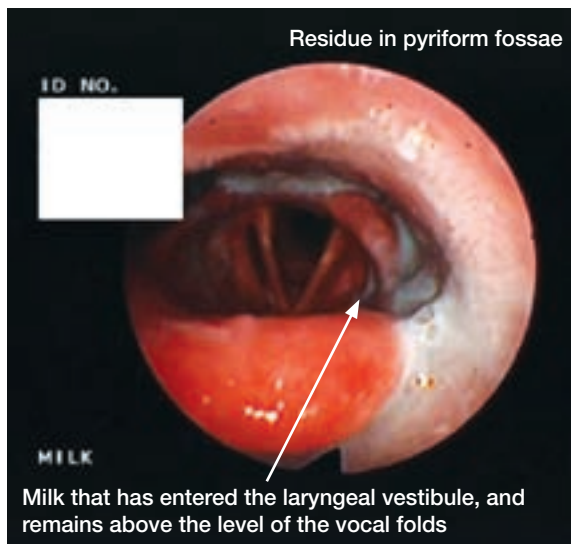


Figure 4. Endoscopic view showing milk residue in the left pyriform fossae and the left lateral channel. Milk can also be seen within the laryngeal vestibule, above the level of the vocal folds

Practical and logistical differences

There are also distinct practical and logistical differences between FEES and VFSS. For example, FEES doesn't involve exposing the patient to radiation, and therefore, may be considered the most suitable examination when the purpose of the examination is to evaluate the effect of biofeedback on swallowing function (Denk & Kaider, 1997). Similarly, FEES can be conducted as an extended examination to enable observations regarding how fatigue might impact on swallowing function (Warnecke et al., 2008), repeated examinations for patients with progressive neurological conditions (Leder, 1998), or a conservative examination where perhaps swallow trials would be unsafe for the patient (Langmore, 2001). The portable nature of FEES also means that patients who may have otherwise been limited to clinical swallowing assessment as a result of the acute nature or fragility of their primary medical condition, or physical status including issues with positioning, are able to undergo instrumental assessment to

better inform treatment and management of dysphagia. This may be a relevant consideration in smaller sized health services without an on-site radiology department. FEES has the potential to improve patient access to instrumental assessment.

Neither FEES nor VFSS can be considered to be an *objective* swallowing assessment, nor to be a *gold standard*. Both VFSS and FEES rely on the clinician observing the procedure to make *subjective* judgement about the visual images obtained. These visual observations are vulnerable to various influences, human factors, errors, and biases. Training in the use of instrumental swallowing assessments improves clinicians' ability to use these tools, and can improve the reliability of how observers identify anatomical landmarks and evaluate the function of physiological events associated with swallowing (Logemann, Lazarus, Keeley, Sanchez, & Rademaker, 2000; Wooi, Scott & Perry, 2001; Warnecke et al., 2009b).

There is a growing appreciation and acknowledgement of the complementary information that VFSS and FEES provide, and where the findings from both examinations are integrated, speech pathologists are equipped to provide a responsive and effective plan for treating and managing dysphagia (Rugiu, 2007).

Models of service delivery

A FEES procedure can be considered as having three components:

- technical – insertion and operation of the endoscope;
- procedural – direction of the procedure including providing instruction to the patient and decision-making regarding textures, volumes, compensatory and rehabilitative techniques, and manoeuvres to be trialed;
- interpretive – reviewing images on-line and via the recordings to evaluate swallowing function, and in turn use this information to make clinical recommendations to optimise swallowing safety and efficiency.

Figure 5 shows a speech pathologist performing FEES. SPs with the appropriate competencies can be responsible for performing all components of the procedure (SPA, 2003). However, FEES is considered to be an advanced practice role (SPA, 2003). The competencies required to conduct FEES are not currently addressed in speech pathology undergraduate (entry-level) training.



Figure 5. Michelle Cimoli, speech pathologist, performing FEES in an outpatient clinic at Austin Health

A reasonable body of published research now demonstrates the safety of FEES when it is conducted by trained SPs (Aviv et al., 2000; Aviv, Murry, Zschommler,

Cohen & Gartner, 2005; Cohen et al., 2003). However, the historical influences of endoscopy being performed by otolaryngologists for laryngeal examination continue to affect the models of service delivery that operate within various health services. In many contexts, a more expensive model of service delivery exists whereby an otolaryngologist, or another medical officer from another specialty (e.g., gastroenterology, radiation oncology, respiratory, intensive care) performs the technical components of the procedure, i.e., inserting and manipulating the endoscope. A crude cost analysis of this model compared to costs of models of service delivery where a speech pathologist is trained and responsible for inserting and operating the endoscope demonstrates considerable cost savings where SPs are trained and competent to perform all components of the procedure (refer to Table 1. Cost comparison of FEES service delivery models [Cimoli & Sweeney, 2009]). Although these costs are based on financial modeling completed in 2009, they still provide a useful proportional comparison of associated staffing costs.

The cheapest model of service delivery for FEES is model A. This model involves two staff members, a SP and a nurse, and uses high-level disinfection procedures to clean and reprocess endoscopes. The choice of using either high-level disinfection or sterilisation to clean and reprocess endoscopes is decided by local hospital policy. If sterilisation was used, costs would be higher.

Model B is the most expensive model. The full costs incurred by this model are difficult to determine. Given that this model has a direct impact on the availability of medical staff to conduct medical core business, this model may contribute to significantly greater costs by increasing the pressure on already under-resourced health services with regard to access and availability of medical personnel.

While a speech pathologist may undertake FEES independently, this in no way changes the fundamental

approach to dysphagia assessment and management. The multifactorial nature and aetiology of dysphagia, as well as the potential consequences associated with dysphagia, require SPs to work as a team with other health professionals, patients, families, and carers. While the composition of these teams depends on the aetiology of dysphagia, clinical indicators, and model of service delivery that operates within a health facility, an interdisciplinary approach to dysphagia assessment and management is well supported in the literature.

Approaches to training

Developing and maintaining the competency of the health care workforce is a critical factor in ensuring the safety and effectiveness of services provided to patients. A speech pathologist should be alert to whether he/she possesses the appropriate qualifications as well as recognising and acknowledging the limits of his/her individual professional competency (Code of Ethics [SPA, 2010]). Individuals who cannot demonstrate the required level of skill in a particular area must seek further advice and guidance to enable them to practise at a certain level. This may include further education and training from a more experienced SP, supervisor, the employing organisation, or the service purchaser.

Like many other advanced practice roles that are undertaken within contemporary speech pathology practice, the competencies required to perform FEES are not addressed in undergraduate (entry-level) speech pathology training in Australia. FEES is considered an advanced practice role (SPA, 2003, 2007). SPs intending to perform FEES should therefore seek their employer's approval to perform the procedure through formal credentialing processes to establish and verify a SP's competence to perform FEES (SPA, 2007).

Professional development courses and workshops regarding FEES are available in Australia and internationally,

Role	Time (mins)	Model A	Model B	Model C	Model D
		2 staff	3 staff	3 staff	3 staff
Endoscopist to insert and manipulate endoscope	30	SP 1	MO 1	SP 1	SP 1
Direct procedure	30	SP 1	SP 1	SP 1	SP 1
Interpret procedure/write report	20	SP 1	SP 1	SP 1	SP 1
Assistant to feed patient, operate equipment	30	RN 1	SP 1	SP 2	AHA
Manage adverse events	30	RN 1	MO 1	RN 1	RN 1
Cleaning and reprocessing of nasendoscope high level disinfection	20	RN 1	RN 1	RN 1	RN 1
Staffing Costs	time(mins)/staff member	50/SP \$27.17 50/RN \$20.93	30/MO \$48.85 40/SP \$27.11 20/RN \$8.29	80/SP \$43.48 50/RN \$20.93	50/SP \$27.17 30/AHA \$10.23 50/RN \$20.93
Cleaning and reprocessing nasendoscope costs	per scope	\$12.50	\$12.50	\$12.50	\$12.50
TOTAL COST/HOUR		\$54.10	\$90.25	\$70.39	\$64.33
<p>NB: This cost comparison represents a proportional analysis, and should not be taken as absolute costs associated with the various models presented. (Different awards, rates of pay, and classifications operate across the various Australian states and territories.) SP – Speech pathologist MO – Medical officer AHA – Allied health assistant RN – Registered nurse</p>					

From "Operational, financial and clinical governance considerations when developing and implementing a Fiberoptic Endoscopic Evaluation of Swallowing (FEES) Service: An advanced practice role" by M. Cimoli and J. Sweeney, 2009, http://www.health.vic.gov.au/_data/assets/pdf_file/0004/374242/Fees-Final-Report-October09.pdf. Copyright by Department of Health Victoria. Reprinted with permission.

and may provide some evidence to an employer in procedures to verify an individual's competency to perform FEES. However, these courses and workshops do not usually assess participants' competency in performing the procedure. Employers are therefore obliged to devise their own means of assessing competency in FEES. This may be difficult in situations where there are no other individuals who are competent to perform FEES at that workplace. In these instances, there are issues regarding *who* is suitably qualified to conduct the assessment, and *what* do they assess?

Better Skills Best Care (BSBC) was a Victorian project funded by Department of Health Victoria (formerly Department of Human Services [DHS]) that aimed to address the issue of access, availability, and quality of training in areas of workforce redesign and role advancement and extension (DHS, 2007). The project provided a framework for developing and assessing of competency of new and extended work roles. As an area of advanced practice, the use of FEES by SPs was identified as a work role that could enhance patient care in the area of dysphagia. At the time, opportunities for a training program with a strong pedagogical basis were limited. Department of Health Victoria commissioned La Trobe University School of Human Communication Sciences and Austin Health Speech Pathology Department to develop and deliver a training program to teach and examine the competencies required to perform FEES. A number of Melbourne metropolitan hospitals were involved in the project as pilot sites and funded by DHS to nominate SP staff to participate in the FEES training course.

The pilot course funded by Department of Health Victoria was run from June to December 2007. It was then delivered by La Trobe University in conjunction with Austin Health. A problem-based learning approach supported the adult learning educational framework of the course, with mastery learning activities (e.g., self-study and workplace training) incorporated to ensure a solid link was made between the learning outcomes achieved in coursework and participants' abilities to undertake the procedure in their local workplaces. The coursework component of the course amounted to approximately 30 hours, with participants required to complete approximately 8 hours of self-study using pre-recorded FEES images, interactive multimedia programs, texts and journal articles, and approximately 20 hours of local workplace training.

The La Trobe University/Austin Health short course takes some positive steps towards training SPs to competency in the use of FEES, with 21 SPs successfully completing all the requirements of the course. However, the 2007 and 2008 versions of the course were unable to include training in the *technical* competencies required to perform FEES. The course was also limited to individuals who had access to the relevant equipment and supervision for training. Continued progress is required to develop professional development opportunities with a standardised approach to training that support a model of service delivery in which SPs are independent in all components of the procedure, including inserting and manipulating the endoscope. This model of service delivery will work towards improving patient access to instrumental assessment of swallowing function, and will ultimately be more cost-effective than the other models of service delivery previously discussed. The course is currently under review, with the vision to include a

greater component of on-line activities to improve flexibility in learning as well as activities to maintain competency. Future training models may incorporate the use of simulation as has been used by colleagues in the USA (Benadom & Potter, 2010).

Conclusion

FEES is an instrumental tool that provides unique and complementary visual information about swallowing function compared to VFSS. It has the capacity to improve patient access to an instrumental swallowing assessment, and may also contribute to more timely and comprehensive diagnosis and management of dysphagia. In many cases where the underlying pathophysiology of a presenting dysphagia remains unclear, and it is difficult to establish a set of recommendations to maximise swallowing safety and efficiency, it may be very useful to undertake both VFSS and FEES in order to develop a more comprehensive representation of swallowing. Health services with established FEES services and those intending to introduce FEES into clinical practice should continue to work towards maximising patient access to this procedure by developing and implementing cost-effective service delivery models where SPs are competent to perform all components of the procedure. Supporting these service delivery models with a consistent and rigorous approach to training will assist in developing and promoting standards of practice that optimise the safety and effectiveness of the procedure. The transition towards more speech pathologists undertaking FEES independently should not be seen as a threat to an interdisciplinary approach to the management of dysphagia. Speech pathologists, whether they use VFSS and/or FEES as part of their management of dysphagia, need to ensure that their clinical decisions are based on the needs of an individual patient, and where possible, informed by scientific evidence.

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References

- American Speech-Language-Hearing Association. (2000). *Clinical Indicators for Instrumental Assessment of Dysphagia* [Guidelines]. Retrieved from <http://www.asha.org/docs/pdf/GL2000-00047.pdf>
- Aviv, J. E., Kaplan, S. T., Thomson, J. E., Spitzer, J., Diamond, B., & Close, L. G. (2000). The safety of flexible evaluation of swallowing with sensory testing (FEESST): An analysis of 500 consecutive evaluations. *Dysphagia*, 15, 39–44.
- Aviv, J. E., Murry, T., Zschommler, A., Cohen, M., & Gartner, C. (2005). Flexible endoscopic evaluation of swallowing with sensory testing: patient characteristics and analysis of safety in 1,340 consecutive examinations. *Annals of Otolaryngology, Rhinology, and Laryngology*, 114, 173–176.

- Benadom, E. M., & Potter, N. L. (2010). The use of simulation in training graduate students to perform transnasal endoscopy. *Dysphagia*, 26, 352-360.
- Brady, S. L., Pape, T., L-B, Darragh, M., & Escobar, N. G. (2009). Feasibility of instrumental swallowing assessments in patients with prolonged disordered consciousness while undergoing inpatient rehabilitation. *Journal of Head Trauma Rehabilitation*, 24(5), 384-391.
- Carnaby-Mann, G., & Lenius, K. (2008). The bedside examination in dysphagia. *Physical Medicine and Rehabilitation Clinics of North America*, 19(4), 747-768.
- Cimoli, M., & Sweeney, J. (2009). *Operational, financial and clinical governance considerations when developing and implementing a fiberoptic endoscopic evaluation of swallowing (FEES) service: An advanced practice role*. Discussion paper prepared for Service and Workforce Planning, Department of Human Services, Victoria. Available on request from authors or Department of Health Victoria <http://www.health.vic.gov.au/workforce/skills>
- Cohen, M.A., Setzen, M., Perلمان, P. W., Ditkoff, M., Matutucci, K. F., & Guss, J. (2003). The safety of flexible endoscopic evaluation of swallowing with sensory testing in an outpatient otolaryngology setting. *Laryngoscope*, 113(1), 21-24.
- College of Audiologists Speech-Language Pathologists of Ontario (CASLPO). (2007). *Practice standards and guidelines for dysphagia*. Retrieved from <http://www.caslpo.com/PracticeStandards/PreferredPracticeGuidelines/Dysphagia/tabid/166/Default.aspx>
- Coscarelli, S., Verrecchia, L., & Coscarelli, A. (2007). Endoscopic evaluation of neurological dysphagic patients. *ACTA Otorhinolaryngologica Italica*, 27, 281-285.
- Denk, D-M., & Kaider, A. (1997). Videoendoscopic biofeedback: A simple method to improve the efficacy of swallowing rehabilitation of patients after head and neck surgery. *ORL – Journal for Oto-Rhino-Laryngology And Its Related Specialties*, 59, 100-105.
- Department of Human Service, Service and Workforce Planning. (2006). Better Skills Best Care (BSBC) DHS Workforce Design Strategy Overview – 2007. http://www.health.vic.gov.au/_data/assets/pdf_file/0006/306699/bsbc_oview_poster.pdf
- Donzelli, J., Brady S., Wesling M., & Craney, M. (2003). Predictive value of accumulated oropharyngeal secretions for aspiration during video nasal endoscopic evaluation of the swallow. *Annals of Otolaryngology, Rhinology, and Laryngology*, 112, 469-475.
- Hales, P. A., Drinnan, M. J., & Wilson, J. A. (2008). The added value of fiberoptic endoscopic evaluation of swallowing in tracheostomy weaning. *Clinical Otolaryngology*, 33, 319-324.
- Kelly, A. M., Drinnan, M. J., & Leslie, P. (2007). Assessing penetration and aspiration: How do videofluoroscopy and fiberoptic endoscopic evaluation of swallowing compare? *Laryngoscope*, 117, 1723-1727. doi: 10.1097/MLG.0b013e318123ee6a
- Kelly, A. M., Leslie, P., Beale, T., Payten, C., & Drinnan, M. J. (2006). Fiberoptic endoscopic evaluation of swallowing and videofluoroscopy: Does examination type influence perception of pharyngeal residue severity? *Clinical Otolaryngology*, 31, 425-432.
- Ku, P. K., Yuen, E. H., Cheung, D. M., Chan, B. Y., Ahuja, A., Leung, S. F., Tong, M. C., & Van Hasselt, A. (2006). Early swallowing problems in a cohort of patients with nasopharyngeal carcinoma: Symptomology and videofluoroscopic findings. *Laryngoscope*, 117, 142-146.
- Langmore, S. E. (2001). *Endoscopic evaluation and treatment of swallowing disorders*. New York: Thieme.
- Langmore, S. E., Terpenning, M. S., Schork, A., Chen, Y., Murray, J. T., Lopatin, D., & Loesche, W. J. (1998). Predictors of aspiration pneumonia: How important is dysphagia? *Dysphagia*, 13, 69-81.
- Leder, S. B. (1998). Serial fiberoptic endoscopic swallowing evaluation in the management of patients with dysphagia. *Archives of Physical Medicine and Rehabilitation*, 79, 1264-1269.
- Leder, S. B., and J. T. Murray (2008). Fiberoptic Endoscopic Evaluation of Swallowing. *Physical Medicine and Rehabilitation Clinics in North America*, 19, 787-801.
- Linden, P., Kuhlmeier, K. V., & Patterson, C. (1993). The probability of correctly predicting subglottic penetration from clinical observations. *Dysphagia*, 8, 170-179.
- Logemann, J. A., Smith, C. H., Pauloski, B. R., Rademaker, A. W., Lazarus, C. L., Colangelo, L. A., ... & Newman, L.A. (2001). Effects of xerostomia on perception and performance of swallow function. *Head Neck*, 23(4), 317-21.
- Logemann, J. A., Lazarus, C. L., Keeley, S. P., Sanchez, A., & Rademaker, A. W. (2000). Effectiveness of four hours of education in interpretation of radiographic studies. *Dysphagia*, 15(4), 180-183.
- Martin-Harris, B. & Jones, B. (2008). The videofluorographic swallowing study. *Physical medicine and rehabilitation clinics of North America*, 19(4), 769-785.
- Murray, J., Langmore, S. E., Ginsberg, S., & Dostie, A. (1996). The significance of accumulated oropharyngeal secretions and swallowing frequency in predicting aspiration. *Dysphagia*, 11, 99-103.
- Perie, S., Roubeau, B., & Lacau St Guily, J. (2003). Laryngeal paralysis: Distinguishing Xth nerve from recurrent nerve paralysis through videoendoscopic swallowing study (VESS). *Dysphagia*, 18(4), 276-283. doi: 10.1007/s00455-003-0025-7
- Rugiu, M. G. (2007). Role of videofluoroscopy in evaluation of neurologic dysphagia. *ACTA Otorhinolaryngologica Italica*, 27, 306-316.
- Scully, C., Epstein, J. & Sonis, S. (2003). Oral mucositis: A challenging complication of radiotherapy, chemotherapy, and radiotherapy – Part 1, pathogenesis and prophylaxis of mucositis. *Head & Neck*, 25, 1057-1070.
- Seidl, R. O., Nusser-Muller-Busch, R., Westhofen, M., & Ernst, A. (2008). Oropharyngeal findings of endoscopic examination in swallowing disorders of neurological origin. *European Archives of Oto-Rhino-Laryngology*, 265(8), 963-970. doi: 10.1007/s00405-007-0559-7
- Smith, C. H., Logemann, J. A., Colangelo, L. A., Rademaker, A. W., & Pauloski, B. R. (1999). Incidence and patient characteristics associated with silent aspiration in the acute care setting. *Dysphagia*, 14, 1-7.
- Speech Pathology Australia (SPA). (2003). *Scope of practice*. Melbourne: The Australian Speech Pathology Association Limited. Retrieved from http://www.speechpathologyaustralia.org.au/library/Core_Assoc_Doc/Scope_of_Practice.pdf
- Speech Pathology Australia (SPA). (2007). *Fiberoptic endoscopic evaluation of swallowing: An advanced practice for speech pathologists – Position paper*. Melbourne: The Australian Speech Pathology Association Limited. Retrieved

from http://www.speechpathologyaustralia.org.au/library/Clinical_Guidelines/FEES.pdf

Speech Pathology Australia (SPA). (2010). *Code of ethics*. Melbourne: The Australian Speech Pathology Association Limited. Retrieved from <http://www.speechpathologyaustralia.org.au/library/Ethics/CodeofEthics.pdf>

Warnecke, T., Teismann, I., Oelenberg, S., Hamacher, C., Ringelstein, E. B., Schabitz, W. R., & Dziewas, R. (2009a). The safety of fiberoptic endoscopic evaluation of swallowing in acute stroke patients. *Stroke: a journal of cerebral circulation*, 40(2), 482–486. doi: 10.1161/STROKEAHA.108.520775

Warnecke, T., Teismann, I., Oelenberg, S., Hamacher, C., Ringelstein, E. B., Schabitz, W. R., & Dziewas, R. (2009b). Towards a basic endoscopic evaluation of swallowing in acute stroke: Identification of salient findings by the inexperienced examiner. *BMC Medical Education*, 9, 13. doi: 10.1186/1472-6920-9-13

Warnecke, T., Duning, T., Schirmacher, A., Mohammadi, S., Schwindt, W., Lohmann, H., ... Young, P. (2010). A novel splice site mutation in the SPG7 gene causing widespread fiber damage in homozygous and heterozygous subjects. *Movement Disorders: official journal of the Movement Disorder Society*, 25(4), 413–420. doi: 10.1002/mds.22949

Warnecke, T., Oelenberg, S., Teismann, I., Hamacher, C., Lohmann, H., Ringelstein, E. B., & Dziewas, R. (2010). Endoscopic characteristics and levodopa responsiveness of swallowing function in progressive supranuclear palsy. *Movement Disorders*, 25(9), 1239–1245. doi: 10.1002/mds.23060

Warnecke, T., Teismann, I., Zimmermann, J., Oelenberg, S., Ringelstein, E. B., & Dziewas, R. (2008). Fiberoptic endoscopic evaluation of swallowing with simultaneous

Tensilon application in diagnosis and therapy of myasthenia gravis. [Case Reports]. *Journal of Neurology*, 255(2), 224–230. doi: 10.1007/s00415-008-0664-6

Wooi, M., Scott, A., & Perry, A. (2001). Teaching speech pathology students the interpretation of videofluoroscopic swallowing studies. *Dysphagia*, 16(1), 32–39. doi: 10.1007/s004550000040

Wu, C-H., Hsiao, T-Y., Ko, J-Y. & Hsu, M-M. (2000). Dysphagia after radiotherapy: Endoscopic examination of swallowing in patients with nasopharyngeal carcinoma. *Annals of Otolaryngology, Rhinology and Laryngology*, 109(3), 320–325.

Worthington, H. V., Clarkson, J. E., Bryan, G., Furness, S., Glenny, A-M., Littlewood, A., ... & Khalid, T. (2010). Interventions for preventing oral mucositis for patients with cancer receiving treatment. *Cochrane Database of Systematic Reviews* 2010, Issue 12. Art. No.: CD000978. doi: 10.1002/14651858.CD000978.pub4

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Using parent report for assessment of the first language of English language learners

Aria May and Cori Williams

Assessment of both languages is recommended when assessing English language learners (ELL) but may not always be practical. Use of a parent questionnaire, such as the Alberta Language and Development Questionnaire (ALDeQ), can assist in obtaining first language (L1) information. This study aimed to use the Canadian developed ALDeQ within an Australian population and determine whether ALDeQ scores would differentiate between ELL who were typically developing compared to ELL with language difficulty. A background questionnaire and the ALDeQ were administered to parents of 14 ELL that were typically developing and 3 ELL with apparent language difficulty aged between 5;3 and 8;7 years. ALDeQ Total Scores of typically developing Australian ELL were consistent with the Canadian norming population and significantly higher than the scores of the group with language difficulties. Although results are promising, further research is necessary to support use of the ALDeQ to investigate L1 abilities of ELL within an Australian population.

Children with language difficulty may have difficulty with expressive and/or receptive language in terms of form, content, or function (American Speech-Language-Hearing Association [ASHA], 1993). Language difficulty may result in long-term academic (e.g., Bashir & Scavuzzo, 1992) and psychosocial difficulties (e.g., Snowling, Bishop, Stothard, Chipchase, & Kaplan, 2006). Early identification of language difficulties is therefore important but the lack of accurate and nonbiased assessment tools available and the changing nature of the language profiles mean that this is not a simple task within the English language learner (ELL) population.

When assessing language abilities of ELL, there is a need to discriminate language differences (due to typical learning processes and cultural considerations) from language disorder (caused by an underlying language

learning problem regardless of language spoken).

Language difficulty will not exist in one language only and assessment therefore should occur in both languages for an accurate diagnosis of language difficulty (ASHA, 2004). Assessment in English only is likely to underestimate the child's language ability; however, it is not always feasible to provide assessment in the child's first language (L1). Use of interpreters presents ethical issues regarding client privacy and cultural beliefs (ASHA, 2004). Administering standardised, norm referenced English language assessments is not appropriate for children with English as a second language (Caesar & Kohler, 2007; Saenz & Huer, 2003). Renorming, translating, and test modification have been suggested as possibilities; however, each has limitations (e.g., Kohnert, 2008; Laing & Kamhi, 2003; Saenz & Huer, 2003).

Dynamic assessment has been suggested as a way to differentiate between cultural difference and language disorder and aims to address content bias through testing. It assesses learning potential through a test-teach-retest approach; however, this strategy is time-consuming, and learning experiences may vary depending on the clinician and contexts (Saenz & Huer, 2003).

Due to the difficulties associated with linguistically based assessment, alternative processing tasks using working memory and executive function are also gaining prominence. Research has shown deficits in these areas for children with specific language impairment and it has been suggested that these types of non-linguistic cognitive tasks may have less cultural bias when compared to other language-based assessments (Graf-Estes, Evans, & Else-Quest, 2007). Alternative processing tasks may be a diagnostic indicator of language difficulty; however, further research is needed, and studies indicate that identification works best when paired with linguistic measures in both languages (Ellis Weismer et al., 2000).

Another challenge for assessment of ELL is variability. Language acquisition rates depend on diverse factors including age, cognition, psychological factors, sociocultural influences, and environments (Bedore & Pena, 2008; Espinosa & López, 2007). Simultaneous ELL tend to develop both languages in a similar progression to monolingual language learners; however, sequential bilinguals' language development is more sensitive to internal characteristics and language learning environments (Espinosa & López, 2007). A language imbalance may occur during emerging bilingualism resulting in characteristics in both L1 and second language (L2) being

KEYWORDS

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LANGUAGE DIFFICULTY

PARENT REPORT

THIS ARTICLE HAS BEEN PEER-REVIEWED



Aria May (top) and Cori Williams

misinterpreted (Guiberson, Barrett, Jancosek, & Yoshinga Itano, 2006). These varying proficiency levels highlight the need for the speech pathologist to consider both languages of the ELL.

One possible solution to the assessment in both L1 and L2 is use of non-standardised assessment of L1 language ability, which includes parent report. Research has shown parent report of a child's current communicative behaviours to be valid and to decrease context sensitivity by gaining information on the child over longer time periods, within a range of communicative contexts (Marchman & Martinez-Sussmann, 2002; Ring & Fenson, 2000). Furthermore, parent report is less time-consuming and cheaper than extensive behavioural assessments (Marchmann & Martinez-Sussmann, 2002). Research using assessments such as the MacArthur Communicative Development Inventory (CDI; Fenson et al., 1994) and the Language Development Survey (LDS; Rescorla, 1989) has provided reliable and valid parent reports of children's early language skills.

Research on retrospective parent report is limited, but there is some evidence that it is useful in identifying conditions such as autism spectrum disorder (ASD). Goldberg, Thorsen, Osann, and Spence (2008) found substantial concordance between videotape observation and parent report of expressive language onset and loss with typically developing children and children with ASD. Sivberg (2003) used retrospective parent report to describe early symptoms of ASD and atypical development for children. The results showed consistency between similar research reports of early ASD symptoms using direct observation and parent report. These two studies suggest retrospective parent report may be a valid and reliable means of assessment, and may be applicable for language assessment.

The ALDeQ (Alberta Language Development Questionnaire) is a norm referenced questionnaire that uses retrospective parent report to obtain information on the L1 of ELL (Paradis, Emmerzael, & Duncan, 2010). The ALDeQ aims to reduce difficulties in the assessment of L1 through use of non-culture specific information obtained from parents. It comprises 18 questions organised in four subsections: A) Early Milestones, B) Current L1 Abilities, C) Behaviour Patterns and Activity Preferences, and D) Family History (see Appendix A for example questions). Questions are given a numerical score using rating scales and added to form a subsection score total. Numerator and denominator scores are added from each section to obtain a proportion (0–1) which forms the ALDeQ Total Score (Paradis et al., 2010). The ALDeQ Total Score is compared to norming sample characteristics where scores of -1.25 standard deviations or lower indicate a language profile more consistent with that of a child with language impairment than typical development. Paradis and colleagues' (2010) preliminary Canadian study used the ALDeQ with 129 typically developing ELL and 29 ELL with language impairment aged 5 to 7 years. Children were identified as language impaired through face-to-face assessment and had a range of language backgrounds: Chinese, South Asian, Arabic, and European-Romance. There were no significant ALDeQ Total Score differences between cultural groups (Paradis et al., 2010). Findings revealed the ALDeQ to be a significant discriminator between the typically developing and language impaired groups. There were significant between-group differences

for each section and for 15 out of 18 ALDeQ questions. The questionnaire had good specificity (96%) in the classification of ELL with typical language, but lower sensitivity (66%) in the classification of ELL clinically identified as language impaired. The ALDeQ was found to be a useful tool to obtain L1 information, particularly when direct L1 examination was not possible.

The aim of the current study was to investigate use of the ALDeQ within an Australian ELL population.

The hypotheses were:

Hypothesis 1. ALDeQ scores for typically developing Australian ELL would be similar to the Canadian norming sample.

Hypothesis 2. ALDeQ Total Scores would differentiate between typically developing ELL and ELL with language difficulty, with lower scores for the language difficulty group.

Method

Participants

Five Perth metropolitan primary schools thought to have a high ELL population were approached for involvement in the study and two schools expressed interest in the research. High ELL populations were identified through the Schools Online website, and indicated by high percentages of ELL enrolments, and ELL specialist programs at the school (Department of Education, 2010). All 36 pre primary and year 1 ELL students were sent consent forms and those who met the selection criteria and agreed to participate in the study were selected ($N = 17$).

Children with primary speech difficulties in the absence of language difficulties were excluded from the study. Children with pre-existing cognitive, neurological, psychological, or sensory impairment, as identified through parent report, were excluded from the study.

Participants were 17 parents or caregivers of ELL recruited from these two schools.

The Child Language and Medical Questionnaire (see Appendix B) was completed by children's parents to collect background information. Parents of three children expressed concern about their child's language development. Two children were reported to have been clinically identified with a language difficulty and one child was reported to have a current referral to language therapy within this group. The remaining 14 parents expressed no concerns about their child's language development (question 12). Parent report allowed children to be placed in two groups – possible language difficulty (those who were reported to have been clinically identified with a language difficulty or had a current referral to language therapy), and those for whom no concerns regarding language development were reported. Children were aged between 5 years, 3 months and 8 years, 7 months ($M = 79.38$ months). Parent report revealed that the majority of children ($n = 16$) were sequential ELL and spoke Vietnamese, Romanian, or Macedonian as a L1, while one child was a simultaneous ELL. Prior to preschool or daycare entry at age 2 to 3, children's English language exposure ranged from none to moderate. See Table 1 for a summary.

Procedure

Data were collected by the primary researcher (speech pathologist) and one Vietnamese interpreter using parent and caregiver report (parents $n = 16$, caregiver $n = 1$). Parents will be used to refer to all interviewees. Interviews took place at the family home ($n = 9$) or by telephone ($n = 8$), according to parent preference. The language of the

Table 1. Demographic information

	<i>n</i>	<i>M</i> age (Months)	L1 ^a (%)	Ethnicity		
				Vietnamese <i>n</i>	Macedonian <i>n</i>	Romanian <i>n</i>
Typically developing	14	80.43	46	10	3	1
Language difficulty	3	78.33	35	2	1 ^b	0

Note. ^a Reported current percentage use of the L1 in the week. ^b Parent reported child spoke both Macedonian and English as L1 with moderate English exposure from ages 0 to 2.

interview was dependent on parent preference and language abilities. The Child Language and Medical History Questionnaire and the ALDeQ were administered during this interview and responses were transcribed on-line.

Results

ALDeQ Total Scores were calculated following procedures outlined by Paradis et al. (2010) and allowed for comparisons with normative data. Results were compared for those children whose parents expressed concern about language with those of children for whom no concern was expressed.

The mean total score for typically developing Australian ELL ($M = 0.81$, $SD = 0.11$, 95% CI [0.75, 0.87]) was consistent with Paradis et al.'s (2010) Canadian norming population mean (total score ($M = 0.81$, $SD = 0.12$, 95% CI [0.79, 0.83])). Confidence intervals for the norming population were captured within the confidence intervals for the Australian typically developing group. The average ALDeQ total score of Australian ELL with language difficulty ($M = 0.45$, $SD = 0.24$, 95% CI [0.19, 0.71]) was lower and more variable than the Canadian language impaired group ($M = 0.50$, $SD = 0.17$, 95% CI [0.44, 0.56]).

As predicted, ALDeQ Total Scores for the typically developing group ($M = 0.81$, $SD = 0.11$, 95% CI [0.75, 0.87]) were higher than those of the language difficulty group ($M = 0.45$, $SD = 0.17$, 95% CI [0.19, 0.71]). A Mann-Whitney *U* test was conducted to evaluate the hypothesis that typically developing ELL would score higher than ELL with language difficulty on ALDeQ Total Scores. The results of the test were in the expected direction and significant, $U = 1$, $z = -2.523$, $p < .05$, $r = .61$. There was no overlap in confidence intervals for the typically developing and language difficulty groups; therefore, it may be inferred that the ALDeQ Total Scores of the two groups were significantly different; however, one ELL from each diagnostic group achieved a score which placed him/her in the opposite group classification.

The mean ALDeQ Total Scores of Vietnamese participants ($n = 12$) was 0.81 ($SD = 0.11$) while that of the Romanian and Macedonian participants ($n = 5$) was 0.83 ($SD = 0.12$). Similar means suggests that there may be no difference between these cultural groups; however, unequal sample sizes and violations of normality (i.e., the shape distribution of scores was not the same for the two groups) prevented further analyses using the non-parametric Mann-Whitney *U* test.

Table 2 shows the mean section scores. Australian participants obtained the lowest scores on Section C: Behaviour Patterns and Activity Preferences ($M = 0.67$, $SD = 0.20$) and the highest scores in Section B: Current L1 Abilities ($M = 0.87$, $SD = 0.14$). ALDeQ proportion section scores of typically developing ELL from the current study were compared with scores of typically developing ELL from Paradis et al. (2010). All mean section scores were

within one standard deviation of the section scores in the Canadian study except for Section C: Behaviour Patterns and Activity Preferences ($M = 0.67$, $SD = 0.20$), which was 1.15 standard deviations below the Canadian mean of 0.82 ($SD = 0.13$).

Table 2. Australian and Canadian data: Typically developing ELL ALDeQ proportion section scores

	Australian data		Canadian data	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Section A	.79	.25	.90	.19
Section B	.87	.14	.69	.26
Section C	.67	.20	.82	.13
Section D	.83	.22	.83	.30
ALDeQ Total Score	.81	.11	.81	.12

Note. Canadian data from Paradis et al. (2010).

Discussion

As predicted, typically developing Australian ELL ALDeQ Total Scores fit within the norming sample range in Paradis et al.'s (2010) study, suggesting the Canadian ALDeQ norming population may be applicable to an Australian ELL population. Australian typically developing proportion scores were all within one standard deviation of the Canadian typically developing scores, except for Section C: Behaviour Patterns and Activity Preferences, which fell just below the one standard deviation range. Global research of children's use of time suggests activity preferences depend on culture, age, socioeconomic differences, and gender (Larson & Verma, 1999), which may partly explain the variance in Australian and Canadian scores for this subsection.

The study also investigated the ALDeQ's ability to discriminate between typically developing and language difficulty groups; however, the sample size of the language difficulty group was very small ($n = 3$). Results revealed that the typically developing group had significantly higher scores with a large effect size, suggesting that the ALDeQ has potential to differentiate between the two diagnostic groups.

This is consistent with findings of the Canadian study and expectations for the current study; however, there were discrepancies in the differentiation of ELL whose scores on the ALDeQ were close to the cut-off point (-1.25 SD). One ELL from each diagnostic group achieved a score which placed him/her in the opposite group classification. For example, one child from the ELL group whose parent did not express concern about language development was shown to have a language profile more consistent with language impairment on the ALDeQ.

Implications

The results of the current study confirm Paradis et al.'s (2010) assertion that the ALDeQ may have a role to play in

identifying language difficulty in preschool and school-aged ELL, particularly when direct L1 assessment is not feasible. There are currently limited resources available to assist in accurate referrals of ELL to speech pathology services. The ALDeQ could begin to fill this gap, and has scope for inclusion as part of an assessment battery for ELL identified at risk of language difficulty. It is appropriate for use with both preschool and school-aged ELL.

An interpreter may be required to administer the ALDeQ although analysis of responses does not require knowledge of the L1's developmental norms. Unlike standardised face-to-face testing, the questionnaire allows information about communication in natural environments to be gained, and is more time efficient than dynamic assessments. The ALDeQ's simple and efficient administration, together with its parent-friendly language, indicate a potential capacity for administration by a range of professionals, provided they receive appropriate training and have awareness of cultural sensitivity.

Strengths, limitations, and future research

The current study was underpowered due to its small sample size and use of non-parametric analysis; however, the results provide preliminary support for use of the ALDeQ to aid in discriminating between typically developing and language difficulty groups. Replication of this study with a large sample size is recommended. The current study used parent report to classify children as having language difficulty or typically developing language. Future studies should place greater stringency on participant selection criteria, including measures of non-verbal intelligence and face-to-face assessment to minimise potential misdiagnosis in initial participant group selection and improve external validity. The current study used two different methods of data collection which may have impacted results, and future studies should systematically explore manipulation of mode of administration of the ALDeQ (telephone versus face-to-face interview).

Although a significant result was found between groups in the ALDeQ Total Score, discrepancies in the ALDeQ's differentiation ability for ELL with marginal scores (scores close to the cut off point) were evident. Paradis and colleagues' (2010) study found the ALDeQ to have good specificity, with issues regarding sensitivity. The current study did not determine sensitivity and specificity of the ALDeQ; however, it found that one ELL in each diagnostic group achieved a score which placed him/her in the opposite category, although these two children's scores were close to the $-1.25SD$ cut-off. Misclassifications of ELL with marginal scores may be due to original group misidentification, particularly as classification relied only on parent report. Future research should continue to investigate ALDeQ misidentification at the marginal level, with scope to reconsider the ALDeQ cut-off as a range rather than a specific value. Children who score within the marginal range would be prioritised for further testing. The current study included a possible language difficulty group with children reported to have been clinically identified with a language difficulty or who had a current referral to language therapy, while the Paradis and colleagues (2010) study used clinical diagnosis as their criteria for inclusion in their language impaired group. Investigation of ALDeQ score differences between children referred to speech pathology services for language difficulty versus children with diagnosed language difficulty should also be addressed.

The current study provides early support for the use of the ALDeQ within an Australian population. It must be noted that the questionnaire was only used with ELL of Vietnamese, Romanian, and Macedonian backgrounds; therefore, findings may not be generalised to cultural groups not included in the study. Although cultural differences in ALDeQ scores were not investigated within this study, it is encouraging that typically developing scores for Australian and Canadian samples were consistent, giving some support to the cross-cultural application of the ALDeQ. Paradis and colleagues (2010) investigated differences between cultural groups' scores on the ALDeQ and found a trend, but no significant differences. Further research into the application of the questionnaire across different cultures is warranted.

Conclusion

The current study reinforces some of the original findings of Paradis and colleagues (2010) and provides preliminary results suggesting that the ALDeQ's Canadian norms may be applicable to an Australian sample in order to differentiate between ELL with language difficulty and typically developing ELL. The ALDeQ is convenient and simple to administer and may have scope to be used by a variety of professionals. It may have potential for use within an assessment protocol for preschool or school-aged ELL when direct assessment of the L1 is not possible, or to add information to direct assessment (Paradis et al., 2010). The ALDeQ allows us to gain information from the parent who indisputably knows their child best and provides a norm referenced score, although further research with a larger sample size in the Australian context is necessary to confirm the results of the current study.

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References

- American Speech-Language-Hearing Association (ASHA). (1993). *Definitions of communication disorders and variations*. doi:10.1044/policy.RP1993-00208
- American Speech-Language-Hearing Association (ASHA). (2004, April 27). *Knowledge and skills needed by speech-language pathologists and audiologists to provide culturally and linguistically appropriate services*. doi:10.1044/policy.KS2004-00215
- Bashir, A. S., & Scavuzzo, A. (1992). Children with language disorders: Natural history and academic success. *Journal of Learning Disabilities*, 25(1) 53–65. doi:10.1177/002221949202500109
- Bedore, L. M., & Peña, E. D. (2008). Assessment of bilingual children for identification of language impairment: Current findings and implications for practice. *The International Journal of Bilingual Education and Bilingualism*, 11, 1–29. doi:10.2167/beb392.0
- Caesar, L. G., & Kohler, P. D. (2007). The state of school-based bilingual assessment: Actual practice versus recommended guidelines. *Language, Speech and Hearing*

Services in Schools, 38, 190–200. doi:10.1044/0161-1461(2007/020)

Department of Education, Western Australia. (2010). Schools Online. Retrieved from <http://www.det.wa.edu.au/schoolsonline/home.do>

Ellis Weismer, S., Tomblin, J. B., Zhang, X., Buckwalter, P., Chynoweth, J. H., & Jones, M. (2000). Nonword repetition performance in school-age children with

and without language impairment. *Journal of Speech, Language, and Hearing Research*, 43(4), 865–878.

Espinosa, L. M., & López, M. L. (2007). *Assessment considerations for young English language learners across different levels of accountability*. Retrieved from http://www.pewtrusts.org/our_work_detail.aspx?id=102

Fenson, L., Dale, P. S., Reznick, J. S., Bates, E., Thal, D. J., & Pethick, S. J. (1994). Variability in early communicative

Appendix A. Example questions from the Alberta Language And Development Questionnaire (ALDeQ)		
Subsection	Example question	Scoring
A: Early milestones	How old was your child when he/she first spoke a word? ____ <i>Examples of the child's first words (with translations):</i>	6 = <15 months (Infant) 4 = 16–24 months (Older toddler) 0 = >25 months (2 years or older) Score: /6
B: Current abilities in the first language	<i>Compare the child to other ELL children</i> Compared with other children of the same age, how do you think that your child expresses him/herself?	0 = not very well; 1 = a little less well; 2 = the same; 3 = very good/ better/one of the best Score: /3
C: Behaviour patterns and activity preferences	How quickly/ easily does your child learn new things? <i>Examples: sports; words; games/puzzles; with new toys (learn the rules of a team sport like soccer, put legos together, computer games)</i> <i>Examples of child learning new things:</i>	3 = the same day/ immediately; 2 = a few tries; 1 = needs help and time to learn it; 0 = long time/sometimes never learns it Score: /3
D: Family history	Is there anyone among the child's immediate family or other relatives who had difficulties learning to read and write, in speaking and pronunciation, slow to learn or talk? Can you explain?	Positive family history? 6 = No indication 3 = Yes, possibly 0 = Yes, definitely Score: /6 STOP: If parent gives a reason that is environmental or external (ex. trauma or surgery) do not consider these responses for positive family history
Note. The ALDeQ example questions are from "Assessment of English language learners: Using parent report on first language development," by J. Paradis, K. Emmerzael, & T. S. Duncan, 2010, <i>Journal of Communication Disorders</i> , 43, p. 482. Copyright 2010 by Elsevier Limited. Reprinted with permission.		

Appendix B. Child language and medical history
<p>General Information</p> <ol style="list-style-type: none"> 1. What is your child's date of birth? 2. What is your child's age?
<p>Language History</p> <ol style="list-style-type: none"> 3. What is your child's first language? 4. What language or languages are spoken by your child in the home? 5. What language or languages are spoken by parents/caregivers in the home? 6. At what age did your child first start hearing/talking English? 7. What was your child's experience with English from age 0–2? <i>None, Limited, Moderate, Strong</i> 8. What is the total amount of time your child has been exposed to English (<i>in months or years</i>)? 9. Where does your child hear/speak English? (<i>e.g., daycare, school, home</i>). 10. What percentage of time does your child speak English during the week? 11. What percentage of time does your child speak other languages during the week? (<i>Please specify percentage for each language</i>). 12. Do you have any concerns about your child's language? If so, please explain.
<p>Medical History</p> <ol style="list-style-type: none"> 13. Does your child have any current medical issues (<i>e.g., hearing loss, ear infection, developmental delay, psychological disorder</i>)? 14. Does your child have a history of any medical issues?

development. *Monographs of the Society for Research in Child Development*, 242(59, Serial No. 5). Retrieved from <http://www.srpd.org/>

Goldberg, W., Thorsen, K. L., Osann, K., & Spence, M. A. (2008). Use of home videotapes to confirm parental reports of regression in autism. *Journal of Autism and Developmental Disorders*, 38, 1136–1146. doi:10.1007/s10803-007-0498-6

Graf Estes, K., Evans, J. L., & Else-Quest, N. M. (2007). Differences in the nonword repetition performance of children with and without specific language impairment: A meta-analysis. *Journal of Speech, Language, and Hearing Research*, 50, 177–195. doi:10.1044/1092-4388(2007/015)

Guiberson, M. M., Barrett, K. C., Jancosek, E. G., & Yoshinga Itano, C. (2006). Language maintenance and loss in preschool-age children of Mexican immigrants: Longitudinal study. *Communication Disorders Quarterly*, 28, 4–17. doi:10.1177/15257401060280010601

Kohnert, K. (2008). *Language disorders in bilingual children and adults*. Oxford: Plural Publishing.

Laing, S. P., & Kamhi, A. (2003). Alternative assessment of language and literacy in culturally and linguistically diverse populations. *Language, Speech, and Hearing Services in Schools*, 34, 44–55. doi:10.1044/0161-1461(2003/005)

Larson, R. W., & Verma, S. (1999). How children and adolescents spend time across the world: Work, play, and developmental opportunities. *Psychological Bulletin*, 125(6), 701–736. Retrieved from <http://www.apa.org/pubs/journals/bul/>

Marchman, V. A., & Martinez-Sussmann, C. (2002). Concurrent validity of caregiver/parent report measures of language for children who are learning both English and Spanish. *Journal of Speech, Language, and Hearing Research*, 45, 983–997. doi:10.1044/1092-4388(2002/080)

Paradis, J., Emmerzael, K., & Duncan, T. S. (2010). Assessment of English language learners: Using parent report on first language development. *Journal of Communication Disorders*, 43, 474–497. doi:10.1016/j.jcomdis.2010.01.002

Rescorla, L. (1989). The Language Development Survey: A screening tool for delayed language in toddlers. *Journal of Speech and Hearing Disorders*, 54(4), 587–599.

Ring, E. D., & Fenson, L. (2000). The correspondence between parent report and child performance for receptive and expressive vocabulary beyond infancy. *First Language*, 20, 141–159. doi:10.1177/014272370002005902

Saenz, T. I., & Huer, M. B. (2003). Testing strategies involving least biased language assessment of bilingual children. *Communication Disorders Quarterly*, 24, 184–193. doi:10.1177/15257401030240040401

Sivberg, B. (2003). Parents' detection of early signs in their children having an autistic spectrum disorder. *Journal of Pediatric Nursing*, 18, 433–439. doi:10.1016/S0882-5963(03)00139-8

Snowling, M. J., Bishop, D. V. M., Stothard, S. E., Chipchase, B., & Kaplan, C. (2006). Psychosocial outcomes at 15 years of children with a preschool history of speech-language impairment. *Journal of Child Psychology and Psychiatry*, 47, 759–765. doi:10.1111/j.1469-7610.2006.01631.x

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Clinical insights

Strategies to enhance effective service delivery for Aboriginal people

Gwendalyn Webb

There are some fundamental tenets¹ which have been found to be successful when working with Aboriginal populations, both in Australia and more globally. The Little Yarns project, funded through the NSW government department of Aging Disability and Home Care (ADHC) as an innovative service has attempted to adopt these tenets in order to deliver quality early intervention services to the local Aboriginal children and families. The Little Yarns project has been funded for four years to focus on language development and intervention for Aboriginal children under school-age who attend the Awabakal Children's Services. The project aims to support families to (a) access mainstream services, (b) provide training for staff and families to increase their knowledge of, and skills in, communicating with children who are language impaired, and (c) increase the awareness of non-Aboriginal workers about providing culturally appropriate services to the Aboriginal population.

Paradigm shift?

Much of the information in the literature (Eckermann et al., 2010; Hoy et al., 2010) suggests that for intervention (in health and allied health) to be effective with Aboriginal populations, deviations from the traditional clinical model of service delivery are required. The strength of the differences in models of service delivery, and the struggle to achieve them nudges one to question whether speech pathologists are experiencing a paradigm shift in how we service Aboriginal people.

Fundamental tenets

Several key themes are emphasised in the literature addressing intervention with Aboriginal people. These include the importance of:

- developing relationships at both organisational and personal levels to develop trust between services and individuals (Eckermann et al., 2010; Hoy et al., 2010);
- consulting with the community regarding areas of need, services required and the best way to deliver these (Eckermann et al., 2010);

- utilising existing community relationships and services (Aldred, Forsingdal, & Baker, 2002; Nelson & Allison, 2004);
- being flexible in service delivery (Speech Pathology Australia, 2000a, 2000b, 2009);
- pacing the service delivery appropriately for those involved (McSwan, Ruddell, & Searston, 2001);
- transferring knowledge and understanding between professionals and the people in the Aboriginal community, to develop lasting, sustainable outcomes (Hoy et al., 2010; McSwan et al., 2001);
- acknowledging the depth of the many social issues involved, and the inter-relatedness of many factors which may impact on the intervention (Australian Department of Families, Housing, Community Services and Indigenous Affairs, 2009; Eckermann et al., 2010; Hoy et al., 2010);
- acknowledging the current and historical negative experiences of these people with health, education, and government initiatives (Eckermann et al., 2010; Nelson & Allison, 2004);
- acknowledging "Shame" and the benefits of Aboriginal translator/liaison person in all stages of the intervention (Gould, 2008; McSwan et al., 2001; Philpott, 2003).

Guiding principles

The guiding principles of the Little Yarns project were developed out of consultation with representatives from the local Aboriginal community and based upon the fundamental tenets documented in the literature. These are described in more detail below.

Extended time to develop relationships

Prior to the commencement of this project a longstanding relationship had been established between the local Aboriginal children's service (Awabakal) and an early intervention outreach service (Firstchance Inc.). Once the project actually commenced, time was allowed for the Little Yarns team (Firstchance Inc.), who consisted of three early intervention teachers and a speech pathologist, to develop relationships with staff from the Aboriginal children's services as well as the children and families who attend these services. As the project has evolved over the past three years, relationships have also developed with key community representatives. These representatives have acted as gatekeepers to other existing community groups. The strengthening of these relationships has allowed trust and respect to develop between the community and the Little Yarns team.

KEYWORDS

ABORIGINAL

ALTERNATIVE SERVICE DELIVERY

CULTURALLY APPROPRIATE

EARLY INTERVENTION



Gwendalyn Webb

Intervention provided within the existing community services

These strong relationships allow families to receive services in an environment that may be perceived as less threatening than attending a mainstream health or education service. The Awabakal Cooperative is a well-established service which caters to the needs of the Aboriginal people of the Greater Newcastle area, which is the urban centre of the Hunter Region; one of the services provided by the Awabakal Cooperative is the Awabakal Children's Service. The children attending the Awabakal Children's Services come from a variety of linguistic backgrounds with their main language being Aboriginal English, ranging along the spectrum of "heavy" to "light" (Butcher, 2008).

Group intervention to avoid "Shame" response

The Little Yarns project is funded as a prevention/early intervention program; as such it services all children attending the centre, because they are acknowledged to be at-risk of developing language/literacy impairment, due to their Aboriginality (Williams & Masterton, 2011). Children are seen within the regular classroom or playground and small group intervention activities aim to avoid a Shame response and benefit target children within the group (Nelson & Allison, 2004); prevention activities, such as training in phonemic awareness skills, aim to benefit all the children attending the service.

Flexible approach in terms of service delivery

The timeframe for service provision is flexible to suit the Aboriginal people and, within the scope of the project, the manner of service delivery is decided in consultation with the community.

Preliminary findings

The project is currently undergoing an external evaluation process. Preliminary findings from annual questionnaires distributed to staff have indicated that families are being supported to access mainstream services. Aboriginal staff members also reported increased knowledge about language impairment and confidence in dealing with children with language impairment. Little Yarns staff reported increased awareness of Aboriginal culture and ways of learning and interacting. Families of children attending the service are also being interviewed. It is hoped that the results of this evaluation will indicate the extent to which the aims of the project are being met.

Summary

The innovative service described here has explored alternative ways of service delivery to the Aboriginal population based on literature finding and consultation. Specifically, some of the aspects which differ from a more traditional clinical model are the consultation process involved prior to and throughout the intervention; the nurturing of relationships on several levels to allow mutual trust and respect to develop; the provision of services within an already existing Aboriginal community service; and the flexible timeframe and manner of service delivery. Speech pathologists working with Aboriginal clients need to consider these basic tenets, as well as any local differences, if they are to intervene successfully with this population.

References

- Aldred, R., Forsingdal, S., & Baker, R. (2002). Working together to improve the health status and health outcomes for Indigenous children and their families living in urban settings: The speech pathologist's role. *ACQuiring Knowledge in Speech, Language and Hearing*, 4(3), 166–169.
- Australian Department of Families, Housing, Community Services and Indigenous Affairs. (2009). *Footprints in time: The longitudinal study of Indigenous children – Key summary report from wave 1*. Canberra: FaHCSIA.
- Butcher, A. (2008). Linguistic aspects of Australian Aboriginal English. *Clinical Linguistics and Phonetics*, 22(8), 625–642.
- Eckermann, A., Dowd, T., Chong, E., Nixon, L., Gray, R., & Johnson, S. (2010). *Binan Goonj; Bridging cultures in Aboriginal health* (3rd ed.). Sydney: Churchill Livingstone.
- Gould, J. (2008). Non-standard assessment practices in the evaluation of communication in Australian Aboriginal children. *Clinical Linguistics and Phonetics*, 22(9), 1–15.
- Hoy, D., Rickart, K., Durham, J., Puntmetkul, R., Mansoor, G., Mujiwijik, A., & Bounnaphol, S. (2010). Working together to address disability in a culturally-appropriate and sustainable manner. *Disability and Rehabilitation*, 32(16), 1373–1375.
- McSwan, D., Ruddell, D., & Searston, I. (2001). *A whole community approach to otitis media: Reducing its incidence and effects*. Townsville: James Cook University Rural Education Research and Development Centre.
- Nelson, A., & Allison, H. (2004). Visiting occupational therapy service to Indigenous children in schools: Results of a pilot project. *Australian Journal of Indigenous Education*, 33, 55–60.
- Philpott, M. (2003). *The Revised Kimberley Early Language Scales*. Melbourne: Speech Pathology Australia.
- Speech Pathology Australia. (2000a). *How do speech pathologists work in a multilingual and culturally diverse society?* Fact sheet 4.1. Melbourne: Author.
- Speech Pathology Australia (2000b). *Speech pathologists working in early intervention programs with Aboriginal Australians*. Fact sheet 2.4. Melbourne: Author.
- Speech Pathology Australia. (2009). *Working in a culturally and linguistically diverse society: Position paper*. Melbourne: Author.
- Williams, C., & Masterson, J. (2011). Phonemic awareness and early spelling skills in urban Aboriginal and non-Aboriginal children. *International Journal of Speech-Language Pathology*, 12(6): 497–507.

- 1 Tenet: any opinion, principle, doctrine, dogma, etc., especially one held as true by members of a profession, group, or movement (<http://dictionary.reference.com>)

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Emerging ethical and professional issues

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In this paper, Suze Leitão, Chair of the Speech Pathology Australia Ethics Board, reflects on emerging ethical and professional issues and discusses some of the Speech Pathology Australia documents that can act as a resource for members of the profession. Members of the Board were asked to respond to the question: “What do you consider to be emerging ethical and professional issues in your workplace?” This article discusses some of the key themes that emerged and reflects on the need to be pro-active in our professional lives.

When I began the task of devising a column based around the theme of “professional issues” with members of the Ethics Board, I started with the Speech Pathology Australia (SPA) Scope of Practice document (The Speech Pathology Australia Association, 2003). This document describes “the breadth of professional practice carried out within the speech pathology profession in Australia”. It provides an overview of the who, what, where, why, and how of speech pathology practice. It describes not only the knowledge and skill-set required by speech pathologists, but also the attitudes and ethical behaviours expected of our profession. This document may be brief but it is certainly wide-ranging.

As I read through the key points, I reflected on some of the changes that we are confronted with in our rapidly evolving world. I wondered how these might be having an

The Ethics Board hard at work!

impact on the demands being made of us – in terms of new knowledge and skills (just think about all the new mobile technologies and applications contained in smart phone and iPad apps!), the introduction of telehealth, and how the Internet is changing how we learn and deliver services. It is also worth reflecting on how global factors such as the GFC have had an impact on our scope of practice.

The SPA Ethics Board has many roles around promoting and managing the ethical standards of our profession – and one of these is to respond to complaints. We receive many complaints and while the greatest number of these are resolved with support and mediation, some of these progress to a formal investigation. Complaints are made by members of both the public and the profession. As a Board we have noticed an increasing number of complaints paralleled by an increase in the complexity of the issues raised.

From an allied health and clinical perspective

Balancing clinical requirements and prioritisation with resource allocation

“At a broad level this covers social justice concepts, in other words, considerations regarding the fair and equitable allocation of resources, rationing of services – also obliquely called prioritisation of services and the reality of dual servicing and agency policy about this. It causes real distress to clinicians who are not able to undertake good, let alone best, practice.”

“This is a constant challenge for clinicians and includes limited capacity for clinical intervention, the non-servicing of some patient groups based on lack of resources, the ethics of prioritisation (what factors to consider in prioritisation).”



Given the focus of the current issue of the *Journal of Clinical Practice in Speech-Language Pathology*, members of the Ethics Board of SPA were asked to reflect on and respond to the question: “What do you consider to be emerging ethical and professional issues in your workplace?”

The Ethics Board of SPA consists of senior and elected members of the profession, as well as community representatives and the Senior Advisor Professional Issues. We come from a wide range of geographical locations and workplace contexts. We work in direct clinical practice, in management positions, in research, in teaching, and in policy and funding development. The Board members’ responses to the question have been grouped together below into broad themes with reflections.

“ There may be specific concerns in relation to waiting list management, for example, long waits for some patients which staff know will affect clinical outcomes in the long term and the issue of having to prioritise people who make complaints even if they are not the most urgent client.”

“Inadequate staffing numbers to meet National Standards for service provision (e.g., Acute Stroke Guidelines), i.e., fairness and doing good.”

“Resource allocation can so easily become focused on managing ‘numbers’ rather than ‘people!’”

“The bigger issue is that there are simply not enough services available and rationing (which this effectively is) denies access and equity to a whole group of clients who are already compromised in their ability to advocate for themselves.”

Interestingly, resource allocation was one of the top issues raised by participants in a SPA workshop in 2007. Body and McAllister (2009) reported that the largest number of concerns about emerging issues related to resource allocation and prioritisation of clients. While these are not, strictly speaking, new or emerging, some of the drivers that are bringing them into sharp focus include the current economic climate, increasing focus on privatisation, and private insurance. A system that makes decisions on services around funding and cost can lead to arbitrary “rules” about numbers of occasions of service or age or standardised score cut-offs to determine eligibility. This can of course impact on the services provided and foregrounds the next theme that emerged – that of evidence based practice (EBP).

Evidence based practice

Many of the responses drew in some way on concepts around evidence.

“The increasing trend for clinicians to explain their practice from an evidence based viewpoint.”

“The increasing knowledge of consumers about clinical practice and evidence, and our need to stay ahead!”

Many also raised the impact that resource allocation and service-driven prioritisation can have on our clinical decision-making, and thus on our ability to draw on EBP.

This theme has taken on higher prominence with the launch of the 2011 CBOS document (The Speech Pathology Australia Association, 2011). In this document, which frames and defines our professional standards, the first of the four range of practice principles states: “In all work contexts and decision-making, the speech pathologist must consider the recommended evidence base for the speech pathology practice.”

“Another ethical issue involves responsibility for how research findings are interpreted and applied in the professional community. Researchers are expected to share evidence that will facilitate quality of care and support the development and evaluation of intervention programs. However, there is a risk that emerging evidence may be misapplied resulting in less access, less choice, and less than satisfactory outcomes for certain clients. Here, the challenge is for researchers and clinicians to develop and maintain effective partnerships so that meaningful research informs quality professional practice.”

“We worry about what policies and procedures are put in place by service providers and the impact their decisions can have on individual practitioners.”

The impact of technology and electronic media and the ethics of safe communication

Another theme to emerge from the responses by the Board members was that of technology.

“There are potentially a wide number of issues related to social networking. For example, the extent to which staff may use and comment on hospital/health care related issues via media such as blogging; Facebook; twitter etc. This raises issues such as patient confidentiality; staff confidentiality. It also raises the issue of who sees the information and how is it monitored.”

Technology is changing at such a rate that new possibilities often emerge before the social and ethical consequences become obvious (Millstead, 2006). In addition, technology is moving at such a fast pace that research simply cannot keep up, and instead, consumers and professionals base their clinical decisions on

Internet discussion groups and forums, where claims cannot be validated. One of the hot topics in the field of speech pathology is of course around the use of mobile technologies and applications which are being readily embraced by clinicians and clients alike, without any scientific evidence base.

“I am not sure that people realise that communicating via email can be such a risk to privacy.”

The ethics of safe communication was also discussed in contexts such as telehealth. This is a rapidly expanding area, particularly with the new Medicare item for GPs. Telehealth as a model of service delivery includes a range of methods of communication including email and Skype, and raises a host of new ethical issues around communication, security, confidentiality, data storage, and consent, as well as the limits of telehealth consultations and professional responsibility.

“Technology is not necessarily a ‘cure all’ that will replace inadequate staffing and resources and, if applied haphazardly, may distance speech pathologists from their communities.”

Behaviour by others not in our profession

With many speech pathologists working in inter- and multidisciplinary teams, the behaviour and practice of others was noted in the responses.

“Speech pathologists have the Code of Ethics which clearly outlines the expectations in relation to our professional behaviour. The best course of action may be less clear when there is an issue with a co-worker. For example, in the event that suboptimal treatment by another health practitioner is observed and that clinician’s manager fails to act despite the issue being raised; or what to do if the medical officer refuses access to allied health discipline/s (either our own or another discipline).” Again, this is highlighted in the CBOS (SPA, 2011) document in the fourth principle:

“Interprofessional practice is a critical component of competence for an entry-level speech pathologist.”

It is worth noting that if working in the public sectors anywhere in Australia, speech pathologists can also be guided by Code of Ethics (The Speech Pathology Association of Australia Limited, 2010) and/or Code of Conduct documents which will be applicable to all professional groups.

Support for those within the profession

“Clinical support for new graduates (particularly those in community settings) to ensure they do no harm.”

“There is a need for profession-specific supervision, mentoring and support for new graduates and younger speech pathologists. So many are moving straight into private practice where they may have little or no support.”

“It’s difficult for students and new graduates when they are perceived as ‘troublemakers’ for raising concerns that ‘established’ practice may not be ‘best practice’.”

The Board is increasingly receiving complaints where a common underlying theme seems to be a lack of mentoring or supervision for younger speech pathologists. Private practices are growing and there is a trend for larger clinics to develop that may be owned or run by members of different professions and discipline-specific support is lacking. Other professions, particularly nursing and midwifery, offer formal transition programs for new graduates in the workplace, and these models and the underpinning transition theory could be readily applied to speech pathology.

From a consumer and investigation panel perspective

Finances

"People today are facing so many challenges due to rising financial forces such as rising mortgage fees, fuel expenses, and power bills, to just name a few. People are also in general working longer hours and spending less family time together. These pressures on money, time, and family seem to be impacting decisions to bring forth a case to ethics with some people feeling hard done by or let down by member practitioners."

Business relationships

"From a member perspective, there also seems to be pressures on business relationships to succeed. At times complaints are being made that have to be sifted through by the panel to find the true and relevant ethical complaints and separate them apart from purely civil and financial ones. Complainants seem to be under more financial pressure than in the past and complaints at times seem to shift into this domain and may not at all be relevant to the Board."

From a research (and clinical) perspective

Consent

"People with communication disorders have the right to make informed decisions about whether to participate in research. To make an informed decision, information statements and consent forms must include content and format that is appropriate for the client and/or their carers. While it is vital that vulnerable clients are not coerced into participating in research, it is also important that people with severe communication issues have opportunities to take part in research – particularly when studies will provide evidence that may facilitate intervention for people with similar disorders. If we assume that research participation is an added burden for a client/family, then we can fail to recognise that some clients and their families experience pride and satisfaction from contributing to research that benefits the community. However, this outcome is likely to occur only if research participants are partners in the research process and their contributions are perceived as valued and managed with respect."

"We need to be very mindful of informed consent, particularly for culturally and linguistically diverse members of the community when we offer clinical services."

"We need to consider the impact of low health literacy. In the 2006 Australian literacy and life skills survey,¹ 47% of the 9000 people sampled had only Level 1 or Level 2 literacy which equates to about Grade 5 level literacy. This means they could read a short piece of text and find a single piece of information. This has an influence on how we write our research and treatment consent forms, our assessment reports, and handouts!"

Summary

Looking back over the themes that emerged, one could argue that, in some ways, this column could have been written at any point in time. Drivers such as money, lack of support, and technology have always had an impact on professional practice. It is the specifics of the current financial situation, the changing world economy, and the fast emerging newer types of technology that influence the current emerging issues. As practitioners, researchers, educators, and members of our professional community we need to be ever vigilant and mindful about these factors and be proactive in our professional lives.

As a Board, we hope that the 2010 revision of the Code of Ethics is something that members of the profession can use in a proactive and positive way, for example during orientation, mentoring, and professional development activities and not just something to refer to when things go wrong. Through such proactive, "ethical thinking" we should always strive to avoid ethical problems arising, rather than wait until they do and then have to manage the problems.

References

Body, R., & McAllister, L. (2009). *Ethics in speech and language therapy*. West Sussex: Wiley-Blackwell.

Millsteed, J. (2006). Technology and Ethics. In H. Freegard (Ed.), *Ethical practice for health professionals* (pp. 210–229). Melbourne: Cengage learning:

The Speech Pathology Association of Australia Limited. (2003). *Scope of practice*. Retrieved from http://www.speechpathologyaustralia.org.au/library/Core_Assoc_Doc/Scope_of_Practice.pdf

The Speech Pathology Association of Australia Limited. (2010). *Code of Ethics*. Retrieved from <http://www.speechpathologyaustralia.org.au/library/Ethics/CodeofEthics.pdf>

The Speech Pathology Association of Australia Limited. (2011). *Competency-based occupational standards for speech pathologists: Entry level*. Retrieved from http://www.speechpathologyaustralia.org.au/library/Core_Assoc_Doc/CBOS_for_Speech_Pathologists_2011.pdf

1 This survey is available at: <http://www.abs.gov.au/ausstats/abs@.nsf/mf/4228.0/>

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What's the evidence for translating EBP into clinical practice?

Jade Cartwright

This column of “What’s the evidence?” follows on from the “Ethical conversations” in this issue of the *Journal of Clinical Practice in Speech-Language Pathology* around the ethical and professional issues currently facing clinicians in the workplace. Evidence based practice (EBP) was a recurring theme throughout the discussion with members of the Ethics Board acknowledging the increasing trend for both clinicians and consumers to endorse evidence based perspectives. A critical point to emerge related to “how research findings are actually interpreted and applied in the professional community” (Leitão et al., this issue, pg 33) to ensure that the translation of evidence to practice is appropriate and doesn’t restrict access, choice, or outcomes for individual clients. This caution is counterintuitive as through EBP clinicians strive for “optimal practice”. However, it is not always clear how effectively research actually does (and can) inform professional practice at the coalface, where administrative and system-level factors can significantly impede or restrict this translation. In fact the “prevailing disconnect between what we know to be effective and what we practice daily” (Liang, 2007, p. w120) is widely reported in the health sciences literature and many attempts to translate evidence into clinical practice are unsuccessful or only partially successful (Lizarondo, Grimms-Somers, & Kumar, 2011; Sales, Smith, Curran, & Kochevar, 2006; Small, 2005; Sudsawad, 2007). Interestingly, a recent survey of 123 speech pathologists working for Ageing Disability and Home Care (ADHC) in New South Wales revealed that 61.4% of speech pathologists surveyed either agreed or strongly agreed that there was a definite divide between the findings of research and application in clinical practice (Togher, Trembath, & Brunac, 2011). Yet the vast majority either agreed or strongly agreed that the application of EBP is a necessary part of speech pathology practice (89.5%) and guides decisions about client care (90.3%) (Togher et al., 2011). This finding suggests that a specific skill-set is perhaps required above and beyond EBP itself to ensure successful implementation and service change in light of strong evidence and practice guidelines. This “What’s the evidence?” column reviews the current evidence for “evidence translation” to offer clinicians some ideas for demonstrating and proactively addressing evidence–practice gaps.

Clinical scenario

Imagine you are a clinician working in a busy teaching hospital. As a senior speech pathologist you are responsible for covering the Neurology Ward and Stroke

Unit. Your caseload is busy and complex with a strong push for early discharge and reduced length of stay. Over the past two years you have read extensively and attended a number of continuing professional events in the areas of aphasia and dysphagia rehabilitation and best practice; however, you have not been able to implement much of your new knowledge. As is typically the case in this setting the assessment and management of dysphagia takes the priority and most of your day is spent conducting bedside swallowing examinations, while also fitting in regular team and family meetings into your busy schedule. It is extremely hard to find time to plan and complete new projects and one of your greatest bugbears is the paucity of time you have available to address your clients’ communication needs. You constantly reflect on how best practice could be achieved within the constraints of the system and how you can get your strong knowledge about the current evidence into practice. It is not a question of what the evidence says or what you should be doing as you are well aware of the research around the efficacy and effectiveness of aphasia treatments; it concerns more the actual translation of this evidence into practice. In other words: how can service change be successfully implemented (and sustained) to meet the recommended clinical guidelines and bridge the divide between evidence and practice to enable optimal client outcomes?

Response to this scenario

The clinical scenario is common across health areas and one that may contribute to despondency and reduced job satisfaction. I know that I have experienced frustration myself many times in practice when you know the current best evidence and expert opinion in the field but your ability to translate this evidence is compromised by external pressures on the service, such as caseload size and complexity, availability of managerial support and/or resources, and engrained service delivery models. Much of the EBP literature in the speech pathology arena has focused on critical appraisal of the research evidence as opposed to the implementation of the ‘clinical bottom line’ or best practice recommendation to emerge. When a clinician has the knowledge but doesn’t translate this knowledge into routine practice it is called a “knowledge-to-action” (KTA) gap (Molfenter, Ammouy, Yeates, & Steele, 2009) and this is the point where energy must be directed to bridge the knowledge–practice divide. Research supports the notion that transferring knowledge into action is a time consuming process (Molfenter et al., 2009). As a



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Table 1. Identified relevant evidence translation articles

Article	Type/Level of evidence*	Summary
Kagan, A., Simmons-Mackie, N., Brenneman, G., Conklin, J., & Elman, R.J. (2010). Closing the evidence, research, and practice loop: Examples of knowledge transfer and exchange from the field of aphasia. <i>Aphasiology</i> , 24(4), 535–548.	Review article	Provides a comprehensive overview of theoretical models and principles of knowledge transfer and exchange for clinicians and researchers.
MacDonald, S., & Wiseman-Hakes, C. (2010). Knowledge translation in ABI rehabilitation: A model for consolidating and applying the evidence for cognitive-communication interventions. <i>Brain Injury</i> , 24(3), 486–508.	Systematic review	Presents a model for consolidating and disseminating existing evidence for cognitive-communication interventions that is accessible for end users and promotes knowledge transfer.
Molfenter, S.M., Ammouy, A., Yeates, E.M., & Steele, C.M. (2009). Decreasing the knowledge-to-action gap through research-clinical partnerships in speech-language pathology. <i>Canadian Journal of Speech-Language Pathology and Audiology</i> , 33(2), 82–88.	Level IV	Presents the outcomes of a successful knowledge-to-action intervention targeting clinicians' hesitance to adopt a new therapeutic tool (sEMG) in practice despite didactic training and "knowledge".
Rose, M., & Baldac, S. (2004). Translating evidence into practice. In S. Reilly, J. Douglas, & J. Oates (Eds.), <i>Evidence-based practice in speech pathology</i> (pp. 317–330). Philadelphia: Whurr Publishers.	Book chapter	Provides a useful overview of the challenges of, and barriers to, the translation of EBP into practice with practical and theoretically driven strategies for addressing them.
Simmons-Mackie, N.N., Kagan, A., Christie, C.O., Huijbregts, M., McEwan, S., & Willems, J. (2007). Communicative access and decision making for people with aphasia: Implementing sustainable health care systems change. <i>Aphasiology</i> , 21(1), 39–66.	Level IV	Outlines the outcomes of an implementation project targeting systems-level change to improve access to health care information and supported decision-making for people with aphasia.

*Source: NH&MRC levels of evidence: http://www.nhmrc.gov.au/_files_nhmrc/file/publications/synopses/cp30.pdf

result, to address evidence–practice gaps like those described in the clinical scenario we should look to current evidence into “research translation” and “knowledge transfer” to identify strategies and models that work. This step does not seek to address the specific clinical scenario directly; rather it seeks to provide some recommendations for clinicians who want to demonstrate and address the evidence–practice gaps they observe in their workplace.

Searching for the evidence

So, what is the evidence for “evidence translation”? To answer this question we can turn to the research databases to look at what has been published in the field. The search undertaken sought to find research studies that tested intervention strategies with a primary purpose of translating research evidence into clinical practice with outcomes measured at the level of the professional (e.g., change in practice, knowledge, or attitudes), the patient or consumer (e.g., improved client satisfaction or outcomes), and/or the service itself (e.g., change in policy, programs, or staffing ratios). Identifying key search terms can be a challenge to EBP, especially when narrow keywords are utilised to find relevant evidence. Search strategies from the related literature, such as those of Evenson, Sanson-Fisher, D’Este, and Fitzgerald (2010), were used to help define the search terms for this review. Starting with PsycINFO (Psychological Abstracts), Medline, and Google Scholar, a title search using the terms (knowledge OR evidence practice gap OR practice guideline* OR recommendation* OR best practice* OR implementation OR knowledge translation) AND (speech patholog* OR speech language therap*) was undertaken. Aphasia, communication, and stroke were additional search terms used. However, very few relevant papers were identified, as shown in Table 1. Interestingly, replacing speech pathology with (nursing) resulted in a much higher return of translation research and review papers, suggesting that more translational research and discussion is taking place in fields beyond speech

pathology. The search terms (speech patholog* OR speech language therap*) AND (evidence based practice) returned many more hits; however, very few of these papers appeared to address “translation” specifically or in a systematic way.

Clinical bottom line

The references identified in Table 1 provide a useful foundation for exploring the research in evidence translation in the speech pathology field and the opportunity to examine strategies that have been proactively used, either successfully or unsuccessfully, to address KTA gaps. The articles by Molfenter et al. (2009) and Simmons-Mackie et al. (2007) have most relevance for the clinical scenario and clearly illustrate the “knowledge transfer and exchange” (KTE) processes or KTA interventions that were used and evaluated. The critically appraised evaluation for the Simmons-Mackie et al. (2007) study is provided in Table 2.

The main themes to emerge from this review are provided in Box 1 and explored below, providing some useful tips for clinicians addressing KTA gaps in their own workplace. Overall, the body of work highlights the promise of KTE as a unique skill set for addressing KTA gaps in practice to improve service provision, drive policy change, and most importantly optimise therapeutic outcomes.

Box 1. Themes guiding successful EBP translation into practice

- Draw upon frameworks, models, and theories to guide knowledge transfer and exchange
- Clearly identify a knowledge-to-action or evidence-practice gap
- Use clients as partners and agents for change
- Identify readiness for and barriers to change
- Form partnerships and collaborations as drivers of change
- Evaluate, measure, and disseminate change outcomes
- Ensure continued KTE dialogue between clinicians and researchers

Table 2. Critically appraised article	
Article purpose	To determine whether communicative access to information and decision-making could be improved for people with aphasia across three health care facilities in Canada by targeting systems-level change. This study sought to address limitations in the translation of evidence regarding the benefit of supported conversation and aphasia-friendly principles into routine practice.
Citation	Simmons-Mackie, N.N., Kagan, A., Christie, C.O., Huijbregts, M., McEwan, S., & Willems, J. (2007). Communicative access and decision-making for people with aphasia: Implementing sustainable health care systems change. <i>Aphasiology</i> , 21(1), 39–66.
Design	Qualitative research design (thematic analysis). No randomization or control group.
Level of evidence	Level IV (Qualitative descriptive study without experimental control)
Participants	Three facilities participated in the project. The facilities included a large tertiary medical centre; a rehabilitation centre; and a long-term care facility. A manager that was associated with stroke care was identified within each of the facilities. These managers then selected “a team” to be involved in the project. A total of 37 team members participated across facilities and a range of disciplines.
The intervention	The KTA intervention involved a 2-day training program based on Supported Conversation for Aphasia™ (SCA) training procedures, followed by post-training support. Participants received information about aphasia and the opportunity to practise using SCA techniques. Participants also brainstormed issues surrounding communication access in their facility, leading to the formulation of specific goals for that site to enhance and improve access. Post-training follow-up occurred with all sites 4 months later with periodic on-site support to address any problems with implementation and to provide teams with individualised resources.
Results	Qualitative data was collected before and after training, and at the 4-month follow-up via observation, interviews, and focus groups. Through observation checklists data regarding the actual use of strategies and resources was collected however, the amount of observation was described as insufficient by the authors. The interviews and focus groups elicited information about the participants’ knowledge and perspectives regarding the access to information and decision-making ability of people with aphasia. After training, the knowledge of all participants concerning how to support people with aphasia to access information improved. Changes were most positive for the rehabilitation and long-term care facilities, with examples provided of system changes that improved access and participation of people with aphasia within their programs. Unfortunately, implementation was less successful in the acute care facility.
Limitations	No control group or randomisation. Four month follow-up unlikely to provide a reliable index of sustainable change. Consumers or people with aphasia were not involved in the training or evaluation of project outcomes. Insufficient observational data collected to obtain objective direct evidence of implementation of communicative access strategies. Only 3 facilities were included in the study with a need to increase sample size.
Summary	The project was successful in improving communicative access and decision-making for people with aphasia at a systems-level for 2 of 3 facilities. That is, the systems and procedures of the facilities did change with positive implications for consumers with aphasia. The outcomes provide support for involving front-line service providers in the evaluation of their own service and strategies for change to enable effective, sustainable, and long-term changes in health services to take place. The successful involvement of service providers suggests that active collaboration between researchers and clinicians can help guide the translation of evidence into practice. Further research does need to take a more controlled, experimental approach to investigate the effectiveness of systems-change projects and address potential barriers to change in the planning stages.

Draw upon frameworks, models, and theories to guide knowledge transfer and exchange

One of the most important themes to emerge from the literature under review was that a multidimensional KTE framework is beneficial for facilitating the successful transfer of knowledge into practice. There are many different KTE models available for clinicians to select from and readers are directed to a number of sources for a more comprehensive overview (Estabrooks, Thompson, Lovely, & Hofmeyer, 2006; Kagan et al., 2010; Rose & Baldac, 2004; Sudsawad, 2007). As an excellent example Molfenter et al. (2009) provide evidence that KTA processes and KTE principles are effective and can be used successfully to guide the planning, implementation and evaluation of translation projects. In particular, they drew upon the KTA process developed by Graham and colleagues (2006), which involves both *knowledge creation* (the synthesis, tailoring and clear, targeted dissemination of knowledge) and then *knowledge action* (the transfer of knowledge into practice) with a cyclical and dynamic relationship between the two. Application of the model ensures that testable and useful translation interventions are devised and implemented (Estabrooks et al., 2006; Kagan et al., 2010), providing a “road map for introducing... evidence-based

techniques into clinical practice” (Molfenter et al., 2009, p. 86). While many frameworks and models are available, further research is needed to test their use in actual practice environments and their relevance for speech pathology (Estabrooks et al., 2006; Sudsawad, 2007). While the evidence is mounting, clinicians should take time to identify the most appropriate KTE model or strategy to meet the needs of a particular practice environment or clinical problem.

Clearly identify a knowledge-to-action or evidence-practice gap

Before selecting the most appropriate KTE framework, it is important to have a KTA gap or clinical problem in mind. This gap in best practice is the driving force behind a translation initiative and should be clearly defined before devising a KTA intervention. Surveys, audits, interviews, focus groups, and reflective practice are all strategies that can be used to demonstrate a divide between what is known and what is actually being implemented in practice in terms of evidence based assessment, intervention, or adherence to recommended clinical guidelines or pathways. Objectively demonstrating a gap in service provision provides local, pre-intervention data, which is useful for not only advocating the need for change, but also for providing a critical reference point for measuring the success of a

KTA intervention. As an example, Molfenter et al. (2009) clearly identified a gap in dysphagia rehabilitation, whereby clinicians had learnt about a new therapeutic tool (*knowledge creation*), but had failed to translate its use into everyday practice (*knowledge action*). The clinical scenario presented is similar: clients are not able to reap the benefits of trialled and tested interventions. In reality, identifying “the gap” is often the easiest, but most crucial, step in a translation project. Such gaps often make their way quickly on to departmental wish lists or to-do plans; however, finding the time, resources, and sometimes the confidence to address them can be more difficult and the right KTE strategies or frameworks can thus be useful.

Use clients as partners and agents for change

Another key message to emerge is that the most successful translation projects are those conducted in partnership with clients or consumers (Kagan et al., 2010; Simmons-Mackie et al., 2007). As a profession we need to be creative in how we survey and gather information from our clients about treatment services and service delivery models as satisfaction data can provide a powerful impetus for change. Engaging and empowering our clients also encourages them to participate more actively in their own treatment and demand the highest level of care. The recommendation has been made that more energy should be directed into informing our clients and key stakeholders about current best evidence to enable them to become drivers of knowledge transfer. Kagan et al. (2010, p. 541) highlight the need to identify “credible messengers” who may best contribute to a “tipping point” in ensuring that research is translated into practice. One choice might be a client with aphasia and their families; others could include champions in the field. Finding the right spokesperson may determine the power and capability of a translation project (Kagan et al., 2010). Simmons-Mackie et al. (2007) identified not involving the right spokesperson as a limitation of their research and strongly encourage including consumers or clients in the planning and evaluation of KTA interventions.

Identify readiness for and barriers to change

Simmons-Mackie et al. (2007) demonstrate the importance of identifying potential barriers to change in the planning (and evaluation) stages of an implementation project. In this study, systems-level change was made in two out of the three facilities involved in the project. While positive changes in attitudes, knowledge, and service were seen in the rehabilitation and long-term care facilities, the outcomes were not as positive in the acute care setting and pervasive systems-level change was not achieved. It is extremely important that such “negative results” are reported and shared with the professional community, providing information about barriers and variables that influence systems change and knowledge translation (Simmons-Mackie et al., 2007). Assessing team readiness for change is another important consideration and once “local barriers” are identified, KTA interventions can be tailored accordingly. KTA models and frameworks guide clinicians through this process, enabling them to *adapt knowledge* to the local context (Graham et al., 2006).

Form partnerships and collaborations as drivers of change

Knowledge transfer and exchange are dynamic and interactive processes and strategic partnerships play a critical role. Passive dissemination of research findings

through conferences, publications, and other forms of written material does not work and will not ensure consistent or effective transfer of evidence (Kagan et al., 2010; Sudsawad, 2007). This point was made clear in the Molfenter et al. (2009) study, where didactic teaching was not enough to translate use of a new therapeutic tool into practice. For system change to occur, “interactive engagement” is needed between “those who create the knowledge, those who disseminate it, and those who can use it” (Lomas, cited in Kagan et al., 2010, p. 540). Perhaps not surprisingly, research findings are most likely to be “used in practice” when the clinician (or service) is linked to a study or project from the outset (Kagan et al., 2010). For example, in both the Molfenter et al. (2009) and Simmons-Mackie et al. (2007) studies clinicians were engaged from the planning phase and able to identify their own KTA goals and needs. Their input facilitated engagement and “buy-in” with commitment to KTE. It is only through actively engaging “front-line service providers” and administrators that sustainable, long-term changes to service quality (and policy) can be made (Kagan et al., 2010).

Evaluate, measure, and disseminate change

It is of critical importance that the outcomes of any implementation project are measured systematically to determine success and to contribute to the evidence base for knowledge transfer. Outcomes should be measured at the level of the health professional (e.g., change in practice, knowledge, or attitudes), the patient or consumer (e.g., improved client satisfaction or outcomes), and/or the service itself (e.g., change in policy, programs, or staffing ratios). Molfenter et al. (2009) and Simmons-Mackie et al. (2007) provide useful examples of ways to measure outcomes. To illustrate, Molfenter and colleagues (2009) used a “blind assessor” not involved in the KTA intervention to interview clinicians and collect feedback about the success of the project. Simmons-Mackie et al. (2007) also conducted interviews and focus groups with their participants to explore changes in knowledge, attitudes, and practices. When working within a KTA framework “sustained knowledge use” is vital and requires inclusion of follow-up measures to ensure that robust changes in practice are made and clearly demonstrated (Molfenter et al., 2009). Kagan et al. (2010) state that sound methodology for evaluating the results and success of knowledge transfer is critical and that a strategy for dissemination of findings should be determined at the outset. Considering the key message of the research, the key stakeholders to engage, and the best ways for sharing the results to support and facilitate further transfer into practice are important, continuing the knowledge action cycle (Graham et al., 2006; Kagan et al., 2010).

Ensure continued KTE dialogue between clinicians and researchers

The final theme to emerge emphasises that effective knowledge transfer is dependent on effective communication between researchers and “end users”, ensuring appropriate and well targeted use of best evidence in practice (Graham et al., 2006; Kagan et al., 2010; Molfenter et al., 2009). This exchange must be bi-directional, mutually inclusive, and cyclical. Researchers play an important role in ensuring that research findings are synthesised and disseminated in an “accessible format for end users” (Macdonald & Wiseman-Hakes, 2010, p. 486), by adopting “practice-friendly research” (Small, 2005, p. 327). Furthermore, it is important that scientific findings have relevance to situations of practice and address areas

of local need. At the front line, clinicians know the practical limitations of a body of evidence and have a responsibility to engage in reflective practice to help identify targets for translational research and creation of new knowledge. When research aligns with local need, as a field we have much greater potential to solve prominent clinical problems in innovative and applied ways (Small, 2005). Active dialogue between researchers and clinicians helps to enhance political consciousness and drive policy change (Small, 2005) and the *Journal of Clinical Practice in Speech-Language Pathology* provides an ideal forum for this exchange of information, fostering greater collaborations in real-world contexts, and sharing the outcomes of theoretically driven KTA interventions.

Conclusion

This column of “What’s the evidence?” set out to explore the evidence for *evidence translation* to address a common clinical scenario where clinician knowledge fails to be translated into action. While the clinical scenario was not addressed directly, the articles reviewed provide clinicians with useful strategies for confidently and proactively targeting KTA gaps in practice. Of importance, the review suggests that a unique skill set is required to translate research findings into practice. That is, a commitment to EBP isn’t enough and clinicians that endorse EBP must go further, forging a strong allegiance to “evidence translation”. Clinicians should get to know and draw upon KTE models to plan, implement and evaluate translation projects. There is a paucity of research that has systematically addressed KTA gaps and evaluated KTE strategies in the speech pathology field; however, the literature available does suggest that such projects hold great promise for changing practice and driving policy change. Clinicians and researchers alike have a professional responsibility to contribute to this body of evidence, ideally in collaboration. “Practice-friendly dissemination” and sharing of implementation projects are important to showcase innovative ways of addressing translation and the inherent barriers to change. The *Journal of Clinical Practice in Speech-Language Pathology* will continue to provide an excellent forum for sharing such quality improvement and translation initiatives and their clinical and systems-level outcomes. To conclude with the words of Nan Bernstein-Ratner (2006): “Evidence is only helpful to professionals if health service providers seek it out, understand it, and apply it” (p. 265).

References

Bernstein Ratner, N. (2006). Evidence-based practice: An examination of its ramifications for the practice of speech-language pathology. *Language, Speech, and Hearing Services in the Schools, 37*, 257–267.

Estabrooks, C.A., Thompson, D.S., Lovely, J.E., & Hofmeyer, A. (2006). A guide to knowledge translation theory. *Journal of Continuing Education in the Health Professions, 26*, 25–36.

Evenson, A.E., Sanson-Fisher, R., D’Este, C., & Fitzgerald, M. (2010). Trends in publications regarding evidence-practice gaps: A literature review. *Implementation Science, 5*, 1–5.

Graham, I.D., Logan, J., Harrison, M.B., Straus, S.E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: Time for a map? *Journal of Continuing Education in the Health Professions, 26*, 13–24.

Kagan, A., Simmons-Mackie, N., Brenneman, G., Conklin, J., & Elman, R.J. (2010). Closing the evidence, research, and practice loop: Examples of knowledge

transfer and exchange from the field of aphasia. *Aphasiology, 24*(4), 535–548.

Leitão, S., Bradd, T., McAllister, L., Russell, A., Kenny, B., Scarinci, N.,... & Wilson, C. (2012). Emerging ethical and professional issues. *Journal of Clinical Practice in Speech-Language Pathology, 14*(1), 33–36.

Liang, L. (2007). The gap between evidence and practice. *Health Affairs, 26*(2), w119–w121.

Lizarondo, L., Grimmers-Somers, K., & Kumar, S. (2011). A systematic review of the individual determinants of research evidence use in allied health. *Journal of Multidisciplinary Healthcare, 4*, 261–272.

MacDonald, S., & Wiseman-Hakes, C. (2010). Knowledge translation in ABI rehabilitation: A model for consolidating and applying the evidence for cognitive-communication interventions. *Brain Injury, 24*(3), 486–508.

Molfenter, S.M., Ammoury, A., Yeates, E.M., & Steele, C.M. (2009). Decreasing the knowledge-to-action gap through research-clinical partnerships in speech-language pathology. *Canadian Journal of Speech-Language Pathology and Audiology, 33*(2), 82–88.

Rose, M., & Baldac, S. (2004). Translating evidence into practice. In S. Reilly, J. Douglas, & J. Oates (Eds.), *Evidence-based practice in speech pathology* (pp. 317–330). Philadelphia: Whurr Publishers.

Sales, A., Smith, J., Curran, G., & Kochevar, L. (2006). Models, strategies, and tools: Theory in implementing evidence-base findings into health care practice. *Journal of General Internal Medicine, 21*, S43–49.

Simmons-Mackie, N.N., Kagan, A., Christie, C.O., Huijbregts, M., McEwan, S., & Willems, J. (2007). Communicative access and decision making for people with aphasia: Implementing sustainable health care systems change. *Aphasiology, 21*(1), 39–66.

Small, S.A. (2005). Bridging research and practice in the family and human sciences. *Family Relations, 54*(2), 320–334.

Sudsawad, P. (2007). *Knowledge translation: Introduction to models, strategies, and measures*. Austin, TX: Southwest Educational Development Laboratory, National Center for the Dissemination of Disability Research. Retrieved from the National Center for the Dissemination of Disability Research website: <http://www.ncddr.org/kt/products/ktintro/ktintro.pdf>

Togher, L., Trembath, D., & Brunac, M. (2011). *Barriers and enablers to the use of evidence based practice by speech pathologists working for Ageing Disability and Home Care (ADHC) (NSW)*. Retrieved from Family and Community Services, Ageing, Disability, and Home Care website: http://www.adhc.nsw.gov.au/__data/assets/file/0005/241655/Barriers_and_enablers_of_evidence_based_practice_report.pdf

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Webwords 42

Professional issues

Caroline Bowen

Hello JCPSLP

Goodbye *ACQ* (*ACQuiring Knowledge in Speech, Language and Hearing*) with the quirky title and hello to the sensibly named *Journal of Clinical Practice in Speech-Language Pathology*. Like its predecessors, *Speech Pathology Australia's* rebadged clinical and professional journal, *JCPSLP*, provides a forum for the 4,750 or so members of the association, and is published three times a year in March, July, and November.

Webwords lives on in its new setting in print, and indeed in a new setting on the web at www.speech-language-therapy.com; more of that shortly.

A little ACQ and Webwords history

The first three Webwords columns appeared in *ACQ* in 1999, the International Year of the Older Person and the year that Speech Pathology Australia celebrated its **50th birthday**¹. It continued to thrive when the association turned 60 in 2009, but we will need to think about a succession plan (or a wake) for the ageing Webwords some time between now and the association's 70th and the author's 75th in 2019.

Pam Snow was editor when I took stumbling first steps into Internet column writing while becoming accustomed to being called "Australia's Judy Kuster" at regular intervals. Inveterate web weaver Emeritus Professor Judith Maginnis Kuster is famous in SLP circles for her **Net Connections**², **Stuttering Home Page**³, and **Internet**⁴ columns in the *ASHA Leader*.

Dr Snow, who introduced the "new look" and newly renamed *ACQ* in her February 1999 editorial, had taken over from Lynette Hodgson who had been editor of *The Australian Communication Quarterly*, which actually was issued quarterly. The *ACQ* editors who followed were Sharynne McLeod (editor of our *International Journal of Speech-Language Pathology*), Liz Spencer, Cori Williams and Suze Leitão, Chyrisse Heine and Louise Brown, Marleen Westerveld and Nicole Watts Pappas, and currently Marleen Westerveld and Kyriaki Ttofari Eecen.

Each editor or editorial double-act has had a characteristic in common – dedication to producing the best possible edition of the journal on each and every occasion, on time, on topic, and in touch with current issues. All facilitated by one, a mysterious presence called 'pubs' at, or rather '@' National Office; two, author and long-serving copy editor extraordinaire, Carla Taines; and three, designer and stalwart typesetter Bruce Godden of Wildfire Graphics. Members who read credits pages know Carla and Bruce have seen to it that the journal reads well and looks good since 1999. Take a bow!

Frozen

Meanwhile, speech-language-therapy.com pursued its mission of providing useful resources and trustworthy information about human communication disorders and was accessed by increasing numbers of people. Just one resource page could be expected to be visited by 30,000 visitors a month, and this translated into around 120,000

downloads of intervention materials in a month for that one page. Feedback from colleagues everywhere indicated that the site's content was appreciated and well used, especially by clinicians and clinical educators.

In August 2011, just as speech-language-therapy.com received its 20 millionth hit and was experiencing record numbers of visitors per day, something unexpected happened. The American company that hosted it withdrew support for the server extensions that had been in place since 1998. This meant the site was doomed to stay in a frozen form, uneditable, for as long as the company received its monthly hosting fee, or until I took it down. This was a signal to abandon it and start again. Walking away from it was not an option given the way it appeared to be valued and utilised by the profession.

New site

After intense work the site moved to a new host, iVent, a short distance from home in Australia. The talented team at iVent designed the new site and did the CMS build but it was my job to populate it. "Populating it" has meant having to variously remove, re-write, re-code, replace, and relocate all the content from the old site to the new one. The first stage took three months, and the work is ongoing.

The home page address remains the same but all the other URLs are different. Outdated and infrequently accessed content has been removed, a powerful search tool replaces the site map, new and revised articles and resources have been added, there is a comprehensive glossary, the links have been reorganised, and it all has a new look.

In populating the site, picking over every inch of the huge old site was an unwelcome task. It provided, however, an opportunity to review all the external links, including 160 of Speechwoman's sites of the month and the site's main links page, and note changes that have taken place since 1998 in the way we use the net for professional purposes.

MRA signatories' sites

Nowhere are these changes more apparent than in the sites mounted by the Mutual **Recognition of Association Credentials Agreement (MRA)**⁵ signatories: ASHA (USA), CASLPA (Canada), IASLT (Ireland), NZSTA (New Zealand), RCLSLT (UK), and SPA (Australia). The mission of any SLP/SLT professional association is reflected in the pages of its website, and is to represent the interests of its members, and in so doing, their clients. Members benefit through access to members only areas and the sites vary in terms of what they offer to non-members in search of resources.

ASHA

The American Speech-Language-Hearing Association (ASHA) is the professional, scientific, and credentialing association for 145,000 members and **affiliates**⁶ who are audiologists, speech-language pathologists and speech, language, and hearing scientists. Non-members have access to copious **information**⁷ and **The ASHA Leader Online**⁸.



Kyriaki Ttofari Eecen, Caroline Bowen, and Marleen Westerveld

CASLPA

With more than 5,400 members, the Canadian Association of Speech-Language Pathologists and Audiologists (CASLPA) is the only national body that supports and represents the professional needs of speech-language pathologists, audiologists, and supportive personnel inclusively within one organisation. Through this support, CASLPA champions the needs of people with communications disorders. CASLPA's **Canadian Journal of Speech-Language Pathology and Audiology**⁹ is freely available.

IASLT

The Irish Association of Speech and Language Therapists (IASLT) is the recognised professional association of SLTs in Ireland. It has an interesting News Archive and a free **Update**¹⁰ magazine.

NZSTA

The New Zealand Speech-Language Therapists' Association (NZSTA) is the professional association and regulatory body for speech-language therapists in New Zealand. Its **New Zealand Journal of Speech-Language Therapy**¹¹ (2003–08 issues) and **Communication Matters**¹² magazine are free for anyone to download.

RCSLT

The Royal College of Speech and Language Therapists (RCSLT) is the professional body for speech and language therapy in the UK, representing speech and language therapists, support workers, and students. The RCSLT works with members to represent the profession at the highest levels. It consults with governments, other professional bodies, unions, universities, charity partners, and commissioning authorities on behalf of its 14,000 members. The **RCSLT Bulletin**¹³ is available at Issuu.

SPA

Speech Pathology Australia (SPA) is the national peak body for the speech pathology profession in Australia, striving for excellence and recognition for the profession and

representing the interests of members and their clients with communication and swallowing difficulties. As well as having a website that presents an attractive, corporate image, Speech Pathology Australia has an entry in **Wikipedia**¹⁴, a **Facebook**¹⁵ presence, it **tweets**¹⁶ (but not very often), and has desultory conversations on its message boards. It reserves access to its publications to members only, and they can enter the secure area to reach *Speak Out*, the *ACQ Archive*, *IJSLP*, and now, *JCPSLP*!

Find Webwords 42 with live links to resources at www.speech-language-therapy.com

Links

1. <http://www.caslpa.ca/english/resources/cm007.asp>
2. <http://www.mnsu.edu/comdis/kuster2/welcome.html>
3. <http://www.mnsu.edu/comdis/kuster/stutter.html>
4. <http://www.mnsu.edu/comdis/kuster4/leader.html>
5. http://www.speechpathologyaustralia.org.au/index.php?option=com_content&view=article&id=913
6. <http://www.asha.org/members/international/affiliate.htm>
7. <http://www.asha.org/slp/>
8. <http://www.asha.org/leader.aspx>
9. http://www.caslpa.ca/english/resources/cjslpa_home.asp
10. <http://www.iaslt.ie/docs/public/information/UPDATE%20Autumn%20Edition%202011.pdf>
11. <http://www.speechtherapy.org.nz/about-nzsta/publications-1/nzsta-journal>
12. <http://www.speechtherapy.org.nz/about-nzsta/publications-1>
13. <http://issuu.com/redactive/docs/bulletinapril2011>
14. http://en.wikipedia.org/wiki/Speech_Pathology_Australia
15. <https://www.facebook.com/pages/Speech-Pathology-Australia/206849462687352>
16. <https://twitter.com/%21/SpeechPathAust>

Webwords 42 is at www.speech-language-therapy.com with live links to featured and additional resources.



Speech Pathology Australia's Top 10 resources

Speech Pathology Australia (SPA) is the national peak body for speech pathologists and consumers of speech pathology services in Australia. The Association strives for excellence and recognition for the profession and represents the interests of members and their clients with communication and swallowing difficulties.

1 Membership

Speech Pathology Australia provides many services to its members, including:

- *representation* of the profession to external bodies including government, employing authorities and the general community;
- *public awareness* activities and strategies to raise the profile of the profession;
- *publications* about professional issues and up-to-date research;
- *continuing education* including Continuing Professional Development events, National Tour workshops, and the annual National Conference;
- *member services* including member register, professional information and advice, as well as practice resources;
- *submission preparation and representation* to funding bodies, government departments, and research authorities.

The Association also offers a range of awards including Life and Fellowship membership, awarded to members with an outstanding commitment to and achievement in the profession.



2 Added-value member benefits

Speech Pathology Australia offers a range of tailored programs and special benefits to members. Guild Group is SPA's preferred provider of professional indemnity and combined liabilities insurance and a range of policies have been negotiated to suit the different needs of members working in public and private settings. Guild offers members a range of quality business and personal (home and car) insurance products as well as financial and superannuation services - for more information about any of these products or services, contact Guild on 1800 810 213 or visit <http://www.guildgroup.com.au>

The Member Advantage program offers a range of outstanding benefits and discounts on lifestyle and business products and services, including car hire, car purchase, Qantas Club, entertainment, books, and much more. Your SPA membership card and number confirms your membership and provides you with ready access to these discounts. Go to: <http://www.memberadvantage.com>

Additionally, a special member service has been negotiated with the Victorian Hospitals' Industrial Association (VHIA) providing members across public and private settings nationally access to industrial and award advice free-of-charge for initial inquiries.

Details of all programs can be found at <http://www.speechpathologyaustralia.org.au/membership/member-benefits-programs>

3 Publications

SPA produces several important publications designed to keep members up-to-date with the latest clinical and theoretical research. The *Journal of Clinical Practice in Speech-Language Pathology* (previously ACQ) provides a professional forum for members through articles about specific professional topics and issues of value to the practising clinician, general information on trends and developments, and information about resources. The *International Journal of Speech-Language Pathology* promotes discussion on a broad range of current clinical and theoretical issues and showcases experimental, review, and theoretical discussion papers. Archived copies of all publications are available from the members' section of the SPA website.

Bimonthly *Speak Out* and regular *e-News* bulletins also help members keep in touch with what is going on in the world of speech pathology and the Association.



4 SPA website

SPA's website is an almost inexhaustible resource, containing an enormous amount of information to inform and assist members in all areas of their practice or study. These include: private practice resources; speechBITE™ (a free database that accesses best evidence in all areas of speech pathology intervention); autism spectrum disorder (ASD) resources and online education modules; terminology for modified foods and fluids; graduate information; lobbying and advocacy information and resources; discussion boards; and member networks.

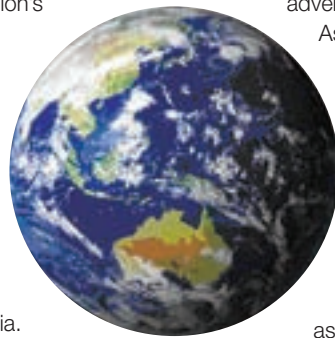
Documents such the Code of Ethics and



the Competency Based Occupational Standards (CBOS) are also available to provide guidance for the breadth of professional practice. Clinical guidelines and position statements provide information about scopes of practice, theoretical models, and workplace applications for specific topics and issues.

5 Ethics

The current Code of Ethics was launched in 2010, reflecting the changes in professional practice, the nature and complexity of issues raised, and an increase in the lodgement of formal complaints. All ethics enquiries and complaints are handled by the Association's Senior Advisor Professional Issues and referred to the standing Ethics Board if required. The Board then investigates alleged breaches of the code and provides recommended actions to SPA's National Council. The Board is active in upholding standards of professional practice and in applying principles that inform ethical decisions. The Senior Advisor Professional Issues can be contacted on sapi@speechpathologyaustralia.org.au and the Code of Ethics can be found at <http://www.speechpathologyaustralia.org.au/library/Ethics/CodeofEthics.pdf>



6 Professional development

The Association offers a number of ways to access professional development, including:

- attendance at SPA events at member rates including Branch continuing Professional Development (CPD) events, national tours, national videoconferences, Private Practice Member Network (PPMN) business seminars, and the annual national conference. A list of upcoming events, with brochures can be found at http://online.speechpathologyaustralia.org.au/iMIS_public/Core/Events/Events.aspx
- borrowing items – for members only – from the CPD Events Library. More information at <http://www.speechpathologyaustralia.org.au/continuing-professional-development-cpd/cpd-events-library>
- access to the online Autism Independent Study Resources. These self-directed learning packages are free for members at <http://www.speechpathologyaustralia.org.au/resources/helping-children-with-autism-package/education-a-resources>
- discussion boards on a variety of topics, free for members <http://forum.speechpathologyaustralia.org.au/>
- participation in the Professional Self Regulation (PSR) program leading to certification – for further information go to <http://www.speechpathologyaustralia.org.au/membership/professional-self-regulation-psr>

7 Mentoring Program, Member Networks, and Special Interest Groups

SPA's Mentoring Program helps practitioners new to some aspect of their role develop their skills, knowledge, and networks by matching them with a more experienced practitioner. For more information, visit <http://www.speechpathologyaustralia.org.au/membership/mentoring-program>

Member Networks are designed to promote and encourage different member groups, like rural and remote, private practice, or education, to contribute to all aspects of

the Association. To find out more or to join, visit <http://www.speechpathologyaustralia.org.au/member-networks-mn>

Special Interest Groups are made up of members and non-members and provide information to maintain and advance current skills, provide opportunities for networking, and discuss topical issues. For more information, go to <http://www.speechpathologyaustralia.org.au/resources/special-interests-groups>

8 Seeking Employment

The Association's website Job Board is an excellent resource for those seeking employment or wishing to advertise vacant positions. Various of the Association's publications also contain advertisements for other positions or overseas recruitment companies.

Those wishing to work overseas in the USA, Canada, Ireland, United Kingdom, and New Zealand may also be assisted through the **Mutual Recognition Agreement (MRA) of Professional Association Credentials.**

SPA is a signatory to an MRA with five sister associations: American Speech-Language-Hearing Association, ASHA (USA); Canadian

Association of Speech-Language Pathologists and Audiologists, CASLPA (Canada); Royal College of Speech and Language Therapists, RCSLT (UK); Irish Association of Speech and Language Therapists, IASLT (Ireland); and New Zealand Speech-Language Therapists' Association, NZSTA (NZ). The MRA recognises that the six member countries have substantially equivalent credentials so it is possible for certified or full members of one association to become recognised by the others. This does not ensure migration to any of the other countries or employment, but the possibility of professional recognition. Further information can be found at: <http://www.speechpathologyaustralia.org.au/membership/overseas-qualifications-assessment>

Guidance and tailored information for new graduates is also available, starting with the Graduate Information webpage. Containing useful links and FAQs, the webpage is designed to help new members of the profession make the transition from student to fully fledged speech pathologist! <http://www.speechpathologyaustralia.org.au/education-and-careers/graduate-information>

9 A national voice for lobbying and advocacy

A key component of the Association's vision is to be an informed and influential peak body and to advocate for the interests of those with communication and swallowing difficulties. SPA does this actively by preparing submissions, meeting with local and federal politicians, and providing comment and information as expert spokespeople on representative committees or in the media. Much of this work is driven by the Association's Strategic Plan 2011–2013. All of the Association's lobbying activities can be found on the website, including current and past briefing papers, our 2010 Federal Election Platform, supporting media releases, and submissions.

An important part of our lobbying work is to have strong and nationally consistent key messages, with all members informed of these and the Association's key objectives. Members interested in lobbying at a state or federal level will be supported through the Practice, Workplace and



Government (PWG) Portfolio, as well as the CEO and Communications and Marketing Manager at National Office. A very useful Lobbying Resources Package is also available on the website to guide members in how to participate in Association lobbying. <http://www.speechpathologyaustralia.org.au/lobbying-a-advocacy>

10 Public awareness resources

Members often attend expos, careers nights, and presentations, and SPA can assist with promotional items, video presentations, and fact sheets. Promotional items include pens, balloons, bookmarks, posters, notepads, t-shirts, literacy resource guides, and brochures. Also available are Association diaries, mugs, and USBs. For more information and to see the full range, visit <http://www.speechpathologyaustralia.org.au/my-spa/marketing-materials-order-form>

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“The phone is such a lifeline ...

... I advise many of my clients with speech or hearing impairments to use the NRS.”



The **National Relay Service** makes it easier for people with complex communication needs to retain their networks and independence – to phone a friend, contact the bank or book a taxi.

Learning to use the NRS is straightforward. Training is free and can be done in your client's home.

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- www.relayservice.com.au



A phone solution for people who are deaf or have a hearing or speech impairment



An Australian Government Initiative



speechBITE

Answering the need for better access to evidence

Looking for treatment research but don't know where to start? Many busy clinicians don't have time to spend hours navigating a multitude of different databases to find published research. Evaluating the scientific quality of research can be another hurdle for clinicians who are looking for the best evidence to improve client outcomes. The good news is that speech pathologists now have a free, online database designed specifically to address their needs: speechBITE. speechBITE is used by clinicians in more than 100 countries worldwide. Are you using speechBITE yet?

What is speechBITE?

The Speech Pathology Database for Best Interventions and Treatment Efficacy, known as speechBITE, is an internet resource designed to assist speech pathologists in evidence based clinical decision-making. speechBITE is a searchable catalogue of peer-reviewed published research on treatment across the entire scope of speech pathology practice. speechBITE provides the citations and, where possible, the abstracts for these references. Articles listed on speechBITE are sourced from an extensive search across multiple electronic databases including MEDLINE, PsycINFO, and CINAHL. Included in the database are systematic reviews, randomised controlled trials, non-randomised controlled trials, case series, and single case experimental designs.

To ensure the speechBITE database includes the most relevant empirical research for the speech pathology profession, all references are pre-screened according to the following criteria: (a) published in a peer-reviewed journal, (b) includes an intervention relevant to speech pathology practice, (c) includes participants with (or at risk of) a communication and/or swallowing disorder, and (d) provides empirical data on treatment efficacy.

Currently speechBITE has *more than 3000 references* across all levels of evidence. The speechBITE database will continue to grow as new references are added on a regular basis. speechBITE is rapidly becoming a key evidence-based-practice resource for speech pathologists worldwide. Since the launch in 2008, the number of searches on speechBITE has increased by 200%.

How do I search speechBITE?

Searching speechBITE is simple and fast. Go to the SEARCH page (<http://www.speechbite.com/search.php>) and enter a *keyword, author, or journal* to locate a treatment study in your area of interest. Or you can make a selection from the easy-to-use drop down menus to locate research according to the following areas:

- target area (e.g., speech, language, voice)
- intervention type (e.g., augmentative/alternative therapy, computer-based intervention)
- service delivery (e.g., group, distance)
- method (e.g., randomised controlled trial, case series, etc.)
- client subgroup (e.g., traumatic brain injury, hearing impairment, intellectual disability)
- age group (e.g., children, adolescents, adults)

Click the ADD button to save the results you want to keep. Then you can EMAIL or PRINT the results.

Did you know? speechBITE...

- = **FREE online database** of treatment research
- = **Covers the scope** of speech pathology practice
- = **More than 3000** articles from peer-reviewed journals
- = **Methodological ratings** for many papers
- = **Easy to search** with drop down menus
- = **No membership needed** or login required
- = **www.speechbite.com**

Rating methodological quality

Many of the treatment studies included in speechBITE have a methodological rating which allows clinicians to more easily identify the scientific quality of the research studies. Randomised and non-randomised controlled trials receive a rating out of 10 using the PEDro-P scale. The PEDro-P scale is derived from the PEDro scale which has been shown to be reliable in physiotherapy (Maher, Sherrington, Herbert, Moseley, & Elkins, 2003). At present, ratings for 670 randomised and non-randomised controlled trials are available on speechBITE. More recently speechBITE has begun rating the methodological quality of single case experimental designs using the 12-point RoBiN-T scale (Tate, McDonald, Percides, Togher, Schultz, & Savage, 2008). Ratings on both the PEDro-P scale and RoBiN-T scale are completed by at least two independent speech pathologists who have undergone training and assessment.

Who is responsible for speechBITE?

speechBITE is an evidence based practice initiative between Speech Pathology Australia and The University of Sydney under the leadership of Associate Professor Leanne Togher. speechBITE gratefully acknowledges funding support from The Motor Accidents Authority of NSW, Speech Pathology Australia, and other sponsors.

For more information

Visit the website at www.speechbite.com or follow us on twitter at www.twitter.com/speechBITE. For more information contact the speechBITE Project Manager Kate Smith at info@speechbite.com.

References

- Maher, C. G., Sherrington, C., Herbert, R. D., Moseley, A. M., & Elkins, M. (2003). Reliability of the PEDro scale for rating quality of randomized controlled trials. *Physical Therapy*, 83, 713–721.
- Tate, R., McDonald, S., Percides, M., Togher, L., Schultz, R., & Savage, S. (2008). Rating the methodological quality of single-subject designs and n-of-1 trials: Introducing the Single-Case Experimental Design(SCED) Scale. *Neuropsychological Rehabilitation*, 18, 385–401.

Andrew Dean Fildes Foundation for Language-Learning Disabilities

Increasing student experiences with children in rural and remote areas

Carl Parsons



Carl Parsons

McAllister and colleagues (McAllister, 2005; McAllister & Lincoln, 2004; McAllister et al., 2004) have urged the profession to seek new mechanisms to provide clinical experiences to students. In a number of her publications she has pointed out that the changing nature of the profession requires that attention be given to rural and remote areas of Australia, and some special attention to Aboriginal communities. One model for rural and remote placements using non-traditional sites and partnerships was recently introduced by Jones et al. (2011).

Their program utilised 3 groups of final year students (a total of 17), who participated in a 6-week placement. Students worked in pairs running clinics at local primary schools, which were supervised by local speech pathologists. Individual student needs were closely monitored and tailored levels of clinical and non-clinical supervision/support were developed to enhance participant experiences. Students also participated in the local inter-professional learning program. The curriculum requirements for the placement were determined and monitored by academic staff from the Faculty of Health Sciences, University of Sydney and delivered collaboratively on-site. Projects such as these give students in speech pathology a unique opportunity to learn about rural and remote living. They also provide an opportunity for the rural communities to have increased access to speech pathology services.

The Andrew Dean Fildes Foundation for Language-Learning Disabilities was established in 1986. Its primary aim is to provide screening, comprehensive assessments, and intensive therapy programs for students with language-learning disabilities. In 2009, the foundation was awarded the Community Contribution award by Speech Pathology Australia for providing a significant and valuable contribution to the speech pathology profession. The foundation organises placements in schools for university students and employs clinical education supervisors for overseeing students on placements to ensure quality programs are offered. The foundation has provided over 350 clinical

placements and provided over \$20 million in services to the Australian community. The foundation's long-term aim is to have a speech pathologist or special educator placed in every school in Australia. The foundation is gradually expanding its services to rural and remote areas outside of Victoria. As part of this move to rural areas, in 2009–10 the foundation entered into a partnership with Charles Sturt University (CSU), School of Community Health, Department of Speech Pathology. The aim of this partnership was to utilise speech pathology students to provide a range of programs for children in three preschools and four primary schools in a remote rural area of NSW. The schools are geographically 600 km west of Sydney with the largest towns of Bathurst at 250 km to the east and Dubbo to the north at 230 km. There are two small towns (separated by 100km) where the schools are located, with a total population of approximately 5000. The area was originally inhabited by the Wiradjuri people and the towns' population is estimated at between 20 and 40% Aboriginal people.

The foundation also established a partnership with the Department of Families, Housing, Community Services and Indigenous Affairs and the Wagga Wagga Indigenous Coordination Centre. Through these partnerships the foundation was able to work with the local schools in a rural community to obtain some in-kind support (accommodation for staff and students) for a series of speech pathology programs. The Fildes Foundation provided all equipment including screening, assessment and therapy materials. The foundation provided some additional funding for students' meals and petrol costs. The foundation paid for organisational costs, supervisory staff, and organisational and management time. The foundation purchased a colour laser printer for use during the program. Europcars Australia provided two 6-seater vehicles for the last program for 4 weeks.

The agreement was that with support from university students from CSU and students at LaTrobe University we would offer 1) screenings to all the preschool students,

Table 1. Number of university students involved, supervisors, program type, and duration

Number of students	University	Full-time supervisors	Program type	Duration
5	CSU	2	Screening	1 week
5	CSU	2	Screening	1 week
4 + 4	CSU + LaTrobe	2	Screen + assessments*	1 week
2	LaTrobe	1	Intensive therapy	2 weeks
10	LaTrobe	2 (but 6 different staff)	Intensive therapy	4 weeks

The uni students worked from 8.30 to 5.00 each day. They worked with clients from 9.00am until 3.30.

* For the assessment program, two 4th year occupational therapy students from Deakin University were also involved.

the prep students at the schools, and any other students referred by teachers, 2) multidisciplinary and comprehensive assessments of hearing, vision, gross and fine motor skills, speech, language, conversational and literacy skills (including reading, writing, spelling and maths) for students who were deemed to need them, and 3) intensive intervention for some students at the schools. In addition, CSU would offer support to the local preschools aimed at early intervention programs. Five different visits were organised for the period June 2009 through December 2010. These visits were for one or two weeks with the last one a 4-week intensive therapy program. Table 1 shows the number of university students involved in the various programs, the number of supervisory staff, the program type, and the duration of each program visit.

Table 2. The type of programs offered and the number of children seen

Type of program	Number of children
Preschool screening	76
Primary school screening	100
Primary school comprehensive assessments	44
Primary school intensive therapy – 2 weeks (10 days)	18
Primary school intensive therapy – 4 weeks (20 days)	76

The uni students worked from 8.30 to 5.00 each day. They worked with clients from 9.00am until 3.30.

Table 1 shows that 30 students from two different speech pathology programs participated in this unique experience. Nine different qualified and experienced speech pathologists were employed to assist in supervising different parts of the programs. Table 2 shows the type of program offered and the number of children who participated in each program.

A total of 76 preschool children were screened and 100 primary children were screened across the four schools. Forty-four students required additional assessments that were conducted during our programs. These assessments required classroom observations, language samples, reading samples, and multiple tests. In a number of cases the occupational therapy students collaborated with the speech pathology students in assessments. The assessment data were used to make referrals, make a formal diagnosis, apply for funding, and/or to ensure that a suitable intervention program could be provided. Eighteen children received a 2-week intensive comprising of daily 30-minute therapy sessions, 5 days per week for two weeks. These children mostly had articulation or grammatical errors that were believed to be “remediable”

over the short duration of the program. Finally, 76 children who had more complex problems participated in the 4-week program. Each child attended a session each day for 5 days each week. The results of the screening, assessment, and therapy outcomes are currently being analysed and will be reported elsewhere. The important aspect of this report is that all the university students indicated positive learning experiences. They enjoyed working with the children, the school environment, and gained a unique experience in a rural Aboriginal community.

This program demonstrated that there are alternative ways to provide services to rural and remote communities and that university students can help to fulfill this need. However, that is not to say that this should be the primary mode of service delivery to rural communities. The long-term goal must be to have speech pathologists living and working in these communities. The local schools that participated in the program have collaborated further and have advertised locum positions for 6 to 8 weeks. Students who have participated in this clinical experienced have expressed interest in these positions.

This work demonstrates that as McAllister and others have indicated there are numerous opportunities for innovation to provide new, worthwhile experiences to university students that can also help to provide a valuable service to clients.

References

- Jones, D., Grant-Thomas, D., Bourne, E., Clark, P., Beck, H., & Lyle, D. (2011). Model for rural and remote speech pathology student placements: Using non-traditional sites and partnerships. *Australian Journal of Rural Health, 19*, 52–53.
- McAllister, L. (2005). Issues and innovations in clinical education. *Advances in Speech–Language Pathology, 7*, 138–148
- McAllister, L., & Lincoln, M. (2004). *Clinical education in speech language pathology*. London: Whurr.
- McAllister, L., Wilson, L., Clark, L., McLeod, S., Beecham, R., & Shanahan, L. (2004). Educating speech pathology graduates for the future: A non-medical curriculum. In B. E. Murdoch, J. Goozee, B.-M. Whelan, & K. Docking (Eds.), *Proceedings of the 26th International Association of Logopaedics and Phoniatrics (IALP) 2004 Congress*, Brisbane, Australia.

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ASD Education and Resources Online

A range of Autism Spectrum Disorders (ASD) resources and education modules have been developed by Speech Pathology Australia with the aim of providing professional development and capacity building for speech pathologists working in the area of ASD, to assist in their provision of services under the Helping Children with Autism package.

These initiatives have been supported by funding from the Government Department of Health and Ageing.



The speech pathology specific resources available are as follows:

- ASD Position Paper
- Online Peer Support Discussion Board
- DVD production of the Autism National Tour presentation
- Independent Study Resource

Visit: www.speechpathologyaustralia.org.au



Around the journals

Professional confidence

Holland, K., Middleton, L., & Uys, L. (2011). Professional confidence: A concept analysis. *Scandinavian Journal of Occupational Therapy*, Early Online, 1–11. doi:10.3109/11038128.2011.583939

Natalie Ciccone

This study investigated the concept of professional confidence which is thought to be important in attaining professional competence. While professional competence is a well-defined concept, professional confidence has not been widely researched and is yet to be clearly defined. A systematic review was completed focusing on four health science specific databases. The review yielded 21 articles deemed to be appropriate to be included in the analysis. These articles came from a range of health professions, including one from speech pathology.

Following the review, a theoretical thematic analysis was completed in order to sort data into the following categories: 'the attributes of, antecedents for and consequences of professional confidence' (p. 3). The authors found four attributes or components of professional confidence; these were:

- affect – feeling comfortable within a professional situation;
- reflection – being able to reflect on own practice and on feedback;
- higher cognitive functioning – use of knowing, believing, accepting, feeling comfortable, and reflecting on performance to develop confidence and;
- action – 'doing, taking the initiative, and engaging' (p. 6).

Within the article these concepts were linked within a single, spiralling diagram showing how each attribute influences the next attribute and so on.

Holland, Middleton, and Uys reported certain personality characteristics such as seeking out leadership opportunities and taking initiative are needed in order to develop professional confidence. However, a supportive and encouraging relationship with peers, colleagues, tutors, etc., is needed in order for professional confidence to develop optimally.

The results of the review suggest there are positive and negative consequences of professional confidence. A realistic level of professional confidence was linked with positive outcomes as well as underpinning professional competence. Being over- or underconfident, however, was linked to negative consequences. For example an underconfident clinician may not trust his/her own clinical reasoning and an overconfident clinician may make more errors.

The article ends with a case study of one person's experience of becoming an occupational therapist. It relates the student's journey, from the end of her studies and into her first job as an occupational therapist, to the development of professional confidence. The findings of the study are demonstrated through the exploration of the case.

How to learn to work on teams

Morrison, S., Lincoln, M., & Reed V., (2011). How experienced speech-language pathologists learn to work on teams. *International Journal of Speech-Language Pathology*, 13(4), 369–377.

Abigail Lewis

Teamwork is valued as an entry-level skill, especially the ability to work in multidisciplinary teams, and yet this is rarely taught at an undergraduate level. In the new *Competency-based Occupational Standards for Speech Pathologists* (Speech Pathology Australia, 2011), working in teams is mentioned under six of the seven units of competency but is particularly referred to in Unit 6 (Professional and Supervisory Practice) where element 6.1 is "Develop, contribute to, and maintain professional and team based relationships in practice contexts" (p. 10). Despite the strong emphasis on the importance of team skills there is little in the literature on how to develop team skills in speech-language pathologists (SPs). This study seeks to address this deficit by exploring how experienced SPs developed their team skills. Ten SPs, five from Australia and five from the US, completed a semi-structured interview, exploring how they developed team skills and the knowledge, skills, and attitudes they felt were required for effective team working. The resulting qualitative data were analysed using a descriptive phenomenological approach.

The SPs reported learning their team skills on-the-job often with the support of a mentor. Some incidental or curriculum-based experience at university was mentioned but was not felt to be adequate. An interesting finding was that participants clearly linked their good experiences of teamwork to remaining in employment and their bad experiences to leaving employment – a strong indicator of the importance of good teamwork skills for job satisfaction and retention of employees.

In terms of the knowledge, skills, and attitudes required many useful pointers were given. Knowledge required was an understanding of other disciplines' roles (including assessment and intervention), knowing when to refer to others, and understanding team responsibilities. Under attitudes, SPs needed to value themselves and the other team members and seek information from them. Finally, the skills of careful listening, giving of appropriate information, and being able to clearly explain the role of a SP were all described.

Despite the small number of participants, the wide age range, years of experience, and client population ensured a spread of views across the SP field. This study describes the key knowledge, skills, and attitudes that undergraduate curricular and team-based organisations need to include to ensure good teamwork skills in students or employees and the long-term retention of SPs in the profession.

Reference

Speech Pathology Association of Australia. (2011). *Competency-based occupational standards for speech pathologists (CBOS)*. Melbourne: Author.

(Un)manageable caseloads of school-based speech-language pathologists

Katz, L. A., Maag, A., Fallon, K. A., Blenkarn, K., & Smith, M. K. (2010). What makes a caseload (un)manageable? School-based speech language pathologists speak. *Language, Speech, and Hearing Services in Schools, 41*, 139-151.

Amy Mayer

For school-based speech-language pathologists (SPs), it is not an unlikely assumption that a large caseload may be related to lower job satisfaction. In recent years the American Speech-Language-Hearing Association (ASHA) has recommended a maximum caseload size of 40 students for school-based SPs in the US. This study identified school-based SPs' current mean caseload and a threshold number at which a caseload becomes "unmanageable" as well as other factors that affect the perception of manageability.

A total of 634 full-time SPs within the US public school system completed a survey about their caseloads (exclusive of additional job responsibilities). The project was driven in part by the growing demand on SPs' services in schools and by the evolving type of service provided by SPs in the US (to include support for reading and written language). The mean caseload size for the SPs was identified as 48.8. Generally the data yielded an upward trend in SPs reporting their caseloads as unmanageable as caseload size increased. Not surprisingly, 100% of SPs with 91 to 100 students reported their caseloads as unmanageable. This was also the case for 20.7% of SPs with 41-45 students and 38.5% of SPs with 46-50 students. The data appeared to indicate a tipping point at around 41 to 46 students. These results were supportive of ASHA's recommendations for student caseloads of 40.

Interestingly, less experienced SPs were found to be more likely to perceive their caseload as manageable. The authors offered the relatively recent inclusion of reading and written language to SPs' caseloads as a possible explanation for this. It was suggested that more experienced SPs may have a sense of increased demands on their roles while less experienced SPs would be more likely to consider these areas a normal part of their work. The authors did not comment about whether other factors such as the effect of burnout or complexity of family situations may be contributing factors for more experienced SPs.

Aside from caseload size and years of experience, the authors also found the level of collaboration to be an important predictor of perceived manageability. Unexpectedly it was found that SPs with a caseload over 47 who reported high levels of collaboration perceived their caseloads as less manageable. This was contrary to the authors' initial thinking that high collaboration would serve to make a caseload more manageable. Because of the importance placed on interprofessional collaboration in the workplace, this issue was recommended for further examination.

Telehealth treatment of chronic stuttering

Carey, B., O'Brian, S., Onslow, M., Block, S., Jones, M., & Packman, A. (2010). Randomized controlled non-inferiority trial of a telehealth treatment for chronic stuttering: The Camperdown Program. *International Journal of Language and Communication Disorders, 45*, 108-120. speechBITE rating 8/10

speechBITE review – Tricia McCabe

Even the most efficacious interventions are only of value when the patient can participate in the intervention. For some patients and their carers, due to physical incapacity, cost, or distance, physically attending therapy is a barrier to

improving their communication or swallowing. In recent years a number of researchers have begun to evaluate the value of providing intervention at a distance. Appropriately, Australian speech pathology researchers are leaders in telehealth, particularly in the areas of dysarthria and stuttering.

This highly rated paper adds to the available evidence on the efficacy of telehealth delivered stuttering interventions; in this case, the Camperdown program which is a speech restructuring treatment for adolescents and adults. The paper reports the results of a non-inferiority trial in which 40 participants were randomly assigned to one of two treatment protocols, one which was conducted face-to-face and one which was conducted by telephone and audio recordings. This study was designed to show whether the new treatment provided the same quality of outcome as the comparison treatment 9 months after the completion of the treatment. The importance of such comparison research is that it provides clinicians and patients with information on whether there is a benefit or risk in providing or participating in the new version of the treatment, which adds to their confidence in decision-making.

The measures which were compared in this study were percent syllables stuttered, speech naturalness, self-reported stuttering, treatment efficacy, and treatment satisfaction. On the first three measures there were no significant differences between the groups, indicating that the treatments are equivalent in outcome.

The primary treatment efficiency measure compared the outcome with number of hours in treatment. Interestingly, the telehealth presentation of the Camperdown program was more efficient than face-to-face delivery as it required fewer hours of treatment. Other prognostic factors were also investigated to see if they were influential in efficiency and older patients; milder patients and participants with no prior treatment history also required less treatment time, regardless of service delivery mode. Pre-treatment severity was linked to an increase in required treatment time by participants in both groups.

The final measure was treatment satisfaction and here the only significant difference between the two groups was on convenience, where, unsurprisingly, patients who were in the telehealth groups were more likely to say the treatment was extremely convenient.

The clinical bottom line is that appropriately trained clinicians who wish to use telephone-based provision of the Camperdown program can do so with confidence that there will be no detriment to their patients compared to face-to-face intervention.

The value of this paper lies beyond the outcomes discussed here as this paper was rated by speechBITE as 8/10 which is the highest score a behavioural intervention can receive. To obtain a higher score, blinding of participants and therapists would need to occur, which is not possible in behavioural treatments. Researchers would do well to use this paper as a model for such trials.

Augmented and nonaugmented language intervention for toddlers and their parents

Romski, M. A., Sevcik, R. A., Adamson, L.B., Cheslock, M., Smith, A., Barker, R. M., & Bakeman, R. (2010). Randomized comparison of augmented and nonaugmented language interventions for toddlers with developmental delays and their parents. *Journal of Speech, Language, and Hearing Research, 53*, 350-364. speechBITE rating 6/10

speechBITE review – Tricia McCabe

Paediatric clinicians often advise parents that use of augmentative and alternative communication (AAC) may

enhance their child's speech and language development. Although there is research literature which supports this advice in a range of populations, much of the literature is focused on older children and few randomised control trials have been completed to date.

In this study, 68 toddlers with severe communication impairment arising from a range of conditions were randomly assigned to one of three treatment groups. Children were included in the research if they had no more than 10 spoken words. The children were average age of 30 months and most scored below the first percentile on the Mullen Scales of Early Language. Parents came from a wide range of demographic groups in metropolitan Atlanta, USA.

The treatment consisted of a parent-coached language intervention focused on vocabulary acquisition. Groups differed by the method that the allocated intervention used. The first group received an augmented input intervention (speech generating device [SGD] used to provide input), the second an augmented output intervention (child uses SGD to communicate) and the third group of children received a spoken communication intervention. All three groups received the same average dose (amount) of intervention, which was approximately 16 weeks of treatment.

The vocabulary targeted was customised for each child through discussion between the treating speech pathologist and the parent. Vocabulary items selected included names, actions and commands. Clinicians and parents were encouraged to use all items on the child's list in each treatment session. The intervention included modelling and parent coaching on a range of language stimulation approaches in the clinic and at home. Examples of the intervention dialogue are provided which will allow clinicians to use these approaches with their own clients. The researchers hypothesised that children in all groups would benefit from the intervention, that the two augmented interventions would result in better outcomes, and that the

input intervention would result in stronger treatment effect than the output intervention.

The outcome measures used to test these hypotheses were derived from child language transcripts from videos of parent-child interactions at home which were analysed using SALT analysis (Miller & Chapman, 1985). For expressive vocabulary scores, both AAC groups performed better than the spoken communication intervention at both the end of the treatment and a follow-up assessment however children in the output intervention performed better than children in the input group contrary to the second hypothesis. Other measures such as type token ratio and mean length of utterance followed this pattern. These treatment effects are modest in size which means that some children may not respond to the treatment with a substantial change in their vocabulary and indeed some children, particularly those in the spoken communication group, did not use any words at all at follow up. Interestingly, those who received the augmented output intervention were more likely to retain their newly acquired vocabulary skills than children in the other two groups.

The clinical bottom lines are: 1) toddlers who received any of the three treatments improved their communication with their parents; 2) those who are required to produce words using the SGD make more and more sustained gains in vocabulary than children who use SGD supports for learning vocabulary without the requirement to use the words or those who have speech-only based intervention; (3) augmented language intervention did not impair the child's development of spoken language; finally (4) the use of AAC with very young children may be warranted.

Reference

Miller, J., & Chapman, R. (1985). *Systematic Analysis of Language Transcripts* [Computer software]. Madison: University of Wisconsin.

Peer review

(January – December 2011)

The editors wish to thank the following people who reviewed papers for *ACQuiring Knowledge in Speech, Language and Hearing*:

Susan Balandin	Norway	Belinda Kenny	Australia	Carl Parsons	Australia
Petrea Cahir	Australia	Claire Langdon	Australia	Wendy Pearce	Australia
Natalie Ciccone	Australia	Tao-yuan Li	USA	Nerina Scarinci	Australia
Julie Cichero	Australia	Valerie Lim	Singapore	Tanya Serry	Australia
Susanne Döpke	Australia	Suze Leitão	Australia	Lyndall Sheepway	Australia
Patricia Eadie	Australia	Michelle Lincoln	Australia	Kate Taylor	Australia
Linda Espinosa	USA	Anne Lowell	Australia	David Trembath	Australia
Silke Fricke	UK	Sue McAllister	Australia	Nicole Watts-Pappas	Australia
Judy Gould	Australia	Tricia McCabe	Australia	Cori Williams	Australia
Anna Hearne	Australia	Jane McCormack	Australia	Philippa Williams	New Zealand
John Heilmann	USA	Susan Morrison	Australia	Chris Wilson	Australia
Gayle Hemsley	Australia	Rosalyn Neilson	Australia	Linda Wilson	Australia
Deborah Hersh	Australia	Ruth Nicholls	Australia		
Tami Howe	New Zealand	Anna O'Callaghan	Australia		



Speech pathology resources

Love, E., & Reilly, S. (2009). *Spot on speaking*; cards; A\$33.50; www.loveandreilly.com.au

Melinda Schambre

Spot on Speaking is an oral language resource published by Love & Reilly. It consists of a set of 70 cards designed for students in the early primary grades. The cards contain conversation starters or questions to promote the oral language skills of, recounting; vocabulary; attributes; reasoning; pragmatics; opinion, and imagination. Each card also contains an extra challenge as an option for extension as well as alternative examples. *Spot on Speaking* is designed to extend conversation and language skills in a structured way. Love and Reilly promote the extension of young children's oral language skills as an essential component of their overall development and crucial to their ongoing learning. Their numerous resources all aim to support the development of oral language and literacy through games and activities. However, this resource does not work as well as other Love and Reilly resources as a stand-alone activity. Because the cards are not a game themselves, they work best with a board game or motivational activity to help keep children interested and stimulated.



Even though the cards are designed to build oral language skills, the cards can also be used to: promote the generalisation of articulation skills into conversation, target fluency, as a rapport-building/ice-breaker activity, and to develop social skills. While aimed at lower primary students they are suitable for students in special schools and language impaired older students.

In keeping with Love and Reilly's aim to provide affordable resources, it is a well-priced resource. However, as with other Love and Reilly resources, the cards would benefit from being laminated or made harder for use with children.

Although not one of my favourite Love and Reilly resources, it does have many uses and is a practical addition to the speech pathologist's resource cupboard. Over many years Love and Reilly have made a significant contribution to the speech pathology profession through their numerous products, commercial publications, workshops, newsletters, articles, website, etc. Thank you to Love and Reilly for providing us with so many terrific resources.

Love, E., & Reilly, S. (2010). *Singing alphabet*; cards, CD, and instruction booklet; A\$35. www.loveandreilly.com.au/

Maria Kouspos

The Singing Alphabet is a multisensory approach to teaching sound-letter links. The package consists of a CD,

29 A4 cards for each sound in the alphabet including the digraphs "sh", "ch", and "th" and a four-page instruction booklet. The CD has 29 separate tracks, one for each sound and it is interactive in teaching children the sound-letter link.

Each track is sung to "Skip to my Lou" and encourages the child to hear the sound, look for the letter (on the A4 card), trace and copy the letter, say the sound when they hear it, and recall the song without the CD. The child hears, says, and uses movement, touch, and visual cues to establish the sound-letter link. This multisensory approach to teaching sounds is ideal for children in mainstream school settings (prep to grade 3) or in special school settings. It may also be used for older children requiring revision of the relationship between sounds and letters. It is an excellent pre- and early literacy teaching tool that can be used for individuals (i.e., one-to-one therapy sessions), small group sessions, and a whole class approach to teaching sounds. This approach also ensures that children are learning in a fun and playful way, especially as some of the sounds are represented in amusing pictures and alliterative phrases. Particular phrases which always seem to amuse children are "dizzy dingo" and "ugly uncles". The package is affordable and can also be purchased by parents and used in the child's home environment. The CD is ideal to play in the car.



Love, E., & Reilly, S. (2009). *A sound way – 2nd edition: Phonological awareness activities for early literacy*. Port Melbourne, Vic.: Pearson Rigby. ISBN 978 1 4425 0205 5; pp. 276; A\$69.95 (book), A\$99.95 (interactive whiteboard CD) plus postage; www.pearson.com.au/schools

Anna Mathison, Sara Wals, Laura Sonnet, and Meagan O'Halloran

Yet again Libby Love and Sue Reilly have produced a wonderfully practical, user friendly guide for parents, teachers and speech pathologists. *A Sound Way – 2nd edition*, as the title suggests, is an updated version of their highly popular original phonological awareness resource for early literacy development, *A Sound Way*. This is an essential guide for early years primary school teachers and educational speech pathologists.

This update brings an already superb resource into the technology world with its interactive whiteboard CD.

One of the positives of this package is that the book and the interactive whiteboard CD are able to stand alone.



The easy-to-read hardcopy text provides the user with multiple reproducible activities for teachers to use within the educational setting. The text is divided into modules that target different phonological awareness skills. These modules are presented in a developmental sequence. The text also provides the reader with essential information on "What is phonological awareness", "What is phonics" and how this links with literacy development.

The very popular Mr Mouth story and Mr Tongue's house are retained in this edition as is the clear diagram of "The sound makers". The manual provides information on how speech sounds are produced and high frequency phonological processes are discussed in easy-to-understand terms.

The reproducible picture activities under each section are basic black-line drawings that are easily distinguishable and age appropriate. Although there are some new activities, many of the word lists and pictures from the first edition have been retained.

The interactive whiteboard CD is a terrific new addition to *A Sound Way – 2nd edition* that provides the user with over

120 activities that are bright and engaging. The CD is also able to be used on a computer using a mouse rather than the touchscreen of an interactive whiteboard. The voice output is clear with an Australian accent which makes it one of only a few interactive resources available for an Australian classroom. The CD is divided into four sections. Three of the sections' titles match those in the book. However, the fourth is a little harder to distinguish, making it difficult for those wanting to make direct correlations between the interactive whiteboard activities and table top activities.

The final opinion on this resource lays with the most important user, the children. The interactive whiteboard activities have proven to be engaging, stimulating, and a useful learning tool for the pre-literacy learner.

To those who already have the original *A Sound Way* and may be wondering if it is worth purchasing *A Sound Way – 2nd edition*, it was felt that there were enough differences between the two resources to make the revised version a good purchase. The addition of the CD makes a valuable resource even more useful.



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Hobart, Tasmania



**24-27 June
2012**

Online program and registration form will be available from the Conference web site on **9 March 2012**. Early bird registration closes Tuesday **8 May 2012**.



**Professor
Bruce
Murdoch**

is Director of the Centre for Neurogenic Communication Disorders Research, at The University of Queensland. He is a recognised international authority on neurologically acquired speech and language disorders in children and adults. Bruce will present a keynote address, a workshop and a masterclass.



**Dr Mabel
Rice**

is the Fred & Virginia Merrill Distinguished Professor of Advanced Studies at the University of Kansas. She directs the Merrill Advanced Studies Center, the Child Language Doctoral Program, and the NIDCD-funded Center for Biobehavioral Neurosciences in Communication Disorders. Mabel will present a keynote address and then a workshop with Professor Kate Taylor.



**Kelly
Weir**

works at the Royal Children's Hospital, Brisbane specialising in: paediatric dysphagia, tracheostomy management, acute inpatients, instrumental evaluation of swallowing, treatment of behavioural feeding difficulties and children with complex medical conditions. She has lectured in paediatric dysphagia at the University of Queensland. Kelly will present a masterclass on Sunday.



**Dr Angela
Morgan**

is a Senior Research Fellow at the Murdoch Children's Research Institute. Her current research examines the neurobiological bases of childhood communication disorders. Angela's interest in applying cross-disciplinary methods in speech pathology was sparked by her post-doctoral training in neuroimaging techniques. Angela will present the Elizabeth Usher Memorial Lecture.

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Letters to the editor

Conducting speech pathology assessments with Aboriginal children: What evidence are we seeking and why are we seeking it?

While I concur with Pearce and Stockings' (2011) assertion that, "there is a clear need for ongoing research to investigate the characteristics of oral narrative produced by Aboriginal children across many regions of Australia" (p. 127), the authors have designed a research methodology which cannot sufficiently address this research topic. Research is required that assists speech pathologists in understanding how to assess the communication development of Aboriginal children in a way that reflects who the children are as communicators in their own right.

The research evidence currently indicates that by engaging with the child's speech community, by working in close collaboration with Aboriginal co-workers, by designing assessment methodologies that reflect the home language and cultural environment of the child, and by using comparative data which also reflect the home language environment of the child, accurate descriptions of communicative competence for individual Aboriginal children are able to occur (cf Gould, 2009). Conversely, assessment methodologies which evaluate the communicative competency of Aboriginal children by utilising Standard English (SE) – based assessment, by comparing performance with SE normative data and by not examining the total communication system of the child fail to provide sufficiently valid and reliable assessment information (cf Gould, 1999). Pearce and Stockings (2011) do raise the importance of considering the ways Aboriginal English (AE) and Standard Australian English (SAE) differ in terms of grammatical features. It is important to expand this discussion and also consider how differences between AE and SAE may impact communication in a number of different ways within an assessment situation (cf Gould, 2009).

Speech pathologists require research evidence that describes Aboriginal children as communicators in their own right in order to avoid the use of deficit language such as "lack of", "reduced", "omits" to describe what are in fact simply language features. We can avoid dealing with dilemmas with normative comparisons by not using SE data and assessment methodologies when assessing Aboriginal children.

References

Gould, J. (1999). *An evaluation of assessment instruments in the measurement of the spoken communication skills of rural Aboriginal children* (Unpublished Master's thesis). Australian National University.

Gould, J. (2009). *The interaction between developmental assessment, deficit thinking and home language in the education of Aboriginal children* (PhD thesis). University of South Australia.

Pearce, W., & Stockings, E. (2011). Oral narratives produced by Aboriginal Australian children: Dilemmas with normative comparisons. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 126–131.

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Promoting an evidence base supporting the linguistic competence of Indigenous children

Thank you for the latest issue of *ACQuiring Knowledge in Speech, Language and Hearing (ACQ)* around Cultural diversity (Volume 13, Number 3, 2011) and highlighting the complexities of working with children of differing cultural and linguistic backgrounds to our own. As somebody who has worked in remote Aboriginal and Torres Strait Islander communities for a number of years, I read many of the articles with interest to see how our profession is progressing regarding assessment and intervention practices with Indigenous children.

As Cori Williams rightly identifies, there is a need to progress our evidence base to support improved practice with Indigenous children. How we go about this is critical in upholding the rich linguistic environments of these children and Petrea Cahir's literature review provides many examples of why this is important and what has not worked in the past. Pearce and Stockings attempt to expand our knowledge of the narrative skills of Indigenous children by comparing them with existing (American) normative data, which underestimates the children's language proficiency. As they identify, there is the need to build on this study to "ensure optimum accommodation of cultural differences in communication style" (p. 130). Hence this would involve assessing children under conditions that enable them to demonstrate the true extent of their language skills in Aboriginal English, by providing culturally appropriate activities (e.g., purposeful activities rather than use of display questions) in culturally appropriate contexts (e.g., in a group of children facilitated by an AE-speaking adult).

As a profession that promotes itself as "communication experts" it is essential that we step outside of the comfort zone of English standardised assessments and tools and begin relying on our skills and knowledge of language to explore children's true communication competence and not only their ESL skills. We need to work in partnership with communities, local language experts, linguists, and interpreters to develop means of assessing children's home language in ways that fit their cultural worldview.

Instead of repeating our old ways of "near enough is good enough" we can look to our own colleagues who are developing other ways of assessing Indigenous children

and exploring their first language abilities (Gould, 2008; Philpott, 2003), as well as a multitude of work by linguists around the country (Simpson & Wigglesworth, 2010). For those who are doing this work, it is important that they share it with our peers and continue the discussion and debate. This issue of *ACQ* has definitely given me the motivation I need to do this.

References

Cahir, P. (2011). Examining culturally valid language assessments for Indigenous children. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 120–125.

Gould, J. (2008). Non-standard assessment practices in the evaluation of communication in Australian Aboriginal children. *Clinical Linguistics and Phonetics*, 22(8): 643–657.

Philpott, M. (2003). *The Revised Kimberley Early Language Scales*. Retrieved from http://www.speechpathologyaustralia.org.au/library/Kimberley_Scales.pdf

Simpson, J., & Wigglesworth, G. (Eds.) (2008). *Children's language and multilingualism: Indigenous language use at home and school*. London: Continuum.

Williams, C. (2011). Working with children from culturally and linguistically diverse backgrounds: Implications for assessment and intervention. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 106–111.

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Response to letters to the editor regarding Pearce and Stockings (2011)

I thank the editors for this opportunity to respond to this correspondence and anticipate the topic will benefit from robust discussion. The correspondents' concerns echo the findings of Pearce and Stockings (2011) that current language assessment approaches may not be suitable for Indigenous children. One correspondent rightly argues that Aboriginal English (AE) norms make more appropriate comparisons, but comprehensive language sampling norms are currently unavailable for Australian populations. Establishment of norms for each AE variety across remote, rural, and urban locations is a major challenge. Evidence to support or disprove assessment and intervention practices for Indigenous children is limited (Cahir, 2011; Williams, 2011) while much knowledge about effective practices is contained within the experience of clinicians and organisations. Publication of research showing how Indigenous children perform on existing language assessment protocols provides empirical evidence for concerns about assessment approaches, clarifies methodologies, and identifies directions for future research.

Both independent and contrastive approaches to research are informative and valid. Independent approaches to language research, supported by the correspondents, explore competence within the child's own language system and cultural context. In such approaches, AE is considered as a unique language system within each Indigenous Australian community. Contrastive methods compare one language system to another, and develop knowledge where two or more languages or dialects are spoken or co-exist within a community. Here, AE may be considered as a non-standard dialect co-existing with

Standard Australian English (SAE) within the broader Australian community. Contrastive methods demonstrate interactions between languages or dialects, and areas of overlap that may influence diagnostic decisions (Kohnert, 2010; Stockman, 2010). The SALT database (Miller & Iglesias, 2008) provided a simple point of reference from which to explore relative strengths and differences in a context where Australian children are commonly compared to overseas norms. It is acknowledged that terminology such as "zero copula" are commonly used in comparative dialectal literature while terms such as "omission of the copula" are more appropriate to description of language impairment in SAE.

Contrastive methods may identify and differentiate learning goals for acquisition of SAE as a second dialect (often at school) from those required to develop AE (often at home). The ability to effectively code switch between AE and SAE is essential to maintain culture and to "close the gap" and facilitate access to employment and higher education. The tension here is "how do we attend to upholding and maintaining cultural difference while producing outcomes that allow Indigenous Australian students to participate on an equal footing in mainstream society?" (Warren & Young, 2008, p. 130). Further research and clinical reports are needed to identify methods of assessment that do not disadvantage Indigenous children and clarify how speech pathologists can best support efforts to improve educational and health outcomes for Indigenous children.

References

Cahir, P. (2011). Examining culturally valid language assessments for Indigenous children. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 120–125.

Kohnert, K. (2010). Bilingual children with primary language impairment: Issues, evidence and implications for clinical actions. *Journal of Communication Disorders*, 43, 456–473. doi: 10.1016/j.comdis.2010.02.002

Miller, J. F., & Iglesias, A. (2008). *Systematic Analysis of Language Transcripts (SALT) (Research Version 2008)* [Computer software]. Madison, WI: Language Analysis Laboratory.

Pearce, W., & Stockings, E. (2011). Oral narratives produced by Australian Aboriginal children: Dilemmas with normative comparisons. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 126–131.

Stockman, I. J. (2010). A review of developmental and applied language research on African American children: From a deficit to difference perspective on dialect differences. *Language, Speech, and Hearing Services in Schools*, 41, 23–38.

Warren, E., & Young, J. (2008). Oral language, representations and mathematical understanding: Indigenous Australian students. *Australian Journal of Indigenous Education*, 37, 130–137.

Williams, C. (2011). Working with children from culturally and linguistically diverse backgrounds: Implications for assessment and intervention. *ACQuiring Knowledge in Speech, Language and Hearing*, 13(3), 106–111.

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JCPSLP notes to authors

The Journal of Clinical Practice in Speech-Language Pathology (JCPSLP) 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 *JCPSLP* aims to contain a range of material that appeals to a broad membership base.

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

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Number 3, 2012	14 April 2012	30 June 2012	Technology and speech pathology
Number 1, 2013	3 August 2012	15 October 2012	TBA
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