SMALL TALK

Identifying communication problems in maltreated children: developing a problem-identification tool
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Small Talk

Identifying communication problems in maltreated children: developing a problem-identification tool

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Executive Summary

The ability to communicate with others is at the essence of our being and begins in infancy. Communication affects a child’s ability to form secure attachments, develop and sustain other relationships, participate effectively in education and engage in all aspects of life. Child development is inextricably linked with communication. Thus any delay or disruption to a child’s ability to communicate effectively should be identified and addressed as soon as possible.

It has been shown that children who experience trauma and adversity such as abuse and neglect are at risk of communication difficulties (Nathanson & Tziourmi, 2007; Sylvestre & Merette, 2010). There is also evidence to suggest that such children are less likely to have their difficulties recognised and responded to (Royal Australasian College of Physicians, 2006). For example, a young boy raised in an environment where he watched his mother being beaten frequently by his father, where neither parent played and interacted with him, where he often did not have enough food and on occasion was hit himself, may not have the words and sentences to speak about what worries him, or what makes him happy. Added to this may be the reality that no-one has noticed that he does not have the words nor the ability to express himself in other ways, or that he does not always ‘take in’ what others are saying. As he gets older and starts school he may already be behind his peers. Sadly, if people perceive him to have behavioural problems rather than recognising the communication and background problems that are interfering with his learning and psychosocial adjustment, this could further obstruct his access to the help he so desperately needs.

This report presents the findings of a research study called the Small Talk project, which explored the speech and language issues for children who had experienced abuse and/or neglect. One major aspect was to explore whether children’s speech and language developmental needs, including hearing, were able to be recognised by those working with them, such as case managers and clinicians from a therapeutic service. Due to the over-representation of Aboriginal children in the Australian child protection and care system (Australian Institute of Health and Welfare, 2013), the study paid particular attention to whether or not there were different patterns of communication difficulties for this important group.

This study had its origins in 2005 when an interagency and multidisciplinary partnership was formed to explore communication problems for children who had experienced abuse and/or neglect. An evaluation of the Berry Street Take Two program, which is a trauma-informed therapeutic program for children who are clients of the child protection system, had found indicators that a high percentage of this population had speech and language development issues and that these issues were not always recognised (Frederico, Jackson, Joffe, McConachy, & Worthington, 2014). There were four components of the Small Talk project:

1. A primary focus was to develop a tool for use by practitioners in child protection, out-of-home care, family support and therapeutic services to identify concerns in the domains of speech, language and hearing in children who have suffered maltreatment significantly by other donors including Berry Street, a private donor and the Commonwealth Department of Families, Housing, Community Services and Indigenous Affairs.

This report describes the Small Talk study and its aims, rationale, a brief literature review, methodology and findings. There is an accompanying detailed literature review that helped inform the methodology and analysis (Jackson, Frederico, Black, Joffe, McConachy, & Worthington, 2014).

Aims of the study and research question

The overall aim of the Small Talk project was to explore ways of identifying which children, who are already vulnerable due to their experiences of abuse and/or neglect, would benefit from assessment and intervention to respond to speech, language or hearing difficulties. In particular this project aimed to develop a problem-identification tool to assist to identify concerns about the development of communication in children who have suffered maltreatment. The intent was to ascertain if such a tool could be used by practitioners in a range of fields, such as out-of-home care, child protection, family support, Aboriginal services and therapeutic services.

Thus, the overarching research question was: Is there a tool or other means that would assist practitioners who are not speech pathologists to identify which children, who have experienced abuse and/or neglect, would benefit from a referral to a speech pathologist or audiologist for an assessment and timely intervention to redress speech, language or hearing difficulties? Other research questions emanating from this project included:

- Is a problem-identification tool more likely to assist practitioners to identify which vulnerable children would benefit from a speech, language or hearing assessment, than simply asking about their general opinion?
- Are there differences for Aboriginal and non-Aboriginal children who have experienced abuse and/or neglect) in terms of speech, language and hearing problems?
- Are there differences in speech, language or hearing problems as a function of the child’s age, gender, source of referral, or living arrangements?
- Are there ways of assisting speech pathologists in their assessment of children (who have experienced abuse and/or neglect) when workers and carers cannot tell them the children’s developmental history?
- What are the types of recommendations a speech pathologist may make for this population?
- Is there value in providing a multidisciplinary approach to education of the workforce and undergraduate students about the interface between child abuse and/or neglect and communication difficulties?

The term Aboriginal is used to refer to Australian Aboriginal and Torres Strait Islander children unless otherwise specified. The term Indigenous also refers to both Aboriginal and Torres Strait Islanders.

This report will use the term ‘practitioner’ to describe professionals who work in the fields of child protection, out-of-home care, family services, Indigenous services and therapeutic services who are not trained as speech pathologists, audiologists or other disciplines with a specialty in communication. Practitioners are also described as 'the referrers' in this report.
and to determine whether this tool could be used to inform which children should be referred for specialist services, such as those provided by speech pathologists and audiologists.

2. A Supplementary Background Questionnaire (SBQ) was developed as part of the methodology to provide the speech pathologist with information about the child’s history and home environment that may not have otherwise been available.

3. A speech, language and hearing assessment was conducted by a speech pathology clinician and recommendations were made, as required, regarding the children’s speech, language and hearing needs, including referrals for further speech pathology or audiology assessments, or communication enhancement suggestions for parents and carers to use with the child in the home.

4. Education of the workforce such as community services, Aboriginal services, child protection and speech pathologists regarding vulnerable populations and particular needs; and education of the future workforce, namely students in social work and speech pathology.

The Small Talk tool and Supplementary Background Questionnaire (SBQ)

The Small Talk problem-identification tool (referred to as the Small Talk tool) was initially designed to assist practitioners to collect information about different communication domains and to include information that would assist the speech pathologist’s assessment process. However, during the early phases of the project it became clear through feedback obtained through the methodology, that the problem-identification tool for practitioners should be separate from information collated for the speech pathologist to undertake her assessment. This was due to the need to not confuse these functions; to enable the research design component (where the speech pathologist was not aware of the results of the problem-identification tool before undertaking the assessment); and to reduce the length of the Small Talk tool. Thus in addition to the Small Talk tool, a Supplementary Background Questionnaire (SBQ) was developed that included information to be provided to the speech pathologist and background information for the purposes of the study, such as the child’s history of adversity. A glossary of key terms is in Appendix 2.

Development of the Small Talk tool was largely informed by consultation with speech pathologists’ research and clinical experience in use of criterion referenced measures to supplement standardized language tests (Joffe, Doyle, & Penn, 1996) and through consultation with practitioners in child protection, out-of-home care, family services, Aboriginal services and therapeutic services along with a review of the literature. The tool needed to be sufficiently sensitive to identify true positives (i.e. which children would appropriately be referred for assessment), sufficiently specific to identify true negatives (i.e. which children were not likely to need such a referral) and to be understandable and manageable for practitioners not trained as speech pathologists. Initially the Small Talk tool was described as a screening tool; however, through a review of the literature it was apparent that although it had some screening tool functions, the tool did not fit with the normally understood parameters for screening tools and so the term ‘problem-identification tool’ was adopted as a more accurate description.

Research design

The research design was a mixed method approach using both quantitative and qualitative methodology and analysis as it sought to explore the real life situation for the children in relation to their speech, language and hearing needs. The methodology was selected in recognition of the complexity of many of the issues for children in the child protection system. This design was also a good fit for clinical research.

There were five steps in the research process, beginning with engaging and training potential referrers from participating organisations and gaining consent from the guardians of children referred. Once consent was obtained, the referrer completed the Small Talk tool and the SBQ. After these documents were received by the Small Talk project team, an appointment was made with the speech pathologist for an assessment. The speech pathologist received the SBQ but not the Small Talk tool, and undertook the assessment and wrote a report recommending intervention as required. Finally, data from the Small Talk tool, the SBQ and the speech pathologist’s assessment were entered into a database for analysis.

The communication assessment included a hearing screening test, formal assessment of speech and language using standard age appropriate validated assessments, observation, sampling and analysis of spontaneous oral language and the speech pathologist’s clinical judgement.

Quantitative data analysis was conducted to determine the relationship between the speech pathologist’s findings and the items on the Small Talk tool. Qualitative analysis was undertaken on some of the open-ended items on the Small Talk tool; and the comments by the speech pathologist, such as clinical recommendations. Case studies were collected to provide a picture of the children who participated in the study and their situations.

Major findings

1. Characteristics of the children

1.1 Demographic characteristics

The Small Talk study involved 65 children from Victoria, Australia. Three-quarters (75%) of the children came from Melbourne. There was a spread of ages across the four- to seven-year old range (up to their eighth birthday) with the mean age of 6 years. There was a relative balance of males (52%) and females (48%). On average, referrers had known the children for just under eight months (mean = 34.4 weeks) with 24 weeks being the median.

1.2 Aboriginal children

Fourteen (22%) children in the study were Aboriginal. This is higher than their rate of representation in the protection and care system but provides a sufficient number to enable some quantitative analysis. There were no significant age or gender differences within the Aboriginal group of children whereas there were some differences within the non-Aboriginal group of children. None of the Aboriginal children were described as using traditional Indigenous language, and two were described as using Aboriginal English. Sixty-four percent of the Aboriginal children were described as being in direct contact with someone from their culture/mob or clan at least once a week.
1.3 Children from culturally and linguistically diverse backgrounds

Although little of this information was recorded in the SBQ, eight children were described as having culturally and linguistically diverse heritage, including Pacific Islander, Vietnamese, Greek, Lebanese, Sudanese and Taiwanese. Three children had more than one Aboriginal or culturally and linguistically diverse heritage described. All children with culturally and linguistically diverse heritage were described as having English as their main language. There were no significant differences by age, gender or placement for these children compared to those who did not have a culturally diverse background.

1.4 Children’s placement

The majority of children in this study lived in some form of out-of-home care, predominantly home-based care (either foster care or kinship care). Being in care was an indication of their level of risk of abuse and/or neglect as a Children’s Court had determined they needed to be removed from their parents’ care. However, this study also included eleven children (17%) who were living with their parents post-substantiation by child protection of abuse and/or neglect. There were no significant differences by age, gender or Aboriginal identity in terms of whether the children lived with their parents or in out-of-home care.

1.5 Children’s family

In addition to information regarding whether the children lived with their family, some information was collected about whether or not they lived with their siblings. Three-quarters of the children who had a sibling lived with at least one of their siblings. However, it was concluded that more information about the children’s family situation would have been valuable and the lack of such information is a limitation of the study.

2. The children’s experiences and situation

2.1 Adverse life experiences

All children who participated in the study were either current or previous clients of the Victorian Department of Human Services, Child Protection Services (child protection) and had experienced substantiated abuse and/or neglect. Although it was not recorded in this study regarding every child, the most frequently mentioned adverse experience according to the SBQ was neglect, followed by parental substance abuse, family violence or a combination of these factors. Examination of a sub-group of 20 children who were clients of Take Two (where more data about the child’s history of abuse and/or neglect was available in accordance with ethics approval) revealed that the information recorded in the SBQ under-reported the types of abuse and/or neglect experienced by the children.

2.2 Children’s presentation

Information collected through the SBQ provided insight into the practitioners’ perceptions of the children’s learning and behaviours in the childcare, kindergarten or school context and when facing new situations. These questions sought to obtain a holistic view of the child and to obtain information that could inform the speech pathologist on how to engage the child in the assessment process. In terms of the question regarding the children’s presentation at school, kindergarten or child care, there was considerable missing data so the results are only indicative. Of the 47 children where data was available, 40% were described as having problems with behaviour and reading, 43% had problems performing at grade level, 45% had problems with social skills, 55% struggled with change and 62% had problems with concentration. In terms of the 60 children where data was available about what happens when they face new situations, more than a third of the children were described as being distracted, extremely active or anxious. Two-thirds or more of the children were considered not to be confident or able to focus in these situations.

Aboriginal children were significantly less likely to be described as having some of these difficulties (such as less likely to be distracted or anxious in dealing with new situations). Children aged six years or older were less likely to be described as able to focus compared to younger children. Presumably, there are higher expectations of older children’s ability to focus, so this question was possibly answered in the context of what practitioners expected for this age group.

2.3 Schooling

In this study, 95% of the children went to school, kindergarten or a child care centre. Just over half of the children went to school, just over a quarter (28%) went to child care and a quarter went to kindergarten. A quarter of the children were described as having attended multiple schools. This indicated that 44% of children, who attended school, even at this young age, had already experienced school disruption.

2.4 Developmental history

The study found that the referrers had minimal knowledge of the children’s developmental history in terms of communication. Only 69% of referrers completed the section on children’s early milestones. Of those who did enter information, the item most frequently selected was ‘don’t know’ (58%). The ‘don’t knows’ were more common for children in out-of-home care. Although not unexpected, this finding highlights some of the barriers in determining potential links associated with communication problems and providing appropriate interventions for children when their developmental history is not known.

3. Prevalence of speech, language and hearing problems

3.1 Speech pathologist’s assessment

One of the most important findings was the high proportion of children who were identified by the speech pathologist as having speech, language or hearing problems warranting further assessment and specialist intervention. For 95% of the children, the speech pathologist noted concerns in at least one communication domain, such as problems with hearing, expressive language, receptive language or voice. The speech pathologist noted concerns in two or more communication domains for 80% of the children. Eighty-eight percent (n=57) of the children were recommended by the speech pathologist for further assessment and intervention. Given the aim of the Small Talk project was to ascertain whether it could assist the determination of which children should be referred to speech pathologists or audiologists, this is a highly pertinent figure. It indicates that of the 65 children in the study, only eight children were deemed to not require such a referral.

In order to compare this population with other populations, analysis was undertaken in relation to the
Clinical Evaluation of Language Fundamentals – Australian Standardised Edition, CELF-4 (for children aged 5 and older) and CELF-P2 (for preschool age children). Although the CELF measures only relate to some aspects of communication they provide a useful point of comparison as they are standardised and normed for the Australian population. Sixty-six percent of the children in the Small Talk sample had at least one index standard score in the CELF-4 or CELF-P2 that was one standard deviation or more below the population mean. Most of the children in this study showed problems measured by the CELF tools on every index score and the overall Core Language score, which measures general language ability, compared to the overall population.

Overall, in the speech pathology assessment, expressive language was of most concern, with over two-thirds of the children having some difficulties in that domain. Receptive language followed, with just over half of the children having some difficulties. The study also found that children who scored below average on the CELF-P2 or CELF-4 measures were more likely to be described as distracted in new situations, to have difficulty reading and/or to perform below expected grade level according to the referers.

3.2 Hearing

Fourteen children were identified as exhibiting some hearing problems, two of whom were already involved with an audiology service. In all, 16 children were recommended for full audiology assessments. Some of these recommendations were due to difficulties in ascertaining if they had a hearing problem. Three-quarters of the children recommended for audiology assessments (n=12) were also recommended to have speech pathology services. Six children who were recommended by the speech pathologist for referral to an ear, nose and throat specialist were also recommended to speech pathology services. No significant differences were found for gender, Aboriginal identity, location or placement in relation to hearing difficulties.

3.3 Referrers' general perception of communication problems

When the referrer was asked a general question regarding whether he or she believed the child had a speech, language or hearing problem, 39 children (64%) were described as having such difficulties. Although this was high in comparison with other research on the prevalence of communication problems, it was lower than the more detailed responses in the Small Talk tool. In other words, the general perception of communication problems from practitioners who were not speech pathologists were less discriminating about communication issues than when they were asked more explicit questions about communication.

4. Referrers’ general perception of communication problems compared with a speech pathologist’s assessment

The practitioners’ general opinion regarding whether or not the child had a speech, language or hearing problem was not sensitive enough to pick up which children would benefit from further assessment. This led to the conclusion that it is not sufficient to rely on a practitioner’s general perception of communication problems if they are not a speech pathologist. This finding also points to the value of having some means for practitioners in various fields to increase their understanding of what to consider when thinking about a child's speech, language and hearing capacity.

5. The Small Talk tool compared with the speech pathologist’s assessment

Whether or not the Small Talk tool was able to accurately identify which children would benefit from a speech, language and hearing assessment was the overarching research question in this study. As such, a number of statistical analyses were undertaken to explore this question.

One type of analysis involved calculating the mean score across all the items for each Small Talk tool, leading to a mean total score. A significant difference was found, where the higher the mean total score of the Small Talk tool, the more likely the speech pathologist’s assessment found sufficient concerns to recommend further assessment or treatment.

A second approach to the analysis was to consider whether the Small Talk tool had sufficient sensitivity and specificity when compared with the speech pathologist’s assessment. Although there was a similarity between the percentage of Small Talk tools (85%) and the percentage of speech pathologist assessments (80%) where there were two or more domains of concern, this did not indicate agreement on the actual domains. When there were two or more domains of concerns in the Small Talk tool and the speech pathologist assessments, there was acceptable sensitivity, but not acceptable specificity. In undertaking a direct comparison from one domain to another, there was little agreement. For example, practitioners appeared to find it difficult to identify concerns in the child’s capacity for hearing, oral narrative (telling a story), voice, receptive language (understanding words and sentences within language) and pragmatics (rules of communicating with others). There was substantial missing information about other domains, such as phonology (recognising and manipulating different sounds in words). Thus, it was concluded that although the Small Talk tool results were promising, it would require revision before it could be used to determine which children would or would not benefit from a full speech pathology assessment. To this end, further analysis was undertaken on a subset of items to determine whether a revised tool may be more promising. (See Appendix 2 for Glossary of Key Terms.)

A third approach to the analysis was to dichotomise the results into two categories: concern and no concern, and to analyse whether a particular grouping of some of the items on the Small Talk tool led to a greater utility of the tool to identify which children would be most likely to benefit from a speech and language assessment. Using a variety of quantitative analyses, an abbreviated 14-item Small Talk tool was developed. This version of the tool had a higher degree of sensitivity and specificity than the original version, although only sensitivity was in the acceptable range. It would need to be tested in the field before making further judgements.

6. Education and multidisciplinary engagement

6.1 Student engagement

A supplementary aim of the project was to increase knowledge of the impact of abuse and neglect and trauma and of the value of multidisciplinary approaches amongst students in speech pathology and social work.
Seminars on this topic were held for speech pathology and social work students at La Trobe University with the students providing positive feedback. The speech pathologist supervised eight speech pathology students to undertake assessments in the study. The students were also supervised by a social work member of the Small Talk team to assist in developing their knowledge of trauma and to provide debriefing regarding some of the distressing aspects of the children’s situations.

6.2 Worker engagement in the project

The Small Talk project team met with all the services involved in making referrals or potential referrals to this project. This included providing an overview of the research project and some professional development about the potential association between speech and language difficulties and abuse and neglect. Although a number of services demonstrated interest in referring children to the Small Talk project, some did not translate this into making a referral. Throughout the data collection process there were occasional difficulties in organising referrals or helping children to attend, despite almost universal agreement among the practitioners of the importance of this type of assessment and their expressed interest in the project.

6.3 Multidisciplinary research team

An important component of the study was the collaboration of speech pathologists, social workers, psychologists, mental health clinicians and Aboriginal workers in the development of the study and its implementation, analysis and dissemination of findings. From the commencement of the study each of these disciplines was consulted on the development of the tool and provided joint training and presented at various conferences. Moreover, the multidisciplinary nature of the team promoted translation of the research across discipline boundaries, which is essential for effectively intervening to assist the communication development of vulnerable children.

Conclusion

This study aimed to identify whether there is an approach to assist children who have experienced abuse and/or neglect to access timely assessment and intervention if they have speech, language or hearing difficulties. In particular, the Small Talk study aimed to develop a problem-identification tool for use by practitioners in child and family services to accurately identify concerns about dimensions of communication in children who have suffered maltreatment.

The Small Talk tool piloted in this study showed promise, especially in identifying children who might benefit from a full speech pathology assessment. However, it was not able to accurately determine which children did not need such an assessment. A revised and abbreviated version of the tool was recommended for further research. In addition, it was recommended that some areas of communication, particularly hearing, are not easy for practitioners to identify as a problem and so this population should have their hearing routinely screened. Despite its limitations, the current tool was better able to identify which children had communication problems than a general question of practitioners about whether they thought the children had such problems.

This study also has a number of interesting implications for working with and caring for children involved in the child protection system. One important finding was the high rate of communication difficulties in this sample of children who had experienced abuse and/or neglect. This was similar to other studies such as Nathanson and Tzioumi’s (2007) study, although the extent and frequency of problems identified in this study were higher. The high prevalence of communication difficulties for these young children requires not only a practice response but a programmatic and policy response across jurisdictions and disciplines, such as child protection, out-of-home care, education, health and mental health.

Surprisingly, no significant differences were found by age, gender or Aboriginal identity; however, this may reflect the fact that so many children across age, gender and culture in this sample had problems. For example, the Aboriginal children in this study had a high rate of speech, language and hearing problems compared to other studies of Aboriginal children; they were just not significantly higher than the non-Aboriginal children in this study.

An interesting and unexpected finding was the significant differences between children who were living with their parents compared to those living in out-of-home care, where those living with their parents were more likely to have communication problems. It is important to consider what this finding may indicate about the ongoing risks to children, and also whether families in that part of the service system have less access to some services than children in out-of-home care. This would benefit from further study.

The lack of developmental history data about these children was another important finding that reinforces their vulnerability and the associated responsibilities of the service system to take notice of developmental milestones and keep accurate records. The utility of a supplementary questionnaire, such as the SBQ, that attempted to capture some of this information, was found to be helpful. Further work, however, is recommended, including the use of some standardised questionnaires.

The Small Talk study highlighted the value of a multidisciplinary approach to assist children who have experienced maltreatment, with respect to their language development and communication skills. Communication is crucial for all professions and its importance is espoused by teachers, clinicians, carers, case managers and speech pathologists alike. The Small Talk project provides an example of viewing communication as a unifying concept where each discipline has a role to facilitate the child’s communication and to support the team around the child to do the same.
Chapter 1: Introduction

A four-year-old girl is picked up from kindergarten by her mother, who tells her that daddy is unwell today and she must be very quiet when she gets home. She knows that her dad drank a lot last night and notices the bruises on her mum’s arm. She already knows not to say anything but to watch. This is their third house they have lived in or is it more? It’s a tiny flat with nowhere to play inside or out. Her older brother just sits and watches the television and tells her off if she makes a noise. She watches her and, when it is quiet, she watches her brother. She knows that today is one of those days when, if her mum or dad looks at her a certain way, she needs to be invisible. If not she’ll be in big trouble and get a clip over the ear, ‘if she’s lucky’. She takes it all in. She did not take in what the lady at the kinder had been trying to tell her about which animals have stripes and which have spots. She cannot remember the rhymes the other children were singing. She still has ringing in her ears from the screams the night before. Her ears have been sore for a while but she knows not to say anything. Sometimes when the kinder teacher talks to her it is like someone speaking through a pillow. It’s muffled and hard to distinguish the words. Even when she hears the words, they don’t seem to make sense. She knows she’s stupid. Her daddy has told her she is as stupid as her mother. Next year she will start school.

1.1 Origins of the Small Talk project

Although this is a fictionalised narrative, it is the real stories that this account mirrors which led to the development of an interagency and multidisciplinary partnership in 2005 to explore ways in which to identify communication problems for children who had experienced abuse and/or neglect. In 2007, this informal partnership developed into the Small Talk project. The partners were La Trobe University, Department of Social Work and Social Policy; La Trobe University, Department of Human Communication Sciences; the Berry Street Take Two program; the Berry Street Northern Home-Based Care program; and the Victorian Aboriginal Child Care Agency (VACCA).

This project was made possible by the commitment of the Baker Foundation in 2007 to fund half the cost of the proposed research project. This funding was awarded on the proviso that the remaining funds would be found through other sources including government and philanthropic bodies. It took until 2009 for the remaining funds to be secured through donations from a private donor to Berry Street, the Berry Street organisation itself, and the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA)* as part of the National Framework for Protecting Australia’s Children. As such, the Small Talk project began in earnest at the end of 2009.

The impetus for the Small Talk project came from an evaluation of the Take Two program – an intensive therapeutic service for clients of child protection in Victoria, Australia. The Take Two program has been funded by the state government since 2003 to provide an intensive therapeutic service for children of any age who are clients of the child protection system, many of whom are in out-of-home care. Take Two is a program of Berry Street (a large community service organisation), in partnership with La Trobe University, Department of Social Work and Social Policy, Mindful (Centre for Training and Research in Developmental Health, the University of Melbourne, Department of Psychiatry) and VACCA (a large Aboriginal Community Controlled Organisation in child and family services). A key element of the Take Two program from the outset has been to integrate research and practice. A research team employed by Take Two, with the Associate Professor of La Trobe University, Department of Social Work and Social Policy) as the lead consultant, was established in 2003 to undertake ongoing evaluation of the Take Two program and to explore research questions which emerged from practice.

The first evaluation report of Take Two highlighted the range of harmful developmental impacts of abuse and neglect on the wellbeing of children, including communication problems (Frederico, Jackson, & Black, 2005). Stories, similar to the vignette at the beginning of this chapter, emanated from clinical practice with questions such as how can we help this child. As a result of this first evaluation, discussions between Take Two and La Trobe University’s Department of Social Work and Social Policy and the Department of Human Communication Sciences explored the utility of developing a checklist or screening tool to assist Take Two clinicians to determine when to recommend a speech and language assessment for their clients. Associate Professor Anne O’Connor (La Trobe University, Department of Human Communication Sciences) drafted a speech and language checklist which was piloted in Take Two in 2005 with 108 children ranging from three to seventeen years of age. The results of this pilot indicated that over two-thirds (69%) of the group were identified by Take Two clinicians as having some communication concerns warranting further assessment, although this was not confirmed by any speech pathology assessment. This result was in contrast to information provided at time of referral to Take Two by child protection which indicated that 16% of children had speech or language difficulties. These and other findings from that pilot were documented in the second evaluation of the Take Two program (Frederico, Jackson, & Black, 2006).

The initial pilot highlighted the value of educating clinicians about what to consider in terms of speech and language development and the utility of a tool that aided the identification of concerns. It was acknowledged that the pilot checklist was too broad in its age range. Further, the research method did not enable analysis of whether it had acceptable sensitivity and specificity in identifying children with communication problems and there was insufficient data to ascertain the number of problems or other measures to determine the cut-off for identifying which children needed further assessment. In other words, there was insufficient data to conclude that the pilot checklist was an appropriate screening or problem-identification tool. However, there were a number of indicators that the concept of a tool of some description for this population should be further explored.

The Small Talk project arose from this initial pilot to explore these and more detailed questions. A proposal was developed to adapt the draft checklist into a more formal screening tool and compare each of the results with a speech, language and hearing assessment. Over time, it became clearer that this project was not so much about a screening tool, especially in terms of a universal screening tool, but was better described as a problem-identification tool. In other words, the focus of this tool was to assist practitioners who are not speech pathologists to better recognise and identify communication problems that may otherwise have remained undetected. Barriers

*FaHCSIA is now part of the Australian Government Department of Human Services.
for detecting such problems were seen to include: the degree of transition and instability experienced by many of these children; the internalising and externalising behaviours that can mask underlying language problems; and the likelihood of missing information about many of these children’s developmental needs (Centre for Community Child Health, Clinical Advisory Group, 2012; Kaltner & Rissel, 2011; Nathanson & Tzioumi, 2007; Royal Australasian College of Physicians, 2006; Snow & Powell, 2011; Zimmer & Panko, 2006).

Given the diversity inherent in communication development and the multiple components of communication, a decision was taken to extend the parameters and items in the tool and to constrain the age range to early years (four to eight years old). Development of the Small Talk tool was also informed by research (Joffe, Doyle, & Penn, 1996) and clinical experience in use of criterion referenced measures that incorporate diverse and nuanced dimensions of communication to supplement information gained from standardised language tests.

It was considered valuable to ascertain whether the particular tool and process envisaged would be helpful to other services involved with children in child protection and out-of-home care. As such, the proposal included other Berry Street programs, particularly home-based care (primarily foster care) and VACCA. In order to gather sufficient numbers of participants in the study, children from other community service organisations (CSOs) and child protection who met the inclusion criteria were also sought. The types of services involved in this project were out-of-home care (foster care, kinship care and residential care); therapeutic services (namely, the Take Two program); family services; Aboriginal services (including out-of-home care and family preservation); and child protection.

The over-representation of Aboriginal children in the child protection and out-of-home care system is reflected in the Take Two population. Take Two has a specialised Aboriginal team that undertakes direct clinical work and provides consultation to other Take Two clinicians. In the initial pilot of the checklist, only a small number of Aboriginal children were involved. Given their over-representation in the child protection and out-of-home care population and the higher prevalence of Aboriginal children with speech, language and particularly hearing difficulties according to other research, VACCA was considered a crucial partner in this study. It has been the approach of any research project within Take Two that directly involves Aboriginal children to seek a partnership with an Aboriginal Community Controlled Organisation, such as VACCA, to ensure the research is conducted throughout the project with a culturally appropriate and informed approach.

1.2 Rationale for the Small Talk project

Across different cultures, language acquisition in children occurs naturally over time, provided the interactions between the child and parent or caregiver are sufficiently frequent, nurturing and responsive. We are born with the biological potential for language. Although some aspects of language development are innate, the capacity for language primarily develops through interactions with family, carers and others. We cannot learn a language to which we have never been exposed. The rate at which children acquire language varies greatly. This can make it difficult to define what is typical and what is of concern. Speech and language acquisition is closely linked with other aspects of child development, such as in the areas of physical, cognitive, social and emotional development and these areas in turn have an impact on speech and language development.

As evidenced in a review of the relevant literature summarised in the next chapter, children who have experienced abuse and/or neglect and are clients of the child protection and out-of-home care system too often fare poorly in terms of development and health and behavioural domains. Many of these difficulties are likely to be a result of their chronic experiences of child maltreatment; however, sometimes experiences in the protection and care system may also contribute to developmental problems, such as placement instability. In addition, a number of reports, as described in the literature review, found many children in the protection and care system receive neither adequate assessments of their developmental needs nor adequate interventions to address those needs.

Research has demonstrated multiple associations between child abuse and neglect and the detrimental impacts on children’s hearing, speech and language development. Not achieving speech and language developmental milestones at a young age can have profound effects on subsequent language functionality and other aspects of development later in life. Communication difficulties have been associated with other major problems, including poor literacy and other educational delays; difficulties in the capacity to form positive and meaningful attachments with others, including the capacity to form other relationships, such as friendships; and delays in the development of a sense of self and of others and challenges in the ability to effectively communicate in therapy.

The project is predicated on a number of findings identified through the literature review, such as:

- Children who have experienced abuse and/or neglect are more likely to have problems with speech, language and hearing;
- Aboriginal children are more likely to have hearing problems and associated communication difficulties;
- Speech, language and hearing problems can contribute to children having problems in other developmental and behavioural domains;
- There are additional barriers to identifying and responding to communication problems in a timely manner, for children in the protection and care system;
- Approaches that can assist practitioners who are not speech pathologists to more accurately identify which children have speech, language and hearing problems should promote timely referral for full speech pathology assessment and intervention; and
- There is limited availability of speech pathology services for children and research that helps to identify children in need of such services will hopefully inform further program and policy development in this area.

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4 The term Aboriginal is used to refer to Australian Aboriginal and Torres Strait Islander children unless otherwise specified. The term Indigenous also refers to Aboriginal and Torres Strait Islanders.
1.3 Aims of the Small Talk project and research questions

The overall aim of the Small Talk project was to explore ways of identifying which children who are already vulnerable due to their experiences of abuse and/or neglect will benefit from assessment and intervention to resolve speech, language or hearing difficulties. In particular, we aimed to develop a problem-identification tool for use by practitioners who were not speech pathologists to identify concerns about the development of communication in children who have suffered maltreatment.

Thus, the overarching research question was: Is there a tool or other means that would assist practitioners to identify those children who have experienced abuse and/or neglect who would benefit from a referral to a speech pathologist and/or audiologist for an assessment and timely intervention to redress speech, language or hearing difficulties? Other research questions emanating from the Small Talk project included:

- Is a problem-identification tool more likely to assist a practitioner who is not a speech pathologist to identify which children (who have experienced abuse and/or neglect) would benefit from a speech, language or hearing assessment, than simply asking their general opinion?
- Are children who have experienced abuse and/or neglect at high risk of having speech, language or hearing problems?
- Are there differences for Aboriginal and non-Aboriginal children (who have experienced abuse and/or neglect) in terms of speech, language and hearing problems?
- Are there differences in speech, language or hearing problems by age, gender, source of referral, or with whom the child lived?
- Are there ways of assisting speech pathologists in their assessment of children (who have experienced abuse and/or neglect) when workers and carers who accompany the child to the assessment do not know the children’s developmental history?
- What are the types of recommendations a speech pathologist may make for this population?
- Was there a value in providing a multidisciplinary approach to education of the workforce and prospective workforce about the interface between child abuse and neglect and communication difficulties?

There were four components to the Small Talk project:

1. A primary focus of the project was to develop a tool for use by practitioners who are not speech pathologists to identify concerns in the domains of speech, language and hearing in children who have suffered maltreatment and to determine whether this tool could be used to inform which children should be referred for specialist services, such as that provided by speech pathologists and audiologists.

2. A Supplementary Background Questionnaire (SBQ) was developed as part of the methodology to provide the speech pathologist with information about the child’s history and home environment that may not have otherwise been available.

3. For each child referred where a practitioner had completed the Small Talk tool and the SBQ, a speech, language and hearing assessment was conducted by a speech pathology clinician. She made recommendations as required regarding the children’s speech, language and hearing needs, including referrals for further speech pathology services or audiology tests, or communication enhancement suggestions for parents and carers to use with the child in the home.

4. Education of the workforce such as community services, child protection and speech pathologists regarding vulnerable populations and particular needs; and education of the future workforce, namely students in social work and speech pathology.

A list of services that referred children to the Small Talk project and completed the Small Talk tool and the SBQ are listed in Appendix 1.

The specific objectives of the Small Talk tool were:

- To guide parents, carers and workers on the types of information to gather about the child’s communication in order to identify whether or not he or she may have a speech, language or hearing problem.
- To facilitate referrals for speech, language or hearing assessments in a timely manner.
- To enable children to receive timely assessments and interventions as required to rectify or redress particular speech, language or hearing problems; to prevent problems worsening; and to assist in other aspects of the children’s development and functioning that may be affected by communication problems. A copy of the main version of the Small Talk tool used in this project is in Appendix 3.

The specific objectives of the SBQ included:

- To provide information to the speech pathologist about the child’s developmental history and current functioning within the home environment to facilitate the assessment. This is based on the recognition that many children in out-of-home care will attend assessments such as this, without a parent or a carer who has access to this information.
- To provide some data about the child’s context to assist data collection for the research.
- To ascertain if a questionnaire such as this is useful to facilitate the assessment by a speech pathologist, especially for children in out-of-home care. A copy of the SBQ is in Appendix 4.

The specific objectives of the speech, language and hearing assessment by a speech pathologist included:

- To compare the Small Talk tool with the results of the speech pathologist assessment to ascertain whether the tool had specificity (can identify children who do not have a problem) and sensitivity (can identify children who have a problem).
- To provide a report to the case manager and other members of the care team regarding the child’s speech, language and hearing functioning and to provide recommendations to workers, parents and carers as required, to strengthen the child’s development in these areas.
The specific objectives of educating the workforce and students included:

- To educate speech pathologists and speech pathology students regarding implications of trauma on children’s development and on their ability to cope with the assessment process, and to also provide them with information about the child protection and care system. This was in order to strengthen their ability to undertake assessments and provide meaningful and relevant recommendations for the children given their context.

- To educate workers in CSOs, child protection, therapeutic services, Aboriginal services and social work students regarding the importance of speech, language and hearing for children, the ways in which child maltreatment can impact on these aspects of development and how to identify and respond to any difficulties.

- To educate the relevant practitioners and students regarding the value of multidisciplinary approaches to work with this vulnerable population.

- To provide advice and education to speech pathologists, CSOs, child protection staff and undergraduate students on the importance of a culturally informed approach and some specific information regarding Aboriginal children and language, such as the use of Aboriginal English.

1.4 Governance and structure of the Small Talk project and team

Berry Street was the primary fund holder and had the lead responsibility for the Small Talk project. This included the formal accountability to the funding sources, payments to La Trobe University as required and management of the research staff within the Berry Street Take Two research team.

The Small Talk project was operated by the Berry Street Take Two research team and the research partners at La Trobe University Department of Social Work and Social Policy and Department of Human Communication Sciences. This project was conducted in the context of the broader research partnership underlying the Berry Street Take Two program involving La Trobe University. La Trobe University had the primary role as the chief investigator of the research and in the employment and supervision of the research staff from the initial participating organisations, including the speech pathologist employed to conduct the implementation of the Small Talk project. The team included Reference Group members along with other staff who were part of the broader Take Two research team. The Working Group met monthly and had the following objectives:

- To develop the Small Talk tool so that it can be used with the client group.
- To discuss issues around the development and application of the tool and larger project, including advising practitioners, discussing pertinent research and disseminating latest information amongst the group.
- To advise on the proposed research and evaluation strategy and to identify critical issues for the research and evaluation of the Small Talk tool.
- To identify priority research areas arising from the evaluation of the Small Talk tool and advise on strategy to pursue further research, such as presentation at conferences and publications.

Small Talk Working Group

A Small Talk Working Group was established. This included Reference Group members along with other staff from the initial participating organisations, including Berry Street Home-Based Care and VACCA. The Working Group consisted of the research staff appointed directly for the Small Talk project as well as other staff who were part of the broader Take Two research team. They are referred to in this report as the project team. The Working Group was ‘the work engine’ of the project where much of the consultation and deliberations over the different versions of the Small Talk tool and developing strategies to increase the sample size were discussed. The Working Group was chaired by the Take Two research manager. The Working Group met monthly and had the following objectives:

- To develop the Small Talk tool so that it can be used with the client group.
- To discuss issues around the development and application of the tool and larger project, including advising practitioners, discussing pertinent research and disseminating latest information amongst the group.
- To advise on the proposed research and evaluation strategy and to identify critical issues for the research and evaluation of the Small Talk tool.
- To identify priority research areas arising from the evaluation of the Small Talk tool and advise on strategy to pursue further research, such as presentation at conferences and publications.

Small Talk project team

The Small Talk project team managed the day-to-day implementation of the Small Talk project. The team included the speech pathologist employed to conduct the assessments, the Take Two Aboriginal research consultant and at different times a research officer and a research assistant. Some of the research team were La Trobe University employees (e.g. the speech pathologist) and others were Berry Street employees (e.g. the research officer and research assistants). The overall leadership of the team was with La Trobe University Department
of Social Work and Social Policy (Associate Professor Margarita Frederico) and the direct management of the roles was with Berry Street Take Two (Carly Black).

**Consultants to the project**

A number of consultants supported this research at different phases throughout the project. Dr Bruce Perry (Senior Fellow, ChildTrauma Academy, USA) provided some helpful ideas along the way, particularly in relation to the nature of the association between child maltreatment and communication and language problems.

In the development phase of the project, in addition to the direct input from Dr Beverly Joffe and the Department of Communication Sciences (La Trobe University), we had the benefit of advice and feedback from two speech pathologists, Sue Morse and Elisabeth Northam (Royal Children’s Hospital), especially in terms of the design of the study.

Dr Brian Cooper (Monash University) provided valuable assistance in relation to statistical analysis near the conclusion of the project.
Chapter 2: Brief Literature Review

A more detailed literature review accompanies this report on the Small Talk project (Jackson et al., 2014). This section provides a summary of some of the key messages from the literature that informed the conduct and analysis of the research.

2.1 What is communication?

Communication is the process by which we share thoughts, feelings and ideas through verbal, gestural and written modes.

Normal communication includes all means by which information is transmitted between the sender and the recipient. The means of communication are verbal and non-verbal; oral and written; formal and informal; or intentional and unintentional. Human beings, unlike other animals, mainly communicate using a system of symbolic communication referred to as language, which may be spoken, written, or signed. (Ndung’u & Kinyua, 2009, para. 1)

Communication involves conveying and interpreting information using socially shared language codes. For example, using a symbol or ‘word’ such as ‘sheep’ to represent something that has wool, four legs and bleats or a ‘sentence structure’ involving a particular word order/sequence, such as ‘where is the sheep?’

There are a number of key terms with particular meaning in the field of speech pathology that are relevant for this project. These include: receptive language (understanding words and sentences within language); expressive language (producing words and formulated sentences to make comments and share thoughts, including oral language or verbal communication); speech (producing and coordinating speech sounds including consonants, vowels and syllables, including the spoken word); pragmatics (rules of talking and communicating with others); discourse and narratives (having conversations, relating or talking about events and telling a story) and phonological awareness (recognition and manipulating different sounds in words; e.g. rhyming and identifying the particular sound that is at the beginning of a word) (Law, Boyle, Harris, Harkness, & Nye, 1998; Nelson, Nygren, Walker, & Panoscha, 2006). See Appendix 2 for Glossary of Key Terms.

Language codes can be transmitted and received through spoken, signed and written channels. The individual conveying information produces language (expressive language). The individual interpreting the information incorporates language comprehension (receptive language; that is hearing or reading plus understanding). There are diverse ways of conveying and interpreting messages across cultures and contexts. Other terms used in speech pathology to refer to vocabulary and language structure are semantics and syntax respectively.

Communication also involves ‘use of language in context’ or ‘pragmatics’, which incorporates ways of communicating for functional purposes. This can range from functions such as requesting action and controlling in very young children (e.g. ‘goway’), to being able to engage in various topics of conversation in early years schooling (e.g. responding to questions with relevant information produced clearly and fluently). These skills improve with increasing age and development in vocabulary diversity and sentence complexity.

The actual language, such as English, French or Watha Wurrung, is an important element to consider in communication and is particularly relevant in discussion regarding Aboriginal and Torres Strait Islander children and children from culturally and linguistically diverse backgrounds.

Aboriginal language has been described as ‘Not just a way of communicating with each other, it’s a way to connect in with landscape’. Recent research has also pointed to language as a strong predictor of resilience in Aboriginal communities. Koorie English is regarded as a language that plays a key role in cultural maintenance. (Department of Education and Early Childhood Development [DEECD], 2010, p. 51)

Although Aboriginal English is described as the main language for more than 80% of Aboriginal Australians, it varies significantly across Australia, along a continuum of how similar or dissimilar it is with Standard Australian English. It usually differs from Standard Australian English in areas such as phonology, syntax, pragmatics and the structure of the conversation. The use of Aboriginal English is an important aspect of cultural identification and community affiliation, especially in the context of the loss for many of their traditional language (Speech Pathology Australia, 2000). "The urban Aboriginal community has its own special set of characteristics and needs, which must be taken into account and which cannot be glibly regarded as the same as those who live in more remote areas" (Eagleson, 1982, cited in Speech Pathology Australia, 2000, p. 1).

Speech Pathology Australia (2011) acknowledged in a submission to an inquiry by the Australian House of Representatives’ Aboriginal and Torres Strait Islander Affairs Committee that many Aboriginal children are expected to communicate in Standard Australian English within environments such as school, regardless of whether their first language is a traditional Aboriginal language or Aboriginal English. In other words, although rarely acknowledged, they are often expected to be bilingual or sometimes even more. The parliamentary inquiry itself concluded the use of languages, including Indigenous languages and Standard Australian English, can assist in improving education, vocational and economic outcomes for Aboriginal and Torres Strait Islander people (House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, 2012).

2.2 Prevalence of speech and language problems and child maltreatment

Speech and language problems for children in general population

There is no commonly accepted approach for identifying speech and language problems in the general population. As a result, there is a range of estimates of the prevalence of such problems in the general community, from various international studies ranging from 0.6% to 33.2% (Law et al., 1998). In their international review, Law and colleagues (1998) concluded that 5.9% of children with speech and language problems was the median prevalence estimate, although they cautioned against relying too heavily on this figure, given the wide range of findings across different studies.

Australian studies also show different prevalence data on speech and language concerns. These include the Australian Early Development Index (AEDI) study (Centre...
for Community Child Health and Telethon Institute for Child Health Research, 2011) and the Australian Institute of Family Studies (AIFS, 2012) Growing up in Australia: The Longitudinal Study of Australian Children (LSAC). As these two studies apply different definitions of communicative and language it is not possible to compare their data.

In the AEDI study, Victorian data showed 8.3% of children were developmentally vulnerable (below the 10th percentile) and 15% of children were developmentally at risk (between the 10th and 25th percentile) for communication and general knowledge. No significant differences were found for Aboriginal children in this domain. In a related domain, the AEDI study showed that 6.1% of children were developmentally vulnerable and 9.9% were developmentally at risk in terms of ‘language and cognitive based skills’ (although this domain related primarily to numeracy and literacy). This was the domain that showed the greatest degree of difference between Aboriginal and non-Aboriginal children, with Aboriginal children being three times more likely to be developmentally vulnerable (Centre for Community Child Health and Telethon Institute for Child Health Research, 2011).

A consistent finding in the literature is the higher prevalence of speech and language delays in males than females (e.g. Centre for Community Child Health and Telethon Institute for Child Health Research, 2011; Department of Families, Housing, Community Services and Indigenous Affairs [FHCSCIA] 2012; Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991; Law et al., 1998; Taylor, Maguire, & Zubrick, 2011). However, some research indicates that such gender differences dissipate as children get older, particularly older than two years of age (Huttenlocher et al., 1991). Nevertheless, the Australian studies, such as the AEDI study and the AIFS longitudinal study, found gender differences for older children relating to aspects of language and communication.

There is also a common finding that children from lower socio-economic circumstances are more likely to have speech and language problems (Centre for Community Child Health and Telethon Institute for Child Health Research, 2011; Eager et al., 2005).

Speech, language and hearing problems for Australian Aboriginal children

There is more data available regarding hearing problems for Aboriginal children than other aspects of communication such as speech and language. According to the National Aboriginal Community Controlled Health Organisation (NACCHO) and the Royal Australian College of General Practitioners. (2005), ear infections are very common for Aboriginal and Torres Strait Islander children. The National Aboriginal and Torres Strait Islander Social Survey, 2008 found 10% of Indigenous children aged between 4 and 14 years of age experienced an ear or hearing problem (Australian Bureau of Statistics, 2009). The Footprints in Time longitudinal study found that 15.4% of Indigenous children had an ear or hearing problem in the 12 months prior to the interview. The Footprints in Time team concluded that the difference between their findings and the national survey’s findings was probably explained by their younger age group.

Although the rate of hearing problems for Victorian Aboriginal children does not appear as high as in other parts of Australia, it is twice as high, at 5.5%, than for non-Aboriginal children (DEECD, 2010).

The literature provides mixed findings regarding whether or not Aboriginal children are significantly more likely to have speech and language problems, as distinct from hearing problems. For example, misunderstanding Aboriginal English by speech pathologists can lead to an over-identification or an under-identification of language problems (Speech Pathology Australia, 2000). The issue of language disorder versus language difference is a related consideration.

Child maltreatment in Australia

Although the number of reported cases of child maltreatment to the child protection system is an inadequate form of measuring the prevalence of maltreatment, it is the major data set available. In Victoria in 2012–2013, 10,489 cases were substantiated by child protection as having experienced some form of abuse or neglect. Substantiated abuse or neglect was more likely in out-of-home care in Victoria was 6.5% (AIHW, 2014). The vast majority of these children (92.4%) were in some form of home-based care, such as kinship care or foster care (AIHW, 2014).

In Victoria, Aboriginal children are over-represented in every aspect of child protection involvement, including in out-of-home care. In 2012–13, Aboriginal and Torres Strait Islander children in Victoria were nearly 10 times as likely as non-Indigenous children to have had notifications substantiated (68.6 per 1,000 children versus 7.3 per 1,000). Victorian Aboriginal or Torres Strait Islander children were nearly 16 times more likely to be in out-of-home care compared to general population aged under 18 years of age (69.5 per 1,000 children compared with 4.4) (AIHW, 2014).

Speech and language problems for children who have experienced maltreatment

There have been few studies in Australia regarding the prevalence of speech and language problems for children in the child protection and out-of-home care system. Two of the three studies found were conducted by some of the authors in this Small Talk project. The following table summarises the results from these studies.

Although studies on the general population show considerable variation in prevalence data, in comparison, studies of the child protection population consistently show higher rates than all of the research available on the general population. The Nathanson and Tzioumi study (2007) is frequently cited as a general indicator of the prevalence of communication problems for children living in out-of-home care in Australia (33%).

2.3 Associations between child maltreatment and speech and language problems

A substantial body of research shows that children who have suffered abuse and/or neglect are at increased risk of having a range of developmental problems, including speech and language difficulties (Allen & Oliver, 1982;
The presence of disability may increase the likelihood of experiencing child abuse and/or neglect (Snow, 2009). Studies also show that children with disability, which may include communication problems, are more at risk of experiencing child abuse and/or neglect (e.g. DePanfilis, 2006; Lazenblatt, 2010). Children living in a lower socio-economic situation are more likely to experience child abuse and neglect (e.g. DePanfilis, 2006; Lazenblatt, 2010). Studies also show that children in lower socio-economic situations are at risk of speech, language and hearing problems (e.g. Centre for Community Child Health and Telethon Institute for Child Health Research, 2011; Eager et al., 2005; Reilly et al., 2010). This is therefore either a double jeopardy for children where poverty can increase the risk of both maltreatment and communication problems and/or a cause and effect situation where one factor leads to the other. Similarly, children with disability, which may include communication problems, are more at risk of experiencing child abuse and/or neglect (Snow, 2009). The presence of disability may increase the likelihood of the parents not coping or the vulnerability for the child when maltreatment occurs or alternatively, the child’s experience of maltreatment may lead to the child having a disability, such as an acquired brain injury.

Table 2.1. Summary of Australian studies regarding prevalence of speech and language problems for children in the protection and care system

<table>
<thead>
<tr>
<th>Authors, date</th>
<th>Type of population</th>
<th>Location</th>
<th>Sample size</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nathanson &amp; Tzioumi, 2007</td>
<td>Children in out-of-home care under the age of 12 years</td>
<td>NSW</td>
<td>n=122</td>
<td>28% had an abnormal hearing test; 45% under the age of 5 years had a speech delay and 20% of older children had a language delay. Overall 33% had a speech or language problem</td>
</tr>
<tr>
<td>Frederico, Jackson, &amp; Black, 2006</td>
<td>Children with substantiated abuse and/or neglect who were clients of Take Two program. Age range 3 to 17 years</td>
<td>Victoria</td>
<td>n=108</td>
<td>Clinicians (not speech pathologists) completed a checklist indicating that 69% of children had two or more speech, language or hearing concerns</td>
</tr>
<tr>
<td>McConachy, Bartlett, &amp; Pethica, 2011</td>
<td>Children entering out-of-home care for the first time</td>
<td>A region of Melbourne, Victoria</td>
<td>n=34</td>
<td>41% were reported by Take Two clinicians (not speech pathologists) to have speech or language difficulties</td>
</tr>
</tbody>
</table>

Although there is evidence that both abuse and neglect have negative consequences for children’s speech, language and hearing, neglect is particularly prominent in the research (Allen & Oliver, 1982; Allen & Wasserman, 1985; Coster & Cicchetti, 1993; Eigsti & Cicchetti, 2004; Grant & Gravestock, 2003; Kaltner & Rissel, 2011; Leslie, Hurlburt, Landsverk, Barth, & Sylmen, 2004; Lynch & Roberts, 1982; Moreno Manso, Garcia-Baamonde Sánchez, & Blázquez Alonso, 2012; Nathanson & Tzioumi, 2007; Richardson & Joughin, 2000; Spratt et al., 2012; Stahmer, Leslie, Hurlburt, Barth, Webb, Landsverk, & Zhang, 2005; Sylvestre & Merette, 2010).

There are numerous explanations for the associations between child maltreatment and speech and language problems including some that are multidirectional. In other words, child abuse and/or neglect may increase the likelihood of speech and language problems; speech and language problems may increase the level of risk and susceptibility for the child; and other factors may lead to child abuse and/or neglect and speech and language problems.

Neuroscience has shown that the brain develops in a use-dependent or experience-dependent way. It follows that a lack of positive nurturing and appropriately stimulating experiences (such as through neglect) or the presence of negative, fearful and overwhelming experiences (such as through abuse) will have adverse developmental consequences, including on speech and language, especially if it continues unabated. The mechanism(s) and extent of these consequences will depend on the age of the child, the chronicity of the adverse experiences and the presence or lack of protective relationships (Coster & Cicchetti, 1993; Grant & Gravestock, 2003; Perry, 2002; Perry & Pollard, 1997; Sylvestre & Merette, 2010). Children’s early years when their brain is developing at a rapid pace is the time when they are most open to learning from experiences, such as language, but they are also most susceptible to adverse experiences, such as abuse and/or neglect. Figure 2.1 from Sakai (2005) portrays the rapid growth in the brain in the first few years of life at the same time as there is rapid speech and language development.


Table 2.1. Summary of Australian studies regarding prevalence of speech and language problems for children in the protection and care system

<table>
<thead>
<tr>
<th>Authors, date</th>
<th>Type of population</th>
<th>Location</th>
<th>Sample size</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nathanson &amp; Tzioumi, 2007</td>
<td>Children in out-of-home care under the age of 12 years</td>
<td>NSW</td>
<td>n=122</td>
<td>28% had an abnormal hearing test; 45% under the age of 5 years had a speech delay and 20% of older children had a language delay. Overall 33% had a speech or language problem</td>
</tr>
<tr>
<td>Frederico, Jackson, &amp; Black, 2006</td>
<td>Children with substantiated abuse and/or neglect who were clients of Take Two program. Age range 3 to 17 years</td>
<td>Victoria</td>
<td>n=108</td>
<td>Clinicians (not speech pathologists) completed a checklist indicating that 69% of children had two or more speech, language or hearing concerns</td>
</tr>
<tr>
<td>McConachy, Bartlett, &amp; Pethica, 2011</td>
<td>Children entering out-of-home care for the first time</td>
<td>A region of Melbourne, Victoria</td>
<td>n=34</td>
<td>41% were reported by Take Two clinicians (not speech pathologists) to have speech or language difficulties</td>
</tr>
</tbody>
</table>


Note. Human brain weight is presented as a function of age, where 100 in the ordinate corresponds to the mean adult value. Approximate times of milestones in normal speech development are also indicated.
Even when children are removed from abusive and/or neglectful environments and placed in out-of-home care, this does not always mean they are protected from further adversity that may contribute to developmental problems. For example, many children will move from one placement to another; they may experience multiple unsuccessful attempts at reunification where they may be subject to further abuse and/or neglect; and their education may be seriously disrupted (Cummins, Scott, & Scales, 2012; Frederico, Jackson, & Black, 2010; Morton, Clark, & Pead, 1999; Proctor, Skriner, Roesch, & Litrownik, 2010). This also exemplifies the links not only with speech and language development and child maltreatment but also the links with the child's experience of attachment.

### 2.4 Associations between attachment and speech and language problems

A strong association has been found between parent-child interaction in the early years and development of social communication (Valentino, Cicchetti, Toth, & Rogosh, 2006). Healthy parent-child interaction is essential for young children to develop a positive internal working model as to what to expect from 'trusted' others. This is the foundation for children to develop a secure attachment. When they experience predictable, nurturing, available and responsive caregiving they develop a view of themselves as lovable and a view that certain others can be relied upon to keep them safe and secure. This in turn enables children to develop sufficient confidence to explore their environment and learn new skills, including language (Cassidy, 2008; Snow, 2009).

This secure attachment style creates a platform for children to develop complex emotion processing abilities, referred to as 'theory of mind', including empathy, emotional reciprocity and display of shared affect and an interpretation of these in the self and in others (Snow, 2009). Theory of mind helps explain the ability to understand, predict and interpret the thoughts and feelings of others. There is evidence of a positive correlation between the child's theory of mind ability and their language ability, as they learn to narrate stories in their own mind before being able to share them with others (Snow, Powell, & Sanger, 2012).

Secure attachment requires that the parent or caregiver is available to the child through open communication, physical accessibility and responsiveness (Kobak & Madsen, 2008). Both verbal and nonverbal communication by the parent or caregiver is essential for the child to develop and maintain a sense of safety and security in attachment (Bretherton & Munholland, 2008).

The quality of parent-child attachment is found to be associated with cognitive development (De Ruiter & Van IJzendoorn, 1993). Studies have also shown that children with secure attachment are more able to develop language competence. This is hypothesized as being both a function of their parents being 'better teachers' and of the children being more receptive students of language due to their degree of security (van IJzendoorn, Dijkstra, & Bus, 1995). Tamis-LeMonda, Bornstein, and Baumwell (2001) found that maternal responsiveness to an infant predicted the positive development of language.

A number of studies by Huttenlocher and colleagues found that a child's exposure to language through social relationships, rather than simply an innate ability, is associated with growth in language and other aspects of cognitive development. For example, in a study of 14- to 26-month-old children, Huttenlocher and colleagues (1991) found that the breadth of parental vocabulary and amount of speech with the child influenced the rate and extent of the child's acquisition of vocabulary. In particular, they found that the more words the mother spoke in the presence of the child the more words the child was able to use. Huttenlocher, Levine, and Vevea (1998) and Huttenlocher, Vasilyeva, Cymerman, and Levine (2002) found a causal link between preschool age children's exposure to language, such as from parents or teachers, and their growth in vocabulary and complex use of syntax.

Children's attachment relationship influences the development of their social competence in general. This occurs through their developing expectations of relationships with others and through attuned parenting and communication. The need for social competence increases with age, such as at preschool where they begin to function in groups or in schools where these groups are more organised and have more social rules (Weinfeld, Sroufe, Egeland, & Carlson, 2008).

### 2.5 Consequences of communication problems for children

**Early speech and language difficulties are strongly associated with later adverse outcomes.** (Laing et al., 2002, p. 1155)

In addition to specific problems with poor or delayed communication, such difficulties can cause other problems for children. These can include difficulties in forming and sustaining positive relationships, emergent literacy, related aspects of cognitive development and educational difficulties, social cognition, mental health problems, behavioural problems, and low self-esteem (Coster & Cicchetti, 1993; Howard, 2007; Howard & Hampton, 2006; Laing, Law, Levin, & Logan 2002; Larney, 2002; Lindsay & Dockrell, 2000; Law et al., 1998; Oberklaid, Wake, Harris, Hesketh, & Wright, 2002; Poe, Burchinal, & Roberts, 2004; Snow, Powell, & Sanger, 2012; Spratt et al., 2012; Sylvestre & Merette, 2010).

Acknowledging that communication problems can contribute to so many other problems in the child's day-to-day life as well as their developmental trajectory highlights the need to recognise when a child does have a speech, language or hearing problem. Some of these other problems may be falsely attributed to other causes if an underlying communication problem is not adequately assessed (Howard, 2006).

### 2.6 Value of timely identification and responses to speech and language problems for children

A number of studies have concluded that early detection of speech and language problems, followed by early intervention, can offer substantial benefits which may in turn prevent or reduce some of the associated problems (e.g. Compton et al., 2010; Glascoe, 2000). Consistent with this finding, if children are identified as having speech and language problems and do not receive sufficient treatment, their communication problems may continue or worsen (Maeder & Roy, 2000).

Twenty years ago, Coster and Cicchetti (1993) argued for a thorough language evaluation as part of the educational or psychological assessment of children with a history of maltreatment and as part of a broader multidisciplinary
assessment of the whole family. Since then not a lot appears to have happened in this area.

2.7 Assessment of speech and language problems for children in the protection and care system

Studies have repeatedly shown that children in the protection and care system are not routinely assessed in terms of their health and development, despite the acknowledgement of their higher risk for health and developmental problems. These studies have particularly focused on children living in out-of-home care (Allen & Olvier, 1992; Clinical Advisory Group, 2012; Kaltner & Rissel, 2011; Nathanson & Tziourmi, 2007; Royal Australasian College of Physicians, 2006; Stahmer et al., 2005; Zimmer & Panko, 2006). There are national policies that identify this is a priority area, such as the National Framework for Protecting Australia’s Children (FaHCSIA, 2012) and the National Standards for Out-of-Home Care (FaHCSIA & National Framework Implementation Working Group, 2011). At a state level there have been practice instructions to child protection and information for CSOs regarding the need to identify and refer children in the out-of-home care system who need hearing and speech and language assessments (Department of Human Services, 2012a, 2012b). Nevertheless, there is still a long way to go before children in the protection and care system have timely and ready access to these types of assessments and appropriate treatments.

Similar concerns have been found through research on the youth justice population, where young people were found to have problems with oral language competence, especially if they had been in out-of-home care, yet there was insufficient access to specialist assessment and intervention (Snow & Powell, 2011).

The Federal Government’s National Framework for Protecting Australia’s Children (FaHCSIA, 2012) and the Victorian State Government’s Best Interests Framework (Miller, 2012) are relevant to all child protection clients including those who are living at home with their families. However, the emphasis on access to health and allied health assessments and treatment is more explicit for children in out-of-home care.

2.8 How did the literature inform the Small Talk project design?

The age range of children

This study was based on the premise that early identification is paramount, given the critical developmental window for language acquisition in the early years. However, a number of studies have indicated that some speech and language difficulties self-correct through the process of natural development between the ages of two and three years (e.g. Eager et al., 2005; Reilly et al., 2010). There was also emphasis given to the importance of speech, language and hearing on the child’s preparation for and participation in school and learning (Hay, Elias, Fielding-Barnsley, Homel, & Freiberg, 2007; Snowling, 2005). Consideration of the age range in the different measures used by the speech pathologists also influenced this study. As such, the age range of four to eight years (up to the eighth birthday) was selected for this study.

Availability of screening tools and other approaches to assist children in protection and care regarding speech, language and hearing

Although there were a number of screening tools for speech and language, most of these were devised as attempts at universal screening tools for children in the general population. They were also devised for children where communication problems were thought to be a primary problem; in other words, where the communication problem was likely to be the only developmental problem, rather than secondary to another problem, such as deafness (Law et al., 1998). Although some children in the child protection and out-of-home care system are likely to have communication problems as a primary or sole developmental problem, it was hypothesised that many of the children in this study would have difficulties in multiple developmental domains.

Most studies on screening tools assumed that parents who knew the child’s history and current situation would be involved in completing the tool (Law et al., 1998). There was no tool found specific to children in out-of-home care, who may not have adults in their lives who know their developmental history. There was also no tool found that was intentionally developed for Aboriginal children by or in partnership with an Aboriginal organisation.

The literature review regarding screening tools provided mixed findings about the value of such tools in relation to speech and language. There is caution about the efficacy of a universal screening tool where speech and language problems are not associated with other developmental concerns (Law et al., 1998). The population of interest in this study was children likely to be facing a range of developmental and other problems as a result of, or exacerbated by, their experiences of maltreatment. The Small Talk project has been informed by the literature regarding universal screening but as a result of the review of the literature did not develop such a screening tool. Rather, this study aimed to provide a means of better recognising when there are signals or evidence of actual problems that may be otherwise missed, and is focussed on a specific population rather than the general population. In particular, the tool developed in this study aimed to provide a means of supplementing the normal observation and assessment processes within the child protection and care system, predicated on the understanding that it is not uncommon for health and development issues to be missed for many of these children. An assumption underlying this project was that unlike children living within nurturing family environments where there is not abuse, neglect and chaos, children in the protection and care system need additional opportunities to have their developmental needs recognised and met.

Although cautioning against a universal screen as a result of their meta-analysis of screening tools, Law and colleagues (1998, p. viii) stated “The fact that there is not sufficient evidence to merit the introduction of universal screening does not imply that speech and language delay should not be identified, for example, by less formal methods.” Glascoe (2000) contended that it is the absence of an earlier identification tool that enables at-risk populations to not be identified until they are at school.

Specific literature regarding analysis of screening tools has directly informed the analysis in this study and is commented on further in the methodology and data analysis section and in more detail in the separate Small Talk literature review (Jackson et al., 2014).
**Additional considerations for Aboriginal children**

Studies have shown that language is inherently a cultural phenomenon as well as an individual developmental issue (Dixon, Kot, & Law, 1988). For example, if the person doing the assessment is from a different language or cultural group than the child, this can affect the interpretation of results. Most standardised tests have not been developed for 'non-white' populations (Schraeder, Quinn, Stockman, & Miller, 1999). This issue was explored more generally regarding assessment of Aboriginal children through a research project called the 'Not One Size Fits All report' undertaken by some of the authors of this report (Bamblett, Frederico, Harrison, Jackson, & Lewis, 2012). They explored a number of constraints and possible suggestions for assessing Aboriginal children's social and emotional wellbeing. Although not focused on language, a number of themes were relevant including a discussion of strategies that could be used to engage Aboriginal children more actively in an assessment process. The research team were mindful of these strategies and the broader implications of the Not One Size Fits All report in the conduct of the Small Talk study.

Through a review of the literature, the available tools for speech and language problems were not considered responsive or sensitive to Indigenous children and their needs, despite the prevalence of these issues in Indigenous communities (Bromfield, Higgins, Osborn, Panozzo, & Richardson, 2005). Assessment of children who are bilingual posed particular problems where assessment tools and access to speech pathologists with the knowledge and experience to work with them is limited (Eager et al., 2005).

Most tests applied to children from minority cultural groups involve these groups after the tests have been developed. An exception is Wyatt's study (1997) where a tool was developed to encompass commonalities between those speaking Standard American English, African-American English, monolingual Spanish, or bilingual Spanish-English.

The Australian standardised version of the Clinical Evaluation of Language Fundamentals (CELF-4) includes discussion of the importance of cultural sensitivity not just from the content of the assessment but the process. Although not specific to Aboriginal children, a useful distinction is made in the CELF-4 manual regarding mainstream and non-mainstream cultures in terms of how culture can affect assessment (as developed by Damico and Hamayan, 1992 and cited by Semel, Wiig, & Secord, 2006). This is very general and implies that both mainstream and non-mainstream cultures are homogenous. Nonetheless these examples seem relevant to the general population in Australia and the Aboriginal population. Table 2.2 is an adaptation from this manual for the purposes of this study.

### Table 2.2. Areas of how differences between some mainstream cultures and non-mainstream cultures can affect assessment of communication

<table>
<thead>
<tr>
<th>Mainstream culture</th>
<th>Non-mainstream culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competition is encouraged</td>
<td>Competition is generally not understood or valued and collaboration is more strongly emphasised</td>
</tr>
<tr>
<td>Being on time and using time efficiently is important</td>
<td>Children may not answer questions as quickly as possible on timed tests, as found for American Indian children</td>
</tr>
<tr>
<td>Finishing one activity before starting another is encouraged</td>
<td>Work and pleasure are not separate and staying on one task may not be the practice</td>
</tr>
<tr>
<td>Sitting still and being passive is preferred</td>
<td>Excess body movements may be shown</td>
</tr>
<tr>
<td>Teachers or assessors may expect eye contact</td>
<td>Children may not feel comfortable with eye contact and may miss directions requiring them to look directly at the teacher or assessor</td>
</tr>
<tr>
<td>Common nonverbal gestures are interpreted as indicating the child's agreement or understanding</td>
<td>The child may nod to show respect. It may not reflect understanding or it may reflect understanding but not agreement</td>
</tr>
<tr>
<td>Formal testing favours children with the ability to perceive specific details within a complex pattern as discrete entities (field independent perceptual style)</td>
<td>Many culturally diverse children have a dependent perceptual style where they focus on the whole not the details</td>
</tr>
<tr>
<td>Formal testing favours children who have analytical reflective thinking skills</td>
<td>Many culturally diverse children favour a more global relational thinking pattern</td>
</tr>
<tr>
<td>Children are familiar and experienced with content used in the test</td>
<td>Content of the test may be less familiar to children from other cultures</td>
</tr>
<tr>
<td>Children are encouraged to be verbal</td>
<td>Children being too verbal may be considered rude</td>
</tr>
<tr>
<td>Children are more likely to do well if they are familiar with or recognise similarities between themselves and the assessor</td>
<td>Children are less likely to do well if they feel unfamiliar and different from the assessor</td>
</tr>
</tbody>
</table>

Note. Adapted from Damico and Hamayan (1992) and cited by Semel, Wiig, and Secord, 2006.
The cautions required in assessing Aboriginal children were illustrated recently through a study by Pearce and Williams (2013) who piloted the use of the CELF-4 with Aboriginal and Torres Strait Islander children in North Queensland. They found that children who use Aboriginal English may be disadvantaged on the CELF-4 measures, especially in relation to the Expressive Language index.

It is well documented that a number of the 38 traditional languages in Victoria have been lost or are at risk of being lost (Butcher, 2008; Victorian Aboriginal Corporation for Languages, 2012). However, there is little research on the use of Aboriginal or Koorie English in Victoria, except to state that it is an important aspect of Aboriginal people’s identity (VACCA, 2005).

Many of the 455,000 strong Aboriginal population of Australia speak some form of Australian Aboriginal English (AAE) at least some of the time and it is the first (and only) language of a large number of Aboriginal children. This means their language is somewhere on a continuum ranging from something very close to Standard Australian English (SAE) at one end, through to something very close to Creole at the other. (Butcher, 2008, p. 625)

Although not all of the differences across cultures could be (or should be) nullified in this study, a number of strategies to be culturally attuned were put in place, especially in relation to Aboriginal children. The Small Talk study included questions about Standard Australian English and Aboriginal English and had access to Aboriginal consultants at VACCA and the Take Two Aboriginal team throughout the conduct of the study. For example, questions were asked in the SBQ about Aboriginal children’s connection with their culture, whether they were placed with an Aboriginal carer, and their use of Aboriginal English or traditional language. The speech pathologist had access to the Take Two Aboriginal research consultant when questions arose during the assessment of Aboriginal children particularly for interpretation of what was a concern and what was to be expected from a cultural perspective. He provided different versions of the drawings that would be more recognisable and engaging of Aboriginal children for the purposes of the assessment. Additionally, observation, spontaneous oral language sampling and analysis, and the speech pathologist’s clinical judgement provided information beyond that gained from the standardised testing.

The role of parents and carers in the process

Much of the research spoke of the value of parental input in the screening and assessment of children’s speech and language development (Bruce, Kornfelt, Radeborg, Hansson, & Nettleblad, 2003; Glascoe, 2000; Glascoe & Dworkin, 1995; Law & Roy, 2008; McGinty, 2000; Rigby & Chesham, 1981). Some advantages of incorporating the parents’ perspectives include: information is usually easier to elicit from parents than from a young child; it capitalises on the parent’s extensive knowledge of their child’s use of language in a variety of settings; it is quicker; it does not require a highly trained clinician; it eliminates the challenges of trying to directly engage the children, which is especially challenging with young children; it is consistent with a family-focused and collaborative approach; it capitalises on questions commonly asked during visits with the parents; and it facilitates a range of decisions such as when to provide parental education (Glascoe, 2000; Law & Roy, 2008).

A related advantage is that if the parents are going to be integral to the treatment plan, the earlier they are engaged in the process the more likely they are to be engaged in the treatment. Despite these advantages, Glascoe (2000) concluded that professional judgement was also needed in conjunction with identifying parental concerns, to avoid potentially missing some children with problems.

Only one study by Glascoe (2000) noted the possibility that the parent may not be the primary carer of the child. None of the studies found noted that the children may be in the care of someone who does not know the child’s developmental history and may not even know their current functioning, such as when children have only recently been placed with the carer.

This issue of the need to be able to assess children whether they were with their parent or a carer led to two aspects of this study. The first was to develop the SBQ to gather information needed for the speech and language assessment that may not be available if a worker took the child to the assessment. The second was to encourage the participating organisations to involve parents and/or carers in completing the Small Talk tool and to record on the SBQ whether or not they were involved.

Low, medium or high verbal environment

An example of how the literature influenced other questions in the Small Talk project was the study by Huttenlocher and colleagues (1991) regarding whether the child lived in a low, medium or high verbal environment. They found that the breadth of parental vocabulary and amount of speech with the child influenced the rate and extent of the child’s acquisition of vocabulary. A longitudinal study by Hart and Risley (1995) had similar findings. These findings influenced the Small Talk tool by including a question in the SBQ to seek this information.

Is there value of having a speech and language assessment even if the child does not have a speech or language delay?

There are some potential costs such as financial burden, time wasting and increased waiting lists if children are assessed unnecessarily; especially given the limited availability of speech pathology services (Glascoe, 2001; Klee, Pearce, & Carson, 2000). However, there is an argument that children who are assessed as a ‘false positive’, in other words the tool indicates they need further assessment but the subsequent assessment finds they had no delays, may still benefit from this process. In particular, previous research has found that many children who were recorded as false positives were often in the lower limits of the normal range and therefore warranted greater monitoring and support (Camilleri & Law, 2001; Glascoe, 2001). For example, Camilleri and Law (2001) observed that “In the light of these findings, the health visitors’ indications to refer or review these children can hardly be considered to have been altogether mistaken” (p. 497). This argument appears even stronger for children who have additional vulnerabilities due to their experience of abuse and/or neglect.
Chapter 3: Development of the Small Talk Tool and Supplementary Background Questionnaire (SBQ)

Initially the intention was to design one tool, the Small Talk Tool. However, during the early phases of the Small Talk project and through consultation with stakeholders it became clear that certain questions did not belong on the Small Talk tool. In other words, they were not needed to guide practitioners to identify whether a child would benefit from a speech, language or hearing assessment, but were, however, required by the speech pathologists for their assessment and for the research study in terms of data. As such, one document became two documents, each with a different purpose. The first document was initially considered to be a screening tool, but given the way that terminology is used in the literature to indicate a different purpose, this document became more accurately described as a problem-identification tool and is simply referred to as the Small Talk tool in this report. The second document was a Supplementary Background Questionnaire (SBQ) that accompanied the Small Talk tool.

The Small Talk tool was intended to inform parents, carers, clinicians and case managers regarding some of the indicators of potential or actual speech, language or hearing problems; to facilitate referrals for speech, language or hearing assessments in a timely manner; and to enable children to receive timely interventions when required. As such, a primary purpose of the Small Talk project was to determine whether a tool could be developed to achieve these aims. As the methodology for this project involved comparing the results of the Small Talk tool with the speech pathologist’s assessment, the speech pathologist was not provided with the results from the Small Talk tool.

The SBQ was designed to gather information that may not otherwise have been readily available to speech pathologists to assist in their assessments and to gather other data for the purposes of this research project. Although it was not originally envisaged that there would be a need for a supplementary questionnaire, it has become a useful document to consider in its own right. As such, the aims of the project were adjusted accordingly. In particular, it has enabled exploration of a research question as to how to provide information to speech pathologists about a child’s developmental history and functioning in their home environment, if the child is not accompanied to the assessment by someone with this information. Unlike the Small Talk tool, data from the SBQ was provided to the speech pathologist as part of the assessment process.

3.1 Development of the Small Talk tool

Producing a tool that was understandable by people who were not trained speech pathologists was challenging, not least because communication has multiple dimensions. An essential condition of the Small Talk project was to ascertain whether such a tool was able to be comprehensive, sensitive and manageable. One of these challenges was the recognition that terminology relating to communication is used across the disciplines of speech pathology, linguistics, psychology and social work but with slightly different meanings or emphasis. For example, the word ‘passive’ had different connotations in the assessment, such as a component of grammar, an emotional response or a physical stance.

A preliminary literature review was undertaken regarding screening tools and other approaches to identify speech, language or hearing problems for children in general and for children in the protection and care system in particular. This, along with general literature in speech pathology regarding important domains for assessment, informed the type and wording of certain items in the Small Talk tool. Items were selected to represent essential components of communication, including voice, fluency, hearing, receptive language, expressive language, discourse and narratives, speech sound production, phonological awareness and nonverbal communication. (See Appendix 2 for Glossary of Key Terms.)

Recognition of the complex, interrelated nature of communication influenced the decision to expand the Small Talk tool to include additional subcomponents of some areas. For instance, a broad view of expressive language takes into account vocabulary and sentence structure. Similarly, in order to ascertain a child’s receptive language capacity, there is the need to consider not only comprehension, but evidence of this by considering appropriateness of the response to what a conversational partner has said. The latter would be considered by speech pathologists in the category of pragmatics.

Among the early stages in the project a number of questions pertaining to validity and accessibility were considered, such as the following: Would the tool be understandable to those using it? Would use of the tool be feasible for someone who is not a speech pathologist, such as a foster care worker, family support worker, mental health clinicians, worker in an Aboriginal organisation and child protection worker? Could the tool be relevant for all vulnerable children, including those from an Aboriginal background? The Small Talk reference group, including speech pathologists, social workers, psychologists and an Aboriginal research consultant, had a pivotal role in discussing these and other questions in order to finalise the tool.

An overview of speech and language concerns for vulnerable children and the first draft of the Small Talk tool was presented at a Take Two professional development session by Dr Beverly Joffe (consultant speech pathologist) and Associate Professor Margarita Frederico (lead research consultant) in 2009. Seven staff from the Berry Street Northern Home-Based Care program joined approximately 60 Take Two clinicians for this session. A similar presentation occurred later with VACCA staff, and consultation was sought to verify the cultural appropriateness of the tool, its representativeness and strengths and weaknesses.

Initial feedback from Take Two, Northern Home-Based Care and VACCA suggested that the tool contained too many questions and that some of the terminology used was difficult to understand. One of the difficulties identified was how workers not trained as speech pathologists could pay sufficient attention to the amount of detail in a child’s language to ascertain the required information. Conversely, some commented that the tool appeared relatively easy to use. Suggestions for improving the tool included the need for a guide for each question and reducing the number of questions. It was through this process that the decision was made to separate out some of the supplementary questions into a discrete questionnaire; i.e. the SBQ.
Another validation process took place involving roundtable discussions of the research team and other stakeholders, with representation from psychology, social work and speech pathology. This involved a rigorous interrogation, with each question being examined to determine its appropriateness and whether its meaning could be understood by practitioners who were not speech pathologists. This ‘to & fro’ process of checking items continued as the tool was shaped and refined. A final working draft was completed in March 2010.

The next stage involved piloting the tool in April and May 2010. The language and communication skills of ten clients referred from Berry Street’s Northern Home-Based Care and Take Two programs were assessed by their workers, using the Small Talk tool. The workers also completed a survey about their perception of the Small Talk tool and the process to complete it. Further changes were made to the Small Talk tool based on this feedback. The children were then assessed by the speech pathologist and speech pathology students under the speech pathologist’s direct supervision.

There were three versions of the Small Talk tool used over the course of the study. The first version was used in the initial pilot. The second version was informed by that pilot and the changes were primarily to provide greater clarity on the items. Between these two versions most of the changes were considered so minor that there was unlikely to be any implications in the analysis between the two versions. These minor changes included:

- Two explanatory sentences in the introduction of the tool had some minor alteration.
- Some minor formatting changes, such as capitalisation of two words, adding two headers and two questions that were changed in terms of their order.
- Four items where minor words were changed; e.g. ‘agree or disagree’ changed to ‘yes or no’ and ‘does’ changed to ‘can’.

There were four changes between the two versions that could possibly have changed the participants’ understanding of the items included:

- One item where an example was added. (C.12 “Does the child understand and respond appropriately to complex instructions e.g. ‘before you eat your food, wash your hands?’”)
- One item where an example was changed. (C.13 “Does the child understand words like ‘if’ e.g. two instructions at once?” was changed to “Does the child understand words like ‘if’ e.g. ‘if you’re a boy, clap your hands?’”)
- One item where the wording and example was changed. (C.21 “Does the child use the correct order of words in questions e.g. ‘can he go?’ was changed to “Does the child choose correct words and put them in the right order in sentences e.g. ‘not him go’ instead of ‘she didn’t go?’”)
- One item where an option was added. (C.6 “Was the child’s voice nasal?”)

The only changes between the second and third version of the Small Talk tool was some minor word changes to an explanatory sentence in the introduction and adding ‘Does the child . . . ’ to five items.

The final version of the Small Talk tool (see Appendix 3) consisted of one page of guidelines entitled ‘How to collect information on how the child uses and understands language’ and two pages of 35 questions. The areas covered in the tool included:

- Changes in language, speech and hearing
- Child’s voice
- Fluency
- Understanding sentences and vocabulary
- Expression
- Having conversations
- Relating or talking about events
- Nonverbal communication
- Speech sounds
- Overall impressions

3.2 Development of the Supplementary Background Questionnaire (SBQ)

During the development of the Small Talk tool it became apparent that certain information normally needed by the speech pathologist to inform the assessment, may not be known by the person accompanying the child. As the Small Talk tool results would not be made available to the speech pathologist it was important to ensure she had the necessary information to provide the most accurate assessment possible. It was also recognised that other data would be important for the purposes of research that would not otherwise be available to the research team.

After discussions with Take Two, Northern Home-Based Care and VACCA in 2009, some questions were removed from the Small Talk tool and formed the basis for the SBQ. Other questions were removed or added through discussions in the working group. The intent was for this document to be as brief as possible and not burdensome for those completing it. The SBQ was piloted at the same time as the draft Small Talk tool in April 2010 and further changes were made as a result.

The SBQ questionnaire provided a brief overview of the Small Talk project and had 53 questions over the remaining three pages. (See Appendix 4 for the final version of the SBQ.) These questions were categorised under the following areas:

- General information
  - Identifying information on the person completing the form
  - Details of how information was collected
  - Identifying information about the child
  - Aboriginal and Torres Strait Islander specific questions
  - Culturally and Linguistically Diverse specific questions
- Background information for assessment
  - Medical information
  - Hearing tests
  - Medication
  - Speech and language tests
  - Neuropsychology assessments
Cognitive assessments
Other assessments
- General behaviour in relation to new situations (to assist the speech pathologist to engage the child in the process of the assessment)
- Family history
- Developmental history
- Academic history and presentation
- Other life experiences

As it was likely that a parent could be involved in completing this questionnaire for some children it was considered appropriate to ask open-ended questions regarding the child’s life experiences. Although this was appropriate from an ethical perspective so as not to distress the parents, it made the data regarding the child’s experience of maltreatment difficult to ascertain. Nevertheless, considerable information was provided in the open-ended question regarding the child’s history of adversity, including maltreatment. Where possible and consistent with the ethics approval, some of this information was supplemented for the children involved with the Take Two program as their referral information was available including their history of child abuse and neglect.

Once the Small Talk tool and the SBQ were developed, piloted and adapted accordingly, the next phase was to apply these documents to explore the research questions further.
Chapter 4: Methodology

The Small Talk project’s method was designed to examine whether the Small Talk tool enhanced practitioners’ ability to identify whether children would benefit from a full speech pathology assessment. After the development and piloting of the Small Talk tool and the accompanying Supplementary Background Questionnaire (SBQ), a five-step process was put in place as described below and portrayed in Figure 4.1. These steps occurred after each participating organisation was given training on the tool and the methodology and had provided ethics approval.

Step 1: Practitioners in the participating organisations were provided with a briefing about the project and how to make a referral to the Small Talk project.

Step 2: The Small Talk team provided the referrer with the plain language statements and consent forms including those to be passed on to the child’s guardian. They also provided the referrer copies of the Small Talk tool and SBQ.

Step 3: The referrer then completed the Small Talk tool and the SBQ (with or without parent/carer participation) and sent this to the Small Talk team. The SBQ was given to the speech pathologist along with any other assessments provided, but not the Small Talk tool.

Step 4: An appointment was made for the child to be assessed by the Small Talk speech pathologist, who then conducted the assessment over one to three sessions and provided a report on the assessment to the referrer.

Step 5: Data from the Small Talk tool, SBQ and the speech pathologist’s assessments were entered onto a database for analysis.

4.1 Target population

The target population for this study was children who have had substantiated episodes of abuse and/or neglect and who were between the ages of 4 years and 7 years and 11 months of age at the time of assessment. They did not have to be current clients of child protection as long as child protection had previously substantiated their experience of abuse or neglect. They could be living at home or in any form of out-of-home care.

Although initially the sample was selected from the Berry Street Take Two program, the Berry Street Northern Home-Based Care program and VACCA, other CSOs and the DHS child protection program were subsequently asked to participate. The original aim for the study was to have 150 participants; however, difficulties in recruitment of participants required flexibility, such as adding to the pool of potential participants. Overall, the different types of services involved were out-of-home care services, family services, therapeutic services, Aboriginal services and child protection. As some of the CSOs and the Aboriginal service (VACCA) provide both family services and out-of-home care services, it was not always possible to distinguish the type of service involved. As such, the generic terms, community service organisations (CSOs) and Aboriginal services are used. Appendix 1 lists the participating organisations in this study. This study was conducted in Victoria, Australia and children were referred from both metropolitan Melbourne and regional/rural areas.

Children were excluded from the study if they had recently been assessed by a speech pathologist, if they had a profound disability or were outside the study’s age range. A recent audiology assessment was not an exclusion criterion, although if the results were available to the speech pathologist she did not undertake a hearing test.

There was no requirement that the child referred to the Small Talk project had to present with any communication difficulties. In fact it was important, for validation purposes, that the tool was tested with children with no communication problems as well as those who were found to have communication difficulties. This was to test the tool’s efficacy at identifying which children did or did not have problems requiring further assessment. This was emphasised in the training with each organisation that was a potential source of referral.

There was a purposive approach to include as many Aboriginal children as possible, as the intent was to at least match the proportion of Aboriginal children in the protection and care population, especially given some of the additional risk factors for speech, language and hearing problems noted in the literature. It was also recognised that a sufficient number of Aboriginal children would be needed in the study to make statistical analysis possible. The percentage of Aboriginal children in the Victorian population is just over one per cent (AIHW, 2014), which is in contrast to the proportion for whom abuse and/or neglect reports are substantiated (11%) and who are in out-of-home care (16.5%) (AIHW, 2013).

4.2 Data collection

Data was collected from the fixed-choice and open-ended items in the Small Talk tool and the SBQ. Of the three versions of Small Talk tool the sample of 65 children included 15 using version one, 9 using version two and 41 using version three of the tool. For a description of the differences between these versions see the previous section on the description of the tool. Most of the differences, albeit minor, were between the first and second version.

Figure 4.1. Overview of method from referral to the Small Talk project to analysis.
Information about different aspects of the children’s speech, language and hearing were collected through the assessment conducted by the speech pathologist. There was one primary speech pathology clinician throughout the data collection period (Ms Nikki Worthington), although her work was supplemented by another speech pathologist on a short-term basis and Ms Worthington supervised speech pathology students at the beginning of the project. There were eight 4th year speech pathology students supervised by the speech pathologist to undertake some of the assessments. In her role as clinical educator for the speech pathology students, Ms Worthington provided direct supervision through observation behind a one-way mirror. In addition, the speech pathology placements were supported and supervised by the senior research officer from the Take Two research team, who has social work qualifications.

Ms Nikki Worthington provided consistency and an overview of every assessment undertaken in this project. She was supervised in this project by Dr Beverly Joffe, who was employed by the La Trobe University Department of Human Communication Sciences at that time.

The speech, language and hearing assessment by the speech pathologists consisted of the following tests.

**Audiology**

Pure tone hearing screening test was undertaken by the speech pathologist. This was used to assess whether the child had adequate hearing for testing and as an important measure in itself, particularly given the reported high risk of middle ear infections for Aboriginal children.

**Formal assessment of speech and language**

The following formal assessment tools were used to test speech and language:

- **Goldman Fristoe Test of Articulation (Goldman & Fristoe, 2000).** The Goldman-Fristoe Test of Articulation provides information about a child’s articulation ability by sampling spontaneous speech sound production in different positions of words. On this test, examinees respond to picture plates and verbal cues from the examiner with single-word answers that demonstrate common speech sounds. Additional sections provide further measures of speech production. This test is used to measure articulation of consonant sounds and determine types of misarticulation. It is used to inform the speech pathologist’s appraisal of aspects of the child’s speech.

- **Clinical Evaluation of Language Fundamentals – Australian Standardised Edition (CELF-4; Semel, Wiig, & Secord, 2006).** The CELF-4 is used with 5 to 21 year olds and combines a number of core subtests with supplementary subtests to provide a comprehensive assessment of language skills. The CELF-4 provides norms for its overall Core Language score, and for its receptive language index score, expressive language index score, language content index score and language structure index score. The edition used in the study had been adapted from the USA version to be more culturally appropriate in Australia. However, no reference is made in the manual of its use with Australian Aboriginal children, although there are relevant comments regarding cultural sensitivity. Because it is a standardised tool that is normed to the Australian population, it provides the opportunity to compare the results with the general population.

- **Clinical Evaluation of Language Fundamentals – Australian Preschool Edition (CELF-P2; Wiig, Secord, & Semel, 2006).** The CELF Preschool-2 language assessment is designed for preschool aged children up to the age of six years. CELF Preschool-2 (CELF-P2) provides a variety of subtests to comprehensively test the language skills of preschool aged children who will be in an academic-oriented setting. Subtests include total language score, receptive language composite, expressive language composite and additional index scores, standard scores, percentile ranks and age equivalents. In this study the CELF-P2 was used for four year olds. As with the CELF-4, this version was adapted from the USA version to be more culturally appropriate in Australia; however, again no reference is made in the manual of its use with Australian Aboriginal children.

- **Test of Narrative Language (TNL) (PRO-ED, Inc, 2004).** The TNL identifies narrative language impairments such as measuring the ability to answer literal and inferential comprehension questions. Whereas most measures of children’s language examine their knowledge of the components of language, the TNL assesses how well children use their knowledge of the components of language in telling a story. This is referenced for children between the ages of five and eleven years and so was not completed for the four year olds in this sample. It is normed for a USA population, not an Australian population. As there are some cautions in the use of this tool with children from different cultures and with children with hearing problems, it is recommended that this test is best suited as a complement to a broader assessment, as is the case in this study, rather than being used on its own. Tests such as the TNL provide information on language beyond the sentence level; e.g. the ability to convey information in a structured and coherent manner using a story framework (a skill that develops with age).

**Speech pathologist’s clinical judgement**

Language sampling and analysis of data collected from spontaneous interactions provide additional information at and beyond a sentence level. Data from standardised tests do not provide exhaustive information on speech, language and communication. Examining findings from language samples provided the ability to look for discrete error patterns in language. These types of sampling tools also provided information on speech and pragmatics:

- **Language Assessment Remediation and Screening Procedure (LARSP) (Crystal, 1979).** The LARSP is a profile chart that outlines various grammatical characteristics of a child’s language at different stages of normal language development. Analysis of a child’s expressive language enables the speech pathologist to determine which grammatical structures the child is using, and the structures with which the child is having problems. The profile includes seven stages of syntactic development, and an interpretation comprising four levels of structural organisation: sentence, clause, phrase and word types, as well as connectivity; that is, the ability to combine structures in order to formulate longer
and more complex sentences. An adaptation of a full LARSP was done for the majority of the children and used to supplement information from the CELF-P2 or CELF-4 and other aspects of the assessment.

- **Developmental Sentence Scoring** (DSS) (Lee & Canter, 1971) is a clinical procedure for estimating the status and progress of children enrolled for language training in a clinic. It is based upon a developmental scale of syntax acquisition. By analysing a child’s spontaneous, tape-recorded speech sample, a clinician can estimate to what extent the child has mastered grammatical rules sufficiently to use them in verbal performance.

- Observation – voice/fluency/pragmatic language. A criterion-referenced checklist was used with children involving a check via observation of various items to determine adequate use of voice, effective fluency and competent use of language in context and on a functional level. Actual checklists were used by the speech pathology students whereas this process occurred mainly through careful clinical observation when the primary speech pathologist solely conducted the assessments.

The initial design of the project provided for two assessment sessions by the speech pathologist, but it soon became apparent that many of the children did not have a sufficient attention span required for this approach, so the children were usually tested over three shorter assessment sessions.

At the completion of each assessment the speech pathologist wrote a comprehensive report including recommendations. These reports were provided to the referring worker and, where appropriate, the parent or carer. Where possible, the speech pathologist attended care team meetings to discuss the report’s findings. Care teams form a support and planning network around the child and carer, and usually consist of the carer, foster care worker, child protection workers, sometimes the child’s parents, and sometimes teachers. Recommendations from the speech pathologists included suggestions for referrals, such as for speech pathology or audiology assessments and practical suggestions for how the child’s communication development could be encouraged and supported by parents, carers and teachers. Data were collected regarding the speech pathologist’s recommendations and these were analysed on a qualitative basis for themes.

### 4.3 Ethics approvals

Ethics approval was gained from the La Trobe University’s University Human Research Ethics Committee (approval no. 09-041). Permission was also received from the DHS Research Coordinating Committee (ref no. CDF/09/1878) as required when involving child protection clients and child protection workers. The ethics approval included being able to access the Take Two research data for the purposes of this study. The project was also approved by the research committees of VACCA and Berry Street. When the project expanded to other CSOs, ethics approval was sought and gained from each agency as required.

### 4.4 Data analysis

Quantitative data analysis was conducted using the Statistical Package for Social Sciences (SPSS). Frequencies and percentages were analysed as well as data being tested for statistically significant differences using chi-square ($\chi^2$) analysis for categorical data and t-tests and analysis of variance (ANOVAs) for continuous variables. Pearson’s r correlations were conducted to examine associations between variables. Internal-consistency reliability analysis utilising Cronbach’s alpha and logistic regression were completed to examine which subset of items from the Small Talk tool had the greatest power in predicting outcome of speech and language assessment. Receiver Operating Characteristic (ROC) curve analysis was completed to examine whether a particular total score on the Small Talk tool was able to discriminate between children requiring speech and language intervention according to the speech pathologist’s assessment and those who did not require such intervention.

Qualitative analysis was undertaken in relation to some of the open-ended items, where the responses were categorised into clusters for further thematic analysis.
Chapter 5: Results – Characteristics of the Sample

5.1 Referral information

Eighty-five children were referred to the Small Talk project. However, 20 children either withdrew or were not considered suitable for various reasons (including being outside the age range, having a severe global delay, or not completing the assessment process). In total, 65 children participated in the Small Talk study. The data described in this section about the characteristics of the sample were derived from the SBQs.

The 65 children in the study were referred from the following agencies: Berry Street Take Two (n=20), Berry Street Northern and Hume region home-based-care programs (n=13), VACCA (n=5), other CSOs (n=26), and the Department of Human Services (DHS; n=1). See Appendix 1 for more detail regarding other CSOs.

Although most of the programs involved with the Small Talk project from the CSOs and VACCA were out-of-home care programs, some referrals came from family service programs, some of whom also support kinship care placements. The actual number was not possible to determine. There was no significant age or gender differences for the children based on which type of service referred to the project. Appendix 5 provides a data table regarding some of the demographics of the children in this sample.

5.2 Age and gender

The study sample comprised 34 males (52%) and 31 females (48%). The mean age at the time the tool was completed was 6.0 years (SD=1.3; range 4.0–8.0 years). There were no significant age differences between male and female children. The sample was evenly divided between children aged under six years (n=32) and children aged six to eight years (n=33). Figure 5.1 shows that even though there was a relatively even spread of ages involved in the project, there were some differences depending on source of referral.

5.3 Aboriginal children

Fourteen children (22%) in this study were Aboriginal. They were referred from all types of referral sources, with five from VACCA, and three each from Take Two, other Berry Street programs and other CSOs.

There were no significant age or gender differences amongst the Aboriginal children. Fifty-seven percent were male and 43% were female. In terms of age, it was an even split with 50% of the Aboriginal children under six years of age and 50% aged six to eight years.

None of the Aboriginal children was described as using traditional Indigenous language and two of the 12 (17%), where it was known, were described by the referrers as using Aboriginal English.

According to the SBQs, 64% of Aboriginal children were described as being in direct contact with someone from their culture/mob or clan at least once a week. Some workers had knowledge of the Aboriginal child’s community (n=9; 64%) and of Indigenous communication patterns (n=7; 50%). Not surprisingly, the two referring workers who said they knew a lot about Indigenous communication patterns were from VACCA.

5.4 Children from culturally and linguistically diverse backgrounds

Analysis of this item is difficult due to the 20 SBQs that had no responses for this question and a further three ‘don’t knows’. In other words, information was not available about this item for 35% of the children. Of the 42 SBQs with a response, eight children (19%) were described as having culturally and linguistically diverse heritage, including Pacific Islander, Vietnamese, Greek, Lebanese, Sudanese and Taiwanese. Three children had more than one Aboriginal or culturally and linguistically diverse heritage.

Figure 5.1. Age of children in Small Talk sample by referring organisation.
heritage. All children with culturally and linguistically diverse heritage were described as having English as their main language. Three children were noted as having one other language (Dinka from Sudan and Maltese). There were no significant differences by age, gender or placement within this group. All the children from culturally and linguistically diverse backgrounds were living in Melbourne at the time of the study.

5.5 The involvement of case workers, clinicians and others

Information was obtained about how long the referring worker had known the child. The study explored whether length of knowing the child impacted on the information provided by the referrer.

As indicated in Figure 5.2 the length of time the referrers knew the children ranged from 2 to 124 weeks (mean=34 weeks; SD=31), although the median was 24 weeks. No significant differences regarding length of time were noted between each type of referrer. Although not significantly different, Take Two clinicians had known the children they referred for the least amount of time. This was consistent with Take Two clinicians being encouraged to refer all children within the age range at the time of the initial assessment period. There were no significant differences by age or Aboriginal identity in terms of how long the children were known to the referrer. Although not statistically significant, the referring workers had known all of the children living with their parents for less than 12 months, compared to a fairly even spread between less than three months to just under three years for children in out-of-home care.

Figure 5.2. Length of time referrers knew the child at the time of referral to the Small Talk project.

In 59% (35 out of 59) of the cases where it was clear, six parents and thirty-one carers participated in completing the Small Talk tool and SBQ along with the referring worker. Four of the six parents who participated had their children in their care, whereas the other two participated though their child lived elsewhere. In those two cases, both the carers and the parents participated in the process. Although the participation of parents and carers was considered likely to have increased the accuracy of the information, 28% of the children were described as having a disrupted placement history, and this was likely to be an underestimate. Therefore there were likely to be gaps in knowledge about many of these children’s developmental history.

According to the SBQ data, no interpreters or cultural consultants were involved while the referrers completed the tool. However, five of the Aboriginal children were referred from VACCA, which has a cultural consultation role.

5.6 Geographical location

Three quarters (75%) of the children in the sample lived in Melbourne. Of the remaining 25%, some lived in the North East regional area of Victoria (Hume region) and others lived in or near the Geelong area (large regional city in Victoria). There were no significant differences by gender or age, with a relatively even spread across the different ages for both Melbourne and the rural areas. There were no significant differences by Aboriginal identity or child’s placement in terms of Melbourne or rural/regional location. Take Two was the largest source of referrals for children in the rural/regional areas.

5.7 Children’s current living situation

The children in this study lived with one or both parents, in home-based care (kinship care or foster care) or in residential care. The majority of children (n=53; 83%) were in out-of-home care. Fifty-two (81%) children lived in home-based care; however, as 21 children were described as living with an undefined ‘carer’ it was not always possible to determine whether this was a foster carer or kinship carer. Only one child was in residential care. Eleven children (17%) were living with their parents. Placement was not recorded for one child. Take Two referred the fewest number of children living with a parent, with only one of their clients not living in out-of-home care. In comparison, the CSOs referred the highest proportion living with a parent. This is consistent with some of the CSOs’ family services teams being the source of referrals.

There were no significant differences in age, gender or Aboriginal identity based on whether the child was living with parents or in out-of-home care. Children living with parents had a mean age of 6.2 years old (37% were under 6 years). Children in out-of-home care had a mean
age of 5.9 years old (51% were under 6 years). Fifty-five percent of children living with parents were male and 51% living in out-of-home care were male.

Eighteen percent of children living with parents were Aboriginal and 23% of children living in out-of-home care were Aboriginal. Where the data was available, 7 out of 12 (58%) of the Aboriginal children were living with an Aboriginal person, either a family member or a carer.

The children living in out-of-home care varied on how long they had been living with their current carer. Of the fifty-one children where this information was available, 11% had been in their current placement for less than three months, with others living with their carers for two and a half years. This information was only recorded for five of the eleven children living with their parents but indicates they had been in their parents’ care for most of their life. Figure 5.3 shows the length of placement for children in out-of-home care compared to the stability of those living with their parents in this sample.

Although there was too much missing information to perform statistical comparisons, of the 37 responses to the question about whether the child was living in a high, medium or low verbal environment, the majority (86%) noted it was a high verbal environment.

5.8 Children’s sibling relationships

Information was collected on whether the children had siblings and whether they lived with them. Two children had no siblings. Forty-three percent had one or two siblings, 25% had three or four siblings and 18% had five or more siblings.

Just under a quarter (24%) of the children did not live with a sibling. One hundred percent of those living with a parent compared to 71% of those living in out-of-home care were living with siblings ($\chi^2(1)=3.85, p=.05$). There were no significant differences by age, gender, Aboriginal identity, or location as to whether a child was more or less likely to be living with a sibling.

5.9 Adverse life experiences

As stipulated by the project design, all children were either current or previous clients of child protection and had experienced abuse and/or neglect as substantiated by child protection. Although the actual number was not recorded, the vast majority of the children in the study were current clients of child protection, including all of those in out-of-home care and a proportion of those living with their parents.

Referring workers were asked an open-ended question in the SBQ about the child’s adverse life experiences that the referrer felt would be relevant to the assessment process. For all but one child, some description of adverse life experiences was provided. Eleven SBQs did not include information regarding child protection concerns even though all children were known to have suffered abuse or neglect which had been substantiated by child protection. For the 54 children where the referrers noted child protection concerns, these are listed below. This is likely to underestimate the frequency of abuse and/or neglect in this sample as it was an open-ended question and not all referrers may have had access to this history. However, the responses illustrate a range of adverse experiences experienced by these young children. The most frequently mentioned adverse experiences were neglect, followed by parental substance abuse, family violence or a combination of these experiences.

![Figure 5.3. Number of months children have been living with their parent or carer at the time of the Small Talk project (n=51).](image-url)
Child protection concerns (n=54)

- Neglect (n=26) (48%)
- Parental substance abuse (n=22) (41%)
- Family violence (n=21) (39%)
- Parents have family violence and substance abuse (n=13) (24%)
- Child removed (n=18) (33%)
- Disrupted attachments such as placement changes (n=15) (28%)
- Removed from home under one year of age (n=12) (22%)
- Parents in gaol (n=7) (13%)
- Trauma or unspecified abuse (n=7) (13%)
- Emotional abuse (n=5) (9%)
- Born with disability, illness or major incident around time of birth (n=5) (9%)
- Physical abuse (n=4) (7%)
- Parental intellectual disability (n=3) (6%)
- Sexual abuse (n=3) (6%)
- Parent deceased (n=3) (6%)

Referring workers were also asked a question about whether the children had ever been hospitalised. Just over half (51%; 22 of 43) of the children where this information was completed had been hospitalised at some time.

Following are examples of how the children’s experiences were described in the SBQ.

**Five-year-old girl**

“Abuse and neglect experiences within family home. Exposed to parental substance abuse and domestic violence. Removed from mother’s care and living with father. Later was told it wasn’t her father and removed from his care. Experienced two foster care placements. Father treated her like a three-year-old than a five-year-old, Father possible intellectual disability, limited stimuli to the child.”

**Four-year-old boy**

“Neglect experiences in the family home. Exposed to parental substance abuse and domestic violence. Removed from parents and placed in foster care. Regressed significantly in behaviour and emotional regulation. Improvements since returned home to a more stable and consistent home life with parents being substance free.”

**Eight-year-old girl**

“Child has witnessed physical and verbal abuse in their home and in family networks; child is small for their age; child is very vulnerable in that they trust anyone, likes affection and attention; child is not aware of stranger danger; child will raise their voice and yell to get point across.”

**Eight-year-old boy**

“History of trauma in home life; witness to family violence; witness to drug and alcohol abuse; age inappropriate responsibilities; neglect; over-feeding.”

For the 20 children in the sample who were clients of Take Two, additional information was available about their experiences of abuse and/or neglect. This was analysed as a subset to ascertain whether responses to this open-ended question regarding adversity were consistent with other data available. Referrals to the Take Two program involve the completion of a document called the Harm Consequences Assessment (HCA) which asks child protection workers to select from a list of items regarding the child’s experience of abuse and/or neglect. The items are classified in accordance with the Victorian legislation (Children, Youth and Families Act 2005) as follows: Abandonment and problems with parenting capacity (such as due to parental substance abuse); physical harm; sexual abuse; emotional harm (including exposure to family violence); and developmental harms (including environmental and medical neglect). Child protection

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**Table 5.1. Comparison of data regarding history of child maltreatment from the HCAs and SBQs for Take Two clients (n=20)**

<table>
<thead>
<tr>
<th>History of maltreatment</th>
<th>HCA results (n=20)</th>
<th>SBQ results (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abandonment or parenting capacity problems</td>
<td>15 (75%)</td>
<td>14 (78%)</td>
</tr>
<tr>
<td>Physical harm</td>
<td>19 (95%)</td>
<td>5 (28%)</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>4 (20%)</td>
<td>0</td>
</tr>
<tr>
<td>Emotional harm</td>
<td>20 (100%)</td>
<td>12 (67%)</td>
</tr>
<tr>
<td>Developmental harm</td>
<td>16 (80%)</td>
<td>13 (72%)</td>
</tr>
<tr>
<td>Abuse (non-specified)</td>
<td>4 (22%)</td>
<td></td>
</tr>
</tbody>
</table>
workers can select items that are considered extreme, serious or concerning (Frederico, Jackson, & Black, 2010). For the purposes of this analysis, only extreme and serious levels of experience were included and they were grouped together. The data from the open-ended question in the SBQ were then coded to fit with the HCA classification and are reported in Table 5.1.

### 5.10 Children’s presentation

There were a number of questions in the SBQ relating to the children’s presentation and development.

<table>
<thead>
<tr>
<th>Children’s responses to new situations</th>
<th>Number selected</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiet in response to questions</td>
<td>18</td>
<td>30</td>
</tr>
<tr>
<td>Distracted</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>Non-compliant</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Not confident*</td>
<td>40</td>
<td>67</td>
</tr>
<tr>
<td>Extremely active</td>
<td>22</td>
<td>37</td>
</tr>
<tr>
<td>Unable to focus*</td>
<td>46</td>
<td>77</td>
</tr>
<tr>
<td>Anxious in new situations</td>
<td>29</td>
<td>48</td>
</tr>
<tr>
<td>Chatty</td>
<td>28</td>
<td>47</td>
</tr>
</tbody>
</table>

*These items were written in the affirmative in the questionnaire but to be more consistent for analysis they have been recorded in the negative in this table, although ‘chatty’ and ‘quiet in response to questions’ is neither positive nor negative.

### Child’s behaviour in new situations

Questions pertaining to the child’s general behaviour in new situations were asked to gain a perspective of the child’s behaviour and communication in different contexts and to assist the speech pathologist to prepare ways to engage the child in the assessment process. The items as described in Table 5.2 were not all indicative of a problem, such as whether or not the child was chatty.

As the items relating to the child’s confidence and ability to focus were written in the affirmative in the SBQ and were the two highest areas of concerns (i.e. being confident and able to focus were the least often selected items), it is not clear whether this is an accurate representation of the referrers’ views, or a misunderstanding of the question. On the other hand, a child’s lack of confidence and difficulty in focusing when dealing with new situations is consistent with what would be expected for this population. There was no significant difference by type of placement or location for these items.

Aboriginal children were significantly less likely to be described as distracted in dealing with new situations, with 14% compared to 45% of non-Aboriginal children ($\chi^2(1) = 3.94, p < .05$). Similarly, Aboriginal children were significantly less likely to be described as anxious with new situations, with 21% being described as anxious in these situations compared to 57% of non-Aboriginal children ($\chi^2(1) = 5.29, p < .05$).

Children aged six years or older were described as less able to focus (90%) compared to children under the age of six years (63%) ($\chi^2(1) = 5.96, p < .05$). Presumably, the referrers compared younger children with other children of the same age in making this determination, which is the appropriate interpretation of this question. This item relating to the child’s ability to focus was the only item in this section that showed a significant difference as a function of how long the referring worker knew the child. The longer they knew the child (mean = 37.6 weeks compared to 21.8 weeks), the less likely they were to indicate the child was able to focus ($F = 5.98, p < .05$).

One hypothesis is that this issue becomes more obvious over time as more becomes expected of children. This could also explain why difficulty in focusing was more often described as a problem for older children, for whom such difficulties would be less expected and so more noticeable.

### Child’s current presentation at school, kindergarten or child care

Ninety-five percent of the children in this study went to a school, kindergarten or child care centre. The majority of the children went to school (56%) which was consistent with their age. Just over a quarter (28%) attended child care and a quarter attended kindergarten (25%). Seven children were enrolled in both child care and kindergarten (11%) and one child was enrolled in child care, kindergarten and school. As she was five years old this was presumably part of a transition plan. Of the 16 children who attended kindergarten, eight were four years of age (42%) and eight were five years of age (63%). Two children of compulsory school age (7 years of age) were not enrolled at school.

Sixteen children (25%) were described as having attended multiple schools. The significant majority of those with multiple school transitions were six years or older ($\chi^2(1) = 4.69, p < .05$) but four children were under the age of six years. Overall, 44% of children who attended school, kindergarten or child care, even at this young age, had already experienced disruption. This included five children in kindergarten and child care. This is concerning but not unusual for children in out-of-home care. All but two of the children who experienced multiple schools were in out-of-home care.

The set of questions about the child’s functioning at school, kindergarten\(^7\) or in child care were asked primarily to provide some understanding of the child’s presentation in other settings, especially as it pertained to their academic ability and having some potential association with communication problems. As seen in Table 5.3 the most frequently noted concerns were the child having

\(^{7}\) Although this question did not specify kindergarten (as an oversight) it was answered for children in kindergarten as well as child care and school.
difficulty in concentrating (62%) and struggling with change (55%). This is consistent with the amount of change likely to have been experienced by many of these children, such as being placed in out-of-home care. All children described with concerning behaviours were in out-of-home care. Nearly half (48%) of the children in out-of-home care were described as having behavioural issues. Children living with their parents were less likely to be described as struggling with change (14%) compared to 63%). Conversely, children living with their parents were more likely to be described as performing below grade expectations (86%) compared to children in out-of-home care (35%). All of these presentations have implications for communication problems.

Children under the age of six years (23%) were less likely to be described as having difficulty reading than children aged six years or older (56%) ($\chi^2(1)=5.38, \ p<.05$). It is assumed that higher expectations for reading were present for older children. As seen in Figure 5.4, more than 50% of the six and seven year olds were identified with reading problems. There was considerable missing data for this item (28%) and so these figures are only suggestive and further research would be required.

Table 5.3. The children’s current presentation at school, kindergarten or child care according to SBQs (n=47)

<table>
<thead>
<tr>
<th>Presentation at school, kindergarten or child care</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor social skills</td>
<td>21</td>
<td>45</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>29</td>
<td>62</td>
</tr>
<tr>
<td>Behavioural issues</td>
<td>19</td>
<td>40</td>
</tr>
<tr>
<td>Difficulty reading</td>
<td>19</td>
<td>40</td>
</tr>
<tr>
<td>Struggles with change</td>
<td>26</td>
<td>55</td>
</tr>
<tr>
<td>Disorganised</td>
<td>13</td>
<td>28</td>
</tr>
<tr>
<td>Performs below expected grade level</td>
<td>20</td>
<td>43</td>
</tr>
</tbody>
</table>

Figure 5.4. Percentage of children with reading difficulties by age of the child according to the SBQ (n=19)
No significant differences were found in terms of the children’s presentation at child care, kindergarten or school in relation to gender, Aboriginal identity, type of placement or location.

When the questions regarding the children’s behaviour in response to new situations were compared with the children’s current presentation at school, kindergarten or child care, significant relationships were found between a number of items as shown in Table 5.4. Although not causal, these associations denote the interrelated nature of many of the children’s difficulties. Some items had a natural association, such as being distracted in new situations and struggling with change at school. One of the interesting and strongest associations was between the children’s problems with confidence and poor social skills and their performing below expected grade level at school.

The SBQ sought to provide some of this information, including a question about whether there were any difficulties for the child at birth, or in terms of sucking, swallowing, chewing or feeding. Such items can indicate associated speech problems that involve motor coordination difficulties. As seen in Table 5.5, only 45 (69%) respondents answered this question and most of those selected ‘don’t know’ (58%). Thus, 46 (71%) of referring workers did not have knowledge about these aspects of the child’s history or current capacity, which is of concern. Either the parents or carers did not know some of this information about the children, the referring workers did not have access to this information, or both. It also cannot be assumed that when information was provided it was correct or complete. There was no observable increase or decrease in the number of ‘don’t knows’ or missing data as a function of who contributed to completing the SBQ in terms of parents or carers.

Although not statistically significant, the ‘don’t knows’ were more common for children in out-of-home care than for those living with their parents. It is perhaps not surprising that some of this information is not well known, as most disciplines involved in the family services, child protection, out-of-home care and therapeutic services are not trained to assess a child’s capacity to suck, swallow, chew and feed. The item on which more information was reported, notwithstanding high rates of missing data, was whether or not the child had any difficulties at birth, with 14 (31%) noting this was applicable for the child.

### Table 5.4. Significant associations between certain behaviours from the child when faced with new situations and the child’s general presentation at school, kindergarten or in child care according to SBQs (n=47)

<table>
<thead>
<tr>
<th>Child’s behaviour in new situations</th>
<th>Child’s presentation in school or child care</th>
<th>Correlations (r)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiet in response to questions</td>
<td>Difficulty in reading</td>
<td>.30</td>
<td>p&lt; .05</td>
</tr>
<tr>
<td>Distracted</td>
<td>Difficulty concentrating</td>
<td>.34</td>
<td>p&lt; .05</td>
</tr>
<tr>
<td>Distracted</td>
<td>Performing below expected grade level</td>
<td>.33</td>
<td>p&lt; .05</td>
</tr>
<tr>
<td>Lack of confidence*</td>
<td>Poor social skills</td>
<td>.42</td>
<td>p&lt; .01</td>
</tr>
<tr>
<td>Lack of confidence*</td>
<td>Performing below expected grade level</td>
<td>.56</td>
<td>p&lt; .001</td>
</tr>
<tr>
<td>Extremely active</td>
<td>Difficulty concentrating</td>
<td>.28</td>
<td>p&lt; .06</td>
</tr>
<tr>
<td>Anxious in new situations</td>
<td>Behavioural issues</td>
<td>.36</td>
<td>p&lt; .05</td>
</tr>
<tr>
<td>Anxious in new situations</td>
<td>Struggles with change</td>
<td>.35</td>
<td>p&lt; .05</td>
</tr>
</tbody>
</table>

*These items were written in the affirmative in the questionnaire but to be more consistent for analysis they have been recorded in the negative in this table.

### Table 5.5. Number of children identified with certain difficulties according to the SBQ (n=45)

<table>
<thead>
<tr>
<th>Types of difficulties for the child</th>
<th>Number</th>
<th>Percentage of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>At birth</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>Sucking</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Swallowing</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Chewing</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeding</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Don’t know</td>
<td>26</td>
<td>58</td>
</tr>
</tbody>
</table>
The SBQ sought information about when the child achieved certain developmental milestones, such as when he or she began to sit, walk, first used words, first used sentences and became toilet trained. Presumably this information is more likely to be known by parents or carers if the child was in their care at the time of reaching these milestones. However, there was a substantial absence of knowledge about the children’s developmental history across the sample.

The actual findings about when the children achieved these developmental milestones were not useful to report as there was too much missing information. However, the pattern of missing information was considered worth exploring further. Table 5.6 presents the number of responses known for each developmental milestone item by type of placement. In every item, more information was known about children in their parents’ care than in out-of-home care and this was statistically significant regarding when children first used sentences and their age of being toilet trained. This is consistent with other research that found information is often missing or unavailable (and potentially lost if not recorded at the time) for many children in out-of-home care (Nathanson & Tzioumi, 2009; Royal Australasian College of Physicians, 2006). No other differences regarding whether this developmental information was known were significant by age, gender, Aboriginal identity or geographical location.

Even though the information provided about these milestones generally fell within the normal expectations, the questions were not part of a formal developmental checklist and so further analysis was not possible.

The SBQ also sought information on whether the child had a hearing test in the previous 12 months. Although the difference was not significant, 17 of the 18 children (94%) who were reported to have had a hearing test in the previous 12 months were in out-of-home care. This equated to 11% of the children in their parents’ care compared to 42% of children in out-of-home care. Close to significance was the finding that Aboriginal children were more likely than non-Aboriginal children to have had a hearing test in the previous 12 months (58% compared to 29%) ($\chi^2(1)=3.42, p=.06$).

Only some of these activities involved interaction with others, such as hide and seek, board games, being read to and playing with others. Given the four- to eight-year-old age group usually transitions from parallel to interactive play, it is useful to consider what is expected for children who have been exposed to neglect and the trauma of abuse. No conclusions can be drawn from this data as it was an open-ended question and some referrers may have only included activities they thought would be appropriate in relation to a speech and language assessment. It is worth considering, however, what the children’s play and activities may represent in terms of their development and would be a valuable area for further study.

Table 5.6 provides a list of the activities coded into categories and the percentages of SBQs where they were mentioned. It is unclear how to interpret the lack of response in 12 SBQs, especially as half of these were completed by referrers who had known the children for over 6 months. The absent information was from SBQs completed by a range of CSOs. As there is no equivalent data regarding the general population, it is not possible to analyse this list of activities and interests for further comparison.
Names in case studies have been changed to conserve confidentiality.

Case study

Two case studies from the sample have been used to illustrate some of the experiences for many of these children, beginning with Grace. The second case study about Jeff and Gary is found at the end of Section 6.

Grace was nearly eight years old and living with her maternal grandmother when she was referred to the Small Talk project.

She was removed from her mother’s care at the age of four years after experiencing severe neglect due to her mother’s continued substance abuse. Her grandmother reported that Grace was feeding and clothing herself from 18 months of age. At the time of the assessment Grace had access visits with her parents on a fortnightly basis.

Grace was attending primary school, and both Grace and her grandmother reported that she had experienced bullying at school. Grace’s grandmother also suggested that Grace had difficulty with reading although she was thought to be progressing appropriately in other areas.

As part of the Small Talk project, Grace attended assessment sessions over three weeks at the La Trobe Communication Clinic and initially presented as an assertive, confident communicator with no apparent communication issues.

Once formal testing began, however, Grace demonstrated significant difficulties in following instructions and interpreting and repeating sentences of increasing length and complexity. Her deficits appeared to be linked to her short-term memory ability and gaps in her knowledge of certain temporal concepts. Grace demonstrated appropriate expressive language skills on both formal and informal assessments.

During the feedback session, Grace’s grandmother reflected that she thought Grace may be experiencing difficulty with memory recall and recognition, and that this was impacting on her ability to learn to read. Grace’s worker had expressed no concerns prior to the assessment sessions with regard to Grace’s communication skills.

Recommendations were made for speech pathology services to target Grace’s receptive language skills and to implement strategies within the home to assist her weak short-term memory.

Table 5.7. Number and percentage of activities and interests of the children according to the SBQs (n=53)

<table>
<thead>
<tr>
<th>Type of activity/interest</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play (e.g. dolls, cars, blocks)</td>
<td>34</td>
<td>64</td>
</tr>
<tr>
<td>Outdoor activities and gross motor activities</td>
<td>20</td>
<td>38</td>
</tr>
<tr>
<td>TV, DVDs and computer games</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Drawing and art and craft</td>
<td>13</td>
<td>25</td>
</tr>
<tr>
<td>Fantasy (e.g. dress-ups, role plays)</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Reading or being read to</td>
<td>9</td>
<td>17</td>
</tr>
<tr>
<td>Other games (e.g. card games, board games, hide and seek)</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Music</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Playing with others</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Cooking</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Animals</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

*Names in case studies have been changed to conserve confidentiality.*
Chapter 6: Results - Speech, Language and Hearing Problems

This chapter reports on the prevalence of speech, language and hearing problems for this vulnerable population of young children. These data were collated from the speech pathologist’s assessments based on her clinical judgement, use of clinical measures, analysis of language samples and informed by formal testing including the CELF-P2 (for 4 year olds) and CELF-4 (for older children).

There is a description of the domains of speech, language and hearing that were identified as problematic by the referring workers through the application of the Small Talk tool. This is followed by analysis of the referrer’s general perception of whether or not the child had a speech, language or hearing problem and compares these perceptions with the results of the speech pathologist’s assessments. This provides insight into the extent to which the opinion about the presence of communication difficulties by a practitioner who is not a speech pathologist can be relied upon to determine which children should be referred for speech, language or hearing assessments.

This analysis builds to explore one of the major research questions for this project; namely, whether the Small Talk tool was able to assist in identifying children with particular speech, language or hearing problems. There is then analysis of some of the qualitative data such as some of the open-ended questions in the Small Talk tool and the speech pathologist’s recommendations for each child. This is followed by discussion of some of the reflections from key stakeholders on their perspectives on the project.

Finally, this chapter describes the education to the students and workers in different fields involved in the Small Talk study.

6.1 Prevalence of speech, language and hearing problems according to the speech pathologist

The findings of the speech pathologist’s assessments provide a valid measure of the prevalence of speech and language difficulties for the children in the Small Talk sample.

Speech pathologist’s assessments

The speech pathologist’s clinical judgement was informed by her analysis of formal tests such as the CELF-P2 and CELF-4 measures, analysis of language samples using LARSP, findings from pure tone hearing appraisal, Goldman Fristoe Test of Articulation and the Test of Narrative Language. Each of these measures considered a component of the speech, language and hearing assessment. However, it was the speech pathologist’s overall clinical judgement, based on information from a variety of sources, that provided an integrated impression of each child’s performance in the range of communication domains. For example, in this study the CELF-P2 and CELF-4 results indicated problems regarding aspects of the children’s language, and then the overall judgement by the speech pathologist, based on additional sampling processes (e.g. language sampling and LARSP), complemented those findings and highlighted more precisely the language contexts for the children where communication problems occurred.

There were ten communication domains that comprised the speech pathologist’s overall clinical judgement. These domains are detailed in Table 6.1 with the number and percentage of children who were identified to exhibit problems in each domain. Expressive language was the area of most concern with over two-thirds (69%) of the children being found to have difficulties in that domain. Receptive language followed with just over half (55%) of the children having some difficulties. The next highest percentage of concerns was in terms of oral narrative skills, although this data was not available for four year olds. (See Appendix 2 for Glossary of Key Terms).

Table 6.1. Domains of speech pathologist’s assessments and outcomes of these assessments (N=65)

<table>
<thead>
<tr>
<th>Domains of speech pathologist’s assessments</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing concerns (n=55)</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>Speech concerns, including results of Goldman Fristoe Test of Articulation (n=65)</td>
<td>33</td>
<td>51</td>
</tr>
<tr>
<td>Receptive language (n=65)</td>
<td>36</td>
<td>55</td>
</tr>
<tr>
<td>Expressive language (n=65)</td>
<td>45</td>
<td>69</td>
</tr>
<tr>
<td>Voice concerns (n=65)</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>Fluency concerns (n=64)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pragmatics (n=62)</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Phonological awareness (n=53)</td>
<td>14</td>
<td>26</td>
</tr>
<tr>
<td>Narrative comprehension, based on the Test of Narrative Language (n=31)*</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Oral narration, based on the Test of Narrative Language (n=29)*</td>
<td>13</td>
<td>45</td>
</tr>
<tr>
<td>Overall clinical assessment by speech pathologist recommending referral (N=65)</td>
<td>57</td>
<td>88</td>
</tr>
</tbody>
</table>

*These domains were not considered for 4 year olds as the Test of Narrative Language is for children aged 5 years or older.
The speech pathologist concluded that 95% (n=62) of the children demonstrated at least one area of communication that was concerning, such as problems with hearing, expressive language, receptive language and/or voice. Eighty percent (n=52) had two or more domains of concern.

As noted in Table 6.1, 88% of the children were recommended by the speech pathologist for further assessment and intervention. All children about whom the speech pathologist identified at least two domains of concern, and four of the nine children with one domain of concern were recommended for further hearing assessment or speech and language assessment and/or intervention.

As seen in Figure 6.1 the majority of children had between two and four domains of concern in terms of speech, language and hearing difficulties. Further details are provided in Appendix 6. There were no significant differences by age, gender, geographical location, Aboriginal identity or placement in terms of the number of communication domains where there was an identified problem. All eleven children living with their parents had at least three domains of concern in speech, language or hearing and ranged up to six domains of concern. In comparison, children in out-of-home care ranged from no concerns to eight domains of concern, with two-thirds of that group ranging from two to four domains of concern. Only two children in the sample had more than six domains of concern, and they were both in out-of-home care.

Younger children were more likely to show some difficulty with pragmatics than children six years or older ($\chi^2(1)=4.22$, $p<.05$).

The narrative comprehension and oral narration tests contained in the Test of Narrative Language (TNL) are only for children aged five years and older. There were also a number of children who could not complete this test in the time available. It is nonetheless interesting to see that 45% of children tested (13 out of 29) had problems in this domain.

In terms of meaningful patterns by age, although not significant, hearing was one of the few areas where there was a trend of problems being more prevalent as the children got older. Forty-two percent of the children identified by the speech pathologist as having concerns regarding hearing had had their hearing tested in the previous twelve months. In other words, 58% had not had their hearing tested recently.

A noteworthy finding in relation to age by speech, language and hearing concerns was the lack of consistent pattern. There were also no significant gender differences in relation to any items. Males were slightly more likely to show difficulties in speech and expressive language and females were slightly more likely to have difficulties in the other domains. There were no significant differences in relation to Aboriginal children; however, they were slightly more likely to have hearing problems (27% compared to 25%).

In terms of the child’s placement, children living with a parent were more likely to be assessed by the speech pathologist to have a number of speech and language concerns. For example, children living with a parent were more likely than children living in out-of-home care to have been assessed to have speech problems (82% compared to 42%) ($\chi^2(1)=5.96$, $p<.05$); expressive language problems (100% compared to 62%) ($\chi^2(1)=6.04$, $p<.05$); voice problems (55% compared to 19%) ($\chi^2(1)=6.18$, $p<.05$), and phonological awareness problems (75% compared to 18%) ($\chi^2(1)=11.44$, $p<.01$).

![Figure 6.1. Percentage of children by the number of domains of concern in the speech, language or hearing assessment by the speech pathologist. N=65](image-url)
Results from the CELF measures

The CELF-P2 (for 4 year olds) and CELF-4 (for older children) measures formed a large component of the language assessment and provided a standardised score on which to compare the Small Talk sample with the general population of Australian children (Semel, Wiig, & Secord, 2006; Wiig, Secord, & Semel, 2006). The CELF measures use a standard score and so have a mean of 100 and a standard deviation of 15.

Table 6.2 outlines the number and percentage of children who scored at least one standard deviation below the population mean (i.e. below 85) on the Core Language standard score and then in relation to four index standard scores for the combined CELF-P2 and CELF-4 measures (further details are in Appendix 7). Children who scored below 70 (<2SD) were on the 2nd percentile (i.e. 98% of children would score higher than them). As described in the CELF-P2 (Wiig, Secord, & Semel, 2006) and CELF-4 manuals (Semel, Wiig & Secord, 2006), these scores relate to the following:

- The **Core Language score** measures general language ability and quantifies a child’s overall language performance.
- The **Receptive Language index score** measures the child’s listening and auditory comprehension.
- The **Expressive Language index score** measures the child’s expressive language skills including oral expression.
- The **Language Content index score** measures various aspects of semantic development, such as vocabulary, concept and category development, and comprehension of associations and relationships among words.
- The **Language Structure index score** measures the child’s receptive and expressive components of interpreting and producing sentence structure.

The two CELF measures were combined to give an overview of the 61 children for whom a CELF-P2 or CELF-4 was undertaken.

As seen in Table 6.2, 66% of children had at least one index standard score on CELF measures that was one standard deviation or more below the population mean. There was little difference between the numbers of children scoring below the standard deviation on each of the Core Language and index scores. In other words, the children in this study appear to have problems measured by the CELF tool on every index score and overall Core Language score compared to the general population. In looking further at the children who were two standard deviations below the mean, this subgroup appeared to have particular problems with expressive language.

No significant differences were found by gender in terms of the CELF scores. However, boys performed slightly better than girls in each dimension. There were no significant differences by age.

### Table 6.2. Number and percentage of children who met the criteria for language impairment according to the CELF measures based on number of standard deviations (SD) below the mean (n=61)

<table>
<thead>
<tr>
<th>CELF-P2 and CELF-4 combined</th>
<th>Mean and SD.</th>
<th>1 SD or more below mean (n)</th>
<th>1 SD or more below mean (%)</th>
<th>2 SD or more below mean (n)</th>
<th>2 SD or more below mean (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Language score (n=61)</td>
<td>M=83.4</td>
<td>27</td>
<td>44</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>SD=15.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receptive Language index (n=61)</td>
<td>M=86.3</td>
<td>29</td>
<td>48</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>SD=16.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive Language index (n=60)</td>
<td>M=83.5</td>
<td>28</td>
<td>47</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>SD=15.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Content index (n=61)</td>
<td>M=85.2</td>
<td>29</td>
<td>48</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>SD=15.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Structure index (n=58)</td>
<td>M=84.8</td>
<td>26</td>
<td>45</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>SD=10.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CELF-P2 &amp; CELF-4 combined with 1 or more scores with 1 SD or more below the mean</td>
<td>40</td>
<td></td>
<td>66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The CELF-P2 and CELF-4 combined had a mean Core Language score of 83 (compared to the general population of 100). The standard deviation was 15.7 and the range was 40 to 115.

The mean scores of the CELF measures for Aboriginal children (M=78) were slightly lower than for non-Aboriginal children, although the difference was not statistically significant.

Pearce and Williams’ (2013) caution as described in the literature review about children who use Aboriginal English being disadvantaged on the CELF measure were considered in this analysis. In this sample only two Aboriginal children (17%) were described by the referrer as using Aboriginal English as well as Standard Australian English. Neither of the children showed any areas of concern on the CELF-4 measures and only one displayed some concerns according to the speech pathologist’s assessment for hearing and voice (which is not measured by the CELF measures).

There were no significant differences by gender, age, or location in relation to the CELF scores. However, there was a significant difference based on type of placement. Children living with parents (73%) were significantly more likely to be one or more standard deviations below the mean in the Core Language score compared to children living in out-of-home care (38%) ($\chi^2(1)=4.41, p<.05$).

As noted previously, speech pathologists use the CELF measures along with other measures to arrive at a clinical decision as to whether or not the child has an expressive or receptive, language problem. As such it is not surprising that all of the children who scored a mean of 85 or lower on one of the CELF measures were described by the speech pathologist as having a language problem. Conversely, as she was not limited to the CELF measures in reaching her clinical judgment, some children who did not score below the mean in the CELF measure in terms of language problems, were assessed by the speech pathologist as exhibiting other aspects of communication that were of concern, such as a hearing, voice or speech problems.

Relationships between children’s behaviours and CELF scores

As mentioned earlier, the SBQ asked a number of questions relating to the children’s general behaviour in new situations and presentation in the school or child care environment. Utilising a Fisher’s exact test, these items were compared with the dichotomised CELF score (using $\leq 85$ within the standard deviation as the cut-off). The only significant relationships found were between the child being described as Confident ($\chi^2(1)=4.51, p<.05$); and Being able to focus ($\chi^2(1)=9.01, p<.01$); and having a ‘typical’ categorisation on the CELF.

For the child’s presentation at school, kindergarten or in child care there was a significant relationship between a problematic CELF score and Difficulty reading ($\chi^2(1)=6.67, p<.05$); and Performing below expected grade ($\chi^2(1)=3.88, p<.05$).

In summary, it was found that if a child scored below one standard deviation on the CELF as conducted by the speech pathologist, they were more likely to be described by the other practitioners as distracted in new situations, to have difficulty reading and perform below expected grade level. Alternatively if a child scored non-problematically on the CELF, they were likely to be described as confident and able to focus.

6.2 Prevalence of speech, language and hearing concerns according to the Small Talk tool

Although not used as a formal measure of prevalence, the Small Talk tool data reflects the numbers of children in this sample assessed by the referring worker as having speech, language or hearing problems.

Table 6.3 shows that only a very small percentage of children were considered by practitioners who were not speech pathologists to have no domains of concern with communication (3%). In other words, 97% of children in this sample had one or more domains that were of concern and 85% had two or more domains of concern with communication according to the Small Talk tool.

<table>
<thead>
<tr>
<th>Number of domains of concern</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No concerns</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>One domain</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>Two domains</td>
<td>17</td>
<td>26.2</td>
</tr>
<tr>
<td>Three domains</td>
<td>7</td>
<td>10.8</td>
</tr>
<tr>
<td>Four domains</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>Five domains</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td>Six domains</td>
<td>4</td>
<td>6.2</td>
</tr>
<tr>
<td>Seven domains</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>Eight domains</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Nine domains</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Ten domains</td>
<td>2</td>
<td>3.1</td>
</tr>
</tbody>
</table>
As shown in Table 6.4, the majority of concerns noted in the Small Talk tool related to speech, expressive language, fluency and non-verbal communication. Examples of these questions and their frequencies are in Appendix 8. When asked a general question about whether the referrer believed the child had a speech, language or hearing problem, nearly two-thirds (64%) indicated that they considered the child may have at least one such problem.

When asked a general question about whether the referrer believed the child had a speech, language or hearing problem, nearly two-thirds (64%) indicated that they considered the child may have at least one such problem. This is in contrast to the more detailed information they entered into the Small Talk tool which showed 85% had two or more domains of concern. This illustrates that a practitioner who is not a speech pathologist can provide a general opinion regarding whether the child has ‘a communication problem’, but that is not the same as asking the same practitioner a series of more tailored questions.

Deterioration or improvement of speech, language and hearing

The Small Talk tool asked questions regarding whether or not the referrer had seen any deterioration in the child’s hearing, speech or language. The most frequent examples for the 11 children where they were described as having some deterioration included: responding less (n=6) starting to interrupt others during conversation (n=5), using fewer words (n=5), and appearing to have increased difficulty in hearing (n=5). The five children with increased difficulty in hearing were all under the age of six years. The only statistically significant difference was that 50% of the children living with parents were more likely to be described as having experienced some type of deterioration compared to 12% of the children living in rural areas (χ²(1)=14.17, p<.05).

In contrast, improvements in communication were noted by practitioners for seven children. These improvements included greater clarity of speech, increased vocabulary and fluency. In a couple of cases, the referrers noted contributions to improvement, such as the child returning home, attending child care and being tutored.

Hearing

In addition to the question relating to deterioration of hearing, there was a question in the Small Talk tool about whether the child could hear. Nine percent of the children were scored as having a problem in this domain. No significant differences were found for age, gender, Aboriginal identity, location or placement in relation to hearing difficulties.

Table 6.4. Domains of Small Talk items and the number and percentage of concern for each domain (N=65)

<table>
<thead>
<tr>
<th>Domains of Small Talk Tool items</th>
<th>Number of children with one or more concerns</th>
<th>Percentage with one or more concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing concerns (n=64)</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>Speech concerns</td>
<td>45</td>
<td>69.2</td>
</tr>
<tr>
<td>Receptive language</td>
<td>20</td>
<td>30.8</td>
</tr>
<tr>
<td>Expressive language</td>
<td>34</td>
<td>52.3</td>
</tr>
<tr>
<td>Phonological awareness (n=52)</td>
<td>25</td>
<td>48</td>
</tr>
<tr>
<td>Voice concerns</td>
<td>25</td>
<td>38.5</td>
</tr>
<tr>
<td>Fluency concerns (n=64)</td>
<td>33</td>
<td>51.6</td>
</tr>
<tr>
<td>Pragmatics</td>
<td>19</td>
<td>29.2</td>
</tr>
<tr>
<td>Oral narration</td>
<td>14</td>
<td>21.5</td>
</tr>
<tr>
<td>Non-verbal communication (not reported on by speech pathologists)</td>
<td>26</td>
<td>40</td>
</tr>
<tr>
<td>Overall view by referrer as to whether child had a speech, language or hearing problem</td>
<td>39</td>
<td>63.9</td>
</tr>
</tbody>
</table>

Note. Total score is calculated by assigning a value of 1 for each item that was reported as a concern and summing the number of 1s for each Small Talk tool. Items that were a subset of a previous item were not included in the total score leaving a total of 29 items.

Speech

The only variable that showed difference in terms of the referrer’s views via the Small Talk tool of the child’s speech was in relation to geographical location. Children in Melbourne were significantly more likely to be reported as having speech concerns. Ninety percent of the children in Melbourne were described with such problems compared to 63% of the children living in rural areas (χ²(1)=14.17, p<.05).

Oral narration

Four year olds, compared to other age groups, were more likely to have narrative difficulties according to the Small Talk Tool. Some items in this domain may not be a concern if four year olds find them challenging. It is not necessarily a delay if they have not yet attained certain skills, such as being able to tell a story in a logical manner. Indeed one of the few statistically significant findings was that younger children in this sample were more likely to have problems in ‘telling a story’; with 30% for children under six years of age compared to 10% for children six years old or older (χ²(1)=3.99, p<.05). As this is to be expected developmentally, there is a question as to whether these items should be included in the tool or rated differently for four year olds.

Voice concerns

The only significant difference in relation to voice was that children living in a parent’s care were significantly more likely to be described in the Small Talk tool as having voice concerns (82% compared to 28%) (χ²(1)=11.13, p<.01).
There were some individual differences that were close to statistical significance, such as the children's voice being too loud for children living with parents (46%) compared to children in out-of-home care (19%) \( (\chi^2(1)=3.59, p=.058) \); and the children's voice being too soft for those living with parents (27%) compared to those in out-of-home care (8%) \( (\chi^2(1)=3.64, p=.056) \).

**Expressive language**

Boys were more likely than girls to have some problems with expressive language, such as putting words in the right order (28% of boys compared to 7% of girls) \( (\chi^2(1)=4.14, p<.05) \). However, there was no overall expressive language difficulty associated with gender. Children living with their parents were significantly more likely to be described as having problems in being understood by others (82%) compared to those in out-of-home care (47%) \( (\chi^2(1)=4.39, p<.05) \).

**Phonological awareness**

There was only one item related to phonological awareness, which was 'if the child could sound out words'. This also overlapped with the speech domain but for the purposes of analysis was separated and placed under this heading. No significant differences were found by age, gender, type of placement or Aboriginal identity. However, a significant difference was found by geographical location, with 82% of the children from a rural/regional area having some concern in this area compared to 39% of children living in metropolitan Melbourne \( (\chi^2(1)=6.36, p<.05) \).

**Analysis of individual items in Small Talk tools**

The frequencies for each item on the Small Talk tool are provided in Appendix 8. Items that were recorded as a concern by a third or more of the referrers are listed in Table 6.5. All of the items related directly or indirectly to expressive language.

For these five items in the Small Talk tool most frequently reported as a concern by referrers, analysis was conducted to examine differences in the sample in relation to age, gender or Aboriginal status. No significant effects of these variables were observed.

The less variety in responses for any particular item the less useful that item was considered to differentiate the sample. There were two items in the Small Talk tool with 10% or higher of ‘Don’t Know’ responses namely, ‘Does child understand words like if?’ (receptive language) and ‘Can the child sound out words’ (phonological awareness).

The Small Talk tool results as a function of how long the referrer had known the child. Although the length of time

<table>
<thead>
<tr>
<th>Items from Small Talk tool most frequently reported</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child can’t sound out words (Phonological awareness domain)</td>
<td>39</td>
</tr>
<tr>
<td>Child speaks very quickly and stumbles over words (Fluency domain)</td>
<td>41</td>
</tr>
<tr>
<td>Child jumbles his/her words (Expressive language domain)</td>
<td>51</td>
</tr>
<tr>
<td>Child’s speech is difficult to understand (Speech domain)</td>
<td>54</td>
</tr>
<tr>
<td>Child makes mistakes when pronouncing speech sounds (Speech domain)</td>
<td>62</td>
</tr>
</tbody>
</table>

Note. Exact wording of each item is provided in Appendix 8.

**Table 6.5. Items from Small Talk tool where over a third of referrers reported concerns**

**Phonological awareness**

There was only one item related to phonological awareness, which was ‘if the child could sound out words’. This also overlapped with the speech domain but for the purposes of analysis was separated and placed under this heading. No significant differences were found by age, gender, type of placement or Aboriginal identity. However, a significant difference was found by geographical location, with 82% of the children from a rural/regional area having some concern in this area compared to 39% of children living in metropolitan Melbourne \( (\chi^2(1)=6.36, p<.05) \).

Analysis of individual items in Small Talk tools

<table>
<thead>
<tr>
<th>Domains or items of communication</th>
<th>Mean length of time known by referrer and whether there were concerns</th>
<th>The difference in number of weeks</th>
<th>Tests of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral narration domain</td>
<td>52 weeks compared to 30 weeks</td>
<td>22 weeks</td>
<td>( F=3.21, p=.78 )</td>
</tr>
<tr>
<td>Receptive language domain</td>
<td>45 weeks compared to 30 weeks</td>
<td>15 weeks</td>
<td>( F=4.74, p&lt;.05^* )</td>
</tr>
<tr>
<td>Hearing</td>
<td>46 weeks compared to 34 weeks</td>
<td>12 weeks</td>
<td>( F=4.27, p&lt;.05^* )</td>
</tr>
<tr>
<td>Focus on you in conversation – item</td>
<td>43 weeks compared to 33 weeks</td>
<td>10 weeks</td>
<td>( F=4.9, p&lt;.05^* )</td>
</tr>
<tr>
<td>Tell a story – item</td>
<td>56 weeks compared to 30 weeks (26 weeks)</td>
<td>26 weeks</td>
<td>( F=3.83, p=.055 )</td>
</tr>
<tr>
<td>Words in correct order – item</td>
<td>48 weeks compared to 33 weeks</td>
<td>15 weeks</td>
<td>( F=4.33, p&lt;.05^* )</td>
</tr>
<tr>
<td>Understands ‘in front of’ – item</td>
<td>47 weeks compared to 33 weeks</td>
<td>15 weeks</td>
<td>( F=4.47, p&lt;.05^* )</td>
</tr>
<tr>
<td>Understands ‘if’ – item</td>
<td>72 weeks compared to 28 weeks</td>
<td>44 weeks</td>
<td>( F=3.4, p=.071 )</td>
</tr>
</tbody>
</table>

*Significant at < .05.
The Small Talk tool total scores

A total score was calculated from the fixed-choice items on the Small Talk tool. Open-ended items and items that were a subset of earlier items were excluded from the total score. For each item where a concern was noted, a score of one was assigned. This meant the total score had a possible range from 0 to 30, with the higher the number indicating the greater number of concerns.

In this sample, the mean total score of the Small Talk tool data was 6.1 (SD=5.3) with a range of 0 to 20. There were no significant differences in the mean total score for age, gender, Aboriginal identity, geographical location, or whether they were living with their parents or in out-of-home care. The mean total score for problems according to the Small Talk tool was higher for children in their parents’ care, in other words, more problems were noted (8.1 compared to 5.6), although not statistically significant.

6.3 Comparing general perceptions of practitioners with a speech pathologist’s assessments

As described earlier, a question near the end of the Small Talk tool concerned the referrer’s overall opinion as to whether the child had a hearing, speech or language problem. This was not a calculation derived from the other items, although may have been influenced by the process of completing the tool. There was significant difference between the referrer’s responses regarding their general perception as to whether or not the child had a hearing, speech or language problem and the speech pathologist’s clinical assessments. The practitioners’ general opinion under-estimated the presence of speech, language and hearing problems compared to the speech pathologist’s assessment. Of the 22 children rated by the practitioners as not having speech, language or hearing difficulties, 17 (77%) were assessed by the speech pathologist as having concerns in one or more of these areas.

To explore this in more detail, the sensitivity and specificity of the referrers’ responses (as assessed against the speech pathologist’s assessment) were examined and shown in Table 6.7. The sensitivity was 69 indicating an insufficient number of children would have been correctly identified by simply asking the referrer’s general opinion. Relying on the referrers’ opinion would have failed to identify 31% of children (the false negative rate) who had a speech, language or hearing difficulty.

The specificity of the referrer’s opinion compared to the outcomes of the speech pathologist’s assessment was 71. As such, the referrers misidentified 29% of children (the false positive rate), where they considered there were concerns about speech and language when the speech pathologist’s assessment indicated the children probably did not have such difficulties.

These findings demonstrate that the ratings of practitioners who are not speech pathologists are not in themselves sufficient to ascertain if a child has speech, language or hearing difficulties. This highlights the value of developing a valid and reliable tool that could help practitioners in various fields increase their understanding of what to consider when deciding which children would benefit from an assessment by a speech pathologist or an audiologist.

6.4 Comparing results of Small Talk tool with the speech pathologist’s assessments

As the overarching research question in the Small Talk study was whether or not a tool could assist in identifying which children would benefit from a speech, language and hearing assessment, a series of more detailed comparisons between the Small Talk tool results and the speech pathologist’s assessments was undertaken.

Number of domains of concern according to speech pathologist’s assessment and the Small Talk tool

The speech pathologist’s clinical assessments were grouped according to how many domains of concern were present per child and the Small Talk tools were similarly grouped. These results are presented in Table 6.8.

<table>
<thead>
<tr>
<th>Practitioner’s general opinion in Small Talk tool</th>
<th>Speech pathologists’ clinical assessment of speech and language difficulty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referrer has general concerns regarding hearing, speech or language</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>37 True Positive</td>
</tr>
<tr>
<td>No</td>
<td>17 False Negative</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
</tr>
<tr>
<td>Totals</td>
<td>57</td>
</tr>
</tbody>
</table>

Sensitivity = 68.5 Specificity=71
The speech pathologist's assessment and the Small Talk tool did not have identical domains. For example, the speech pathologist's assessment had two domains relating to narrative (comprehension and production of a narrative), whereas the Small Talk tool only had one (production). However, no differences were found when narrative comprehension data was removed from the analysis of the speech pathologist's assessment. The Small Talk tool had the nonverbal communication domain, which was not part of the speech pathologist's assessment. When the nonverbal communication domain was removed from the analysis, the percentage of two domains or more for speech pathologist's assessment remained at 80% and the percentage for the Small Talk tool was 79%.

Although there is a similarity between the percentage of Small Talk tool results and the percentage of speech pathologist's assessments that had two or more domains of concern, this did not indicate agreement on the actual domains of concern. As seen in Table 6.9, the ability to correctly identify children with a speech, language and/or hearing problem through the Small Talk tool (i.e. sensitivity) was 82.7 whereas its ability to correctly identify children who did not have a problem (i.e. specificity) was 38.5.

According to Law and colleagues (1998) a figure of 80 or higher is considered acceptable for both specificity and sensitivity, acknowledging that sometimes there is a trade-off between the two. This analysis shows that by comparing when there are two or more domains of concern in the Small Talk tool and the speech pathologist's assessments, there is an acceptable sensitivity, yet not acceptable specificity. Although the Small Talk tool has higher sensitivity than relying on the practitioners' general opinion, this analysis indicates that this approach to measurement of the Small Talk tool could not be used to accurately determine which children did or did not need a speech, language or hearing assessment. However, as there were only a small number of true negatives in the sample (where children were correctly identified as not needing a referral to other services), it may be that an analysis of specificity and sensitivity is problematic. The Small Talk tool would need to be tested on a population in which fewer children had speech, language and/or hearing problems.

The Small Talk tool results were higher in concerns compared to the speech pathologist’s assessments in the domains of speech, voice, pragmatics and fluency. Conversely, the speech pathologist’s assessments indicated more concerns in the domains of hearing, receptive language, expressive language, and expressive narrative ability. This indicates that this version of the Small Talk tool could not be used through analysing each domain individually to determine which children would benefit from a referral to a speech pathologist or audiologist.

In Table 6.10 true positives represent alignment between the Small Talk tool and the speech pathologist’s assessment in terms of agreement in recognising a problem. A true negative indicates that the Small Talk tool and the speech pathologist’s assessment align to concur that there is not a problem. A false positive indicates that the Small Talk tool results indicate the child has a problem in this domain but this was not supported by the speech pathologist’s assessment. A false negative indicates that the Small Talk tool results suggest the child does not have a problem in this domain, yet the speech pathologist’s assessment indicates that such a problem exists.

**Table 6.8. Number of domains of communication concerns according to the speech pathologist's assessments and the Small Talk tool (N=65)**

<table>
<thead>
<tr>
<th>Number of domains of concern</th>
<th>Percentage of domains of concern according to speech pathologist</th>
<th>Percentage of domains of concern according to Small Talk tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>No concerns</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>One domain</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Two domains</td>
<td>31</td>
<td>26</td>
</tr>
<tr>
<td>Two domains or more</td>
<td>80</td>
<td>85</td>
</tr>
</tbody>
</table>

**Table 6.9. Small Talk tool with two or more domains of concern compared with the speech pathologist's assessment having two or more domains of concern**

<table>
<thead>
<tr>
<th>Small Talk tool</th>
<th>Speech pathologist assessment – two or more domains of concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two or more domains of concern</td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>43 True Positive</td>
</tr>
<tr>
<td>No</td>
<td>9 False Negative</td>
</tr>
<tr>
<td>Totals</td>
<td>52</td>
</tr>
</tbody>
</table>

Sensitivity = 82.7 Specificity = 38.5

Note. Non-verbal communication domain was removed as it was not present in the speech pathologist’s assessment.
This analysis demonstrates that practitioners found it particularly difficult to accurately identify concerns in the child’s hearing, oral narration, voice, receptive language and pragmatics. Although they identified more concerns in the Small Talk tool than when asked a general question, there were too many false negatives in most domains. In contrast, they were likely to over-identify problems in speech and fluency.

**Small Talk tool’s mean total score compared to speech pathologist’s assessment**

The mean total score from the Small Talk tool was calculated to indicate the referrer’s perspectives across all items. This is in contrast to their response to the general question as to whether they had any concerns about the child’s speech, language and/or hearing. The hypothesis was that the Small Talk tool’s mean total score would be a better indication of speech, language and hearing concerns as per the speech pathologist’s assessment, than the referring worker’s general perception of whether such problems existed.

Where the speech pathologist assessed the children as having no domains of concern, the mean of the associated Small Talk tool’s total score was 1.7 (SD=1.2). This was significantly lower than when the speech pathologist’s assessment had one or more domains of concern, where the mean total score was 6.4 (SD=5.4) \((F=4.74, p<.05)\). The analysis suggests a trend of higher mean scores on the Small Talk tool for children assessed by the speech pathologist as having more domains of concern. This is a promising indication of the potential utility of the tool.

There was a significant difference in the mean total scores between children where the speech pathologist’s assessment was recommending further intervention (mean total score = 6.7 (SD=5.4) and where the assessment recommended no intervention (mean total score = 2.4 (SD=2.4). This finding is also promising and indicates the Small Talk tool signalled differences between children requiring speech and language intervention and those who did not require intervention \((F=8.23, p<.01)\).

**Small Talk tool items compared to speech pathologist’s assessment**

Given the insufficient specificity and room for improvement in the sensitivity of the current version of the Small Talk tool, further analysis occurred on different groupings of items to ascertain whether a different version of the tool could yield better results. For the purposes of this analysis the responses to each of the items on the Small Talk tool were dichotomised to ‘concern’ versus ‘no concern’. No concerns, don’t know and missing data were combined under the category of ‘no concern’. Items that were a sub-item of an earlier item, namely examples of deterioration, were excluded, leaving 29 items for analysis.

In counting how frequently a concern was noted for each of the 29 items a range in variance in how referrers responded to each item was found. The less variety in responses for any particular item the less useful that item was considered in differentiating the sample. For example, items where 90% or more of the referrers responded that there was a concern were of little utility in predicting which children were assessed by the speech pathologist as requiring further referral. Similarly, if 10% or less of the sample responded that there was a concern for that particular item, there is a similar concern about the lack of predictive power of that item.

<table>
<thead>
<tr>
<th>Domains of concern</th>
<th>True positives %</th>
<th>False negatives %</th>
<th>True negatives %</th>
<th>False positives %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing</td>
<td>14</td>
<td>86</td>
<td>95</td>
<td>5</td>
</tr>
<tr>
<td>Speech domain</td>
<td>97</td>
<td>3</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>Receptive language domain</td>
<td>39</td>
<td>61</td>
<td>79</td>
<td>21</td>
</tr>
<tr>
<td>Expressive language domain</td>
<td>62</td>
<td>38</td>
<td>70</td>
<td>30</td>
</tr>
<tr>
<td>Voice domain</td>
<td>38</td>
<td>62</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>Phonological awareness domain</td>
<td>60</td>
<td>40</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>Fluency domain</td>
<td>100</td>
<td>0</td>
<td>49</td>
<td>61</td>
</tr>
<tr>
<td>Pragmatics domain</td>
<td>42</td>
<td>58</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td>Oral narration domain</td>
<td>8</td>
<td>92</td>
<td>88</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 6.10. Comparing the Small Talk tool to the speech pathologist’s assessments for each domain regarding the percentage of true positives and true negatives \((N=65)\).
difficult to understand', was predictive of the outcome of the speech pathologist's assessment. The logistic regression analysis revealed only one item, 'Is the child's speech difficult to understand?', was predictive of the outcome of the speech pathologist's assessment. The logistic regression was thus excluded.

Given the limited ability to accurately determine whether a child had a hearing problem, it was considered more appropriate to test for this separately rather than relying on a tool. Phonological awareness, apart from where it may overlap with speech, is also considered a difficult area for a practitioner who is not a speech pathologist to assess, and is needed in a larger, more heterogeneous sample where there were few true negatives in the study. Overall the statistical analysis revealed that this version was not actually used in the study, just that there is an 82% probability that any child in this study would need to select as being of concern for the tool to indicate a referral for further assessment is warranted; e.g. 0–14 for the 14-item version of the tool (Tabachnick & Fidell, 2013).

A ROC curve was completed on the original 29 items of the Small Talk tool, the 19-item version and the 14-item version. The ROC curve statistic is .754 (p < .05) for the 29 items; .753 (p < .05) for the 19 items; and .817 (p < .01) for the 14-item version. This confirms the validity analysis that the 14-item version is the preferred version. It indicates that there is an 82% probability that any child in this study would be accurately classified by using the 14-item version of the Small Talk tool. With this sample the most accurate cut-off score for the revised Small Talk tool is one. In other words, if one or more items are selected as a concern, then a referral for speech and language assessment is indicated.

Table 6.11 reveals the items that had either 90% or more or 10% or less of referrers reporting concerns. This was the case for ten items in the Small Talk tool.

As these ten items had minimal variance they were removed from the next stage of analysis. With the reduced set of 19 items, a reliability analysis was completed. This revealed the 19 items had a Cronbach's alpha of .86 indicating a high level of internal consistency. This is a strength of the scale as it reveals that the items are consistent with a single overall construct, namely communication.

The correlation between the mean total score of the 19 items and the speech pathologist's assessment was r=.274. Individual items that had a lower correlation (r<0.4) with the new total score of 19 items were removed, resulting in 14 items remaining. This led to an increase in the correlation between the new total score of 14 items and the outcome of the speech pathologist's assessment (r=.323, p< .01). It is important to note that the high proportion of children assessed by the speech pathologist as having a speech, language or hearing difficulty has implications for the statistical analysis. McGrath and Meyer (2006) note a correlation of this size when predicting relatively infrequent behaviour (i.e. those not having a speech difficulty are a minority in this population) is likely to prove a very useful and sensitive predictor of outcome.

It was also considered important to bring an interpretive lens to the analysis and still maintain face validity and educative value for referring workers who would be completing the tool. In other words, it was not just the statistical analysis that should determine which questions remain in the next version of the Small Talk tool; the value of items in educating users of the tool about the different communication domains was also important. The 14-item version contains at least one item under each of the different domains covered in the original Small Talk tool, except for hearing and phonology. Given the limited ability to accurately determine whether a child had a hearing problem, it was considered more appropriate to test for this separately rather than relying on a tool. Phonological awareness, apart from where it may overlap with speech, is also considered a difficult area for a practitioner who is not a speech pathologist to assess, and was thus excluded.

Due to the exploratory nature and the small sample size a stepwise (forward) logistic regression was completed. This analysis revealed only one item, 'Is the child's speech difficult to understand?', was predictive of the outcome of the speech pathologist's assessment. The logistic regression was therefore not useful in further developing the tool and this is understandable due to the constraint on power from the small sample size. What it does mean is that this item should be retained in any modified version of the Small Talk tool. This item also had the second largest correlation with the outcome of the speech pathologist's assessment (r=.538). The item with the highest correlation with the outcome of the speech pathologist's assessment was 'Can the child continue the topic of conversation?' which had a correlation of .578 and is in the 14-item version of the Small Talk tool. A copy of the proposed revised 14-item Small Talk tool is found in Appendix 9.

To examine whether a particular mean total score on the Small Talk tool was able to discriminate between children requiring speech and language intervention (as assessed by the speech pathologist) and those who do not require such intervention, a statistical technique called the Receiver Operating Characteristic (ROC) curve was completed. The ROC curve is a plot of the true positive rate against the false positive rate for all the different possible cut-off points for the tool. Cut-off point refers to how many items a worker would need to select as being of concern for the tool to indicate a referral for further assessment is warranted; e.g. 0–14 for the 14-item version of the tool (Tabachnick & Fidell, 2013).

A ROC curve was completed on the original 29 items of the Small Talk tool, the 19-item version and the 14-item version. The ROC curve statistic is .754 (p < .05) for the 29 items; .753 (p < .05) for the 19 items; and .817 (p < .01) for the 14-item version. This confirms the validity analysis that the 14-item version is the preferred version. It indicates that there is an 82% probability that any child in this study would be accurately classified by using the 14-item version of the Small Talk tool. With this sample the most accurate cut-off score for the revised Small Talk tool is one. In other words, if one or more items are selected as a concern, then a referral for speech and language assessment is indicated. Although the cut-off score of one leads to an acceptable sensitivity of .86, the specificity is still quite low (.5). As mentioned earlier, this is also consistent with the results that there were few true negatives in the study. Overall the 14-item version modestly predicts outcome but research is needed in a larger, more heterogeneous sample where assessment outcome is more varied. It should also be noted that this version was not actually used in the study, just that these 14 items were analysed as a specific cluster. Further research using the actual 14-item version would be clearly indicated.

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### Table 6.11. Items from Small Talk tool where 90% or more or 10% or less of referrers reported a concern

<table>
<thead>
<tr>
<th>Items from Small Talk tool</th>
<th>Referrer’s Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the child’s voice hoarse?</td>
<td>Yes</td>
<td>6.3%</td>
</tr>
<tr>
<td>Does the child appear to hear what is said to him/her?</td>
<td>No</td>
<td>9.2%</td>
</tr>
<tr>
<td>Does the child understand simple questions and instructions (e.g. ‘what colour is your shirt’)?*</td>
<td>No</td>
<td>3.1%</td>
</tr>
<tr>
<td>Does the child understand words like ‘if’ (e.g. ‘if you’re a boy, clap your hands’)?*</td>
<td>No</td>
<td>9.2%</td>
</tr>
<tr>
<td>Can the child make their needs known to others in his/her cultural community?</td>
<td>No</td>
<td>7.7%</td>
</tr>
<tr>
<td>Can the child use words to start an activity (e.g. ‘let’s play’)?</td>
<td>No</td>
<td>6.2%</td>
</tr>
<tr>
<td>Can the child ask questions?</td>
<td>No</td>
<td>3.1%</td>
</tr>
<tr>
<td>Do the child’s answers match the questions of the person he/she is talking to?</td>
<td>No</td>
<td>9.2%</td>
</tr>
<tr>
<td>Can the child start a conversation?</td>
<td>No</td>
<td>7.7%</td>
</tr>
<tr>
<td>Does what the child tells you make sense?</td>
<td>No</td>
<td>7.7%</td>
</tr>
</tbody>
</table>

*These items had a new or different example in version 1 of the tool (n=15) compared to version 2 and 3 (n=50).
6.5 Interventions and recommendations

Of the 57 cases (88%) where the speech pathologist made a recommendation for further intervention, 53 children had recommendations for speech pathology services, which equates to 82% of the sample. As so many of the sample were recommended for speech pathology services, no further statistical analysis was possible regarding differences with children where such a recommendation was not made.

Each of the recommendations for speech pathology services detailed which problem areas should be targeted. These were many and varied. Two examples of recommendations are below:

1. Recommendations for a boy, aged 7 years were:
   Speech pathology service targeting language skills (1) Auditory processing; (2) Improving his understanding of the concepts ‘before’, ‘after’ and ‘then’; (3) Increasing the complexity of his sentences, including using sentences which involve co-ordination and subordination; (4) Increasing the complexity of his questions, including using questions in which the auxiliary verb has been separated from the main verb; (5) Improving his use of reflexive pronouns; (6) Improving his word finding ability; (7) Improving his narrative skills.

2. Recommendations for a boy, aged 6 years were:
   Speech pathology service that focuses on the following areas: (1) Investigating his oral motor skills through observation and an oral peripheral examination; (2) Improving his articulation of sounds and words at a sentence level; (3) Improving his understanding of basic concepts; (4) Improving his ability to formulate grammatically correct sentences; (5) Introducing coordination to increase his length of utterance, (6) Improving his overall knowledge and use of a wide variety of words; (7) Improving his pragmatic language skills including eye contact and turn taking.

There were 16 children with recommendations for audiology assessments, mostly due to concerns reflected in the speech pathologist’s assessment but also in some cases where the speech pathologist was unable to conduct this type of assessment. Four children recommended for audiology assessments were not recommended to receive speech pathology services. Six children who were identified for referral for an ear, nose and throat assessment were also recommended to have speech pathology services.

A number of other recommendations were made indicating the variety of results in the assessment, such as:

- Examination by GPs such as for issues of hypo-nasality or adenoids/tonsils.
- One child for whom an Occupational Therapy assessment was recommended because of concerns about gross motor skill development and referral to Take Two and a speech pathology service.
- Referral to a dentist for assessment of jaw movement.
- Neuropsychology assessment.
- Eight recommendations for referral to an Educational Psychologist for a cognitive assessment including one child for an assessment of her eligibility for the Department of Education and Early Childhood Development’s ‘The Program for Children with a Disability’ under the criterion of ‘Expressive Language Disorder’.

In addition to recommendations for referrals to other services, the speech pathologist made numerous suggestions for how to encourage the children’s speech and language within the home and school setting. See Appendix 10 for a description of these suggestions.

6.6 Perspectives from three members of the Small Talk Working Group

Deb Collard — Manager of Home-Based Care and Family Services (Berry Street Northern Region)

The manager of a key partner organisation in the project (Ms Deb Collard from Berry Street) was asked for her reflections on the impact of her involvement in the project on herself, her staff and the children who participated in the project.

Ms Collard identified a variety of benefits for all involved. She spoke of the broader ‘opportunity to develop a greater understanding of the impact of trauma upon children’s communication’ and ‘better understanding of what might be a hearing, speech or language delay’. Ms Collard also described the increased understanding amongst her staff of why children may have difficulty in expressing their emotions; and, through the recommendations from the assessments, how staff and carers can assist children in this area. For example, the process gave workers a different perspective as to why a child had not made any disclosures of sexual abuse. They had suspected the child had been sexually abused and her sisters had made disclosures. The speech and language assessment enabled workers to understand that the child had minimal capacity to narrate her experiences or to provide a beginning, middle or ending of the story, thus was constrained in being able to make a formal disclosure of abuse.

According to Ms Collard, she further enhanced her own communication skills with children as a consequence of escorting children to the speech and language assessments, and observed that foster carers gained a better understanding of what to consider in terms of speech and language when a child first comes into their care. Ms Collard also noted the value of the role of the Take Two Aboriginal research consultant in understanding some of the cultural issues.

In her opinion, the speech pathology assessment reports provided her staff with the evidence for advocating for funding for speech pathology services for children who needed it. However, it was not always possible to obtain such funding. Ms Collard welcomed the opportunity to network with a new group of professionals and to link with speech pathologists who were experienced in responding to the communication needs of children with trauma backgrounds.

The improved understanding that maltreated children have difficulties with speech and language inevitably led to greater awareness of the shortage of resources to meet the communication needs of such children. The process highlighted the difference of availability of funding for children who were involved with child protection compared to children in regular respite or on a voluntary agreement whose parents did not have funds for speech therapy. There was also limited availability of speech pathology services in schools. Despite this, Ms Collard was able to report positive outcomes for many of the children. The long waiting list for publicly funded speech pathology services for children over six years of age was also identified by Ms Collard.
Les Corlett — Take Two Aboriginal research and training consultant

Mr Les Corlett was asked to provide his perspective on his involvement with the Small Talk project.

Mr Corlett considered his advice was sought appropriately, as a member of the project’s Working Group and also being consulted by the project team in developing culturally appropriate tools for recruiting Aboriginal children and families for assessment and for assisting workers to engage with and interview children. Specifically he ensured that the flyers used for recruitment would maximise engagement through use of colour, Aboriginal designs and inclusion of photos of Aboriginal children. He ensured the picture tool used when interviewing children contained culturally appropriate images. He recognised, however, that it could not be assumed that Aboriginal children were always well connected with their community, and so recommended some mainstream images as well.

Mr Corlett’s involvement was aimed at ensuring that the language in the Small Talk tool and the SBQ was culturally appropriate and did not make incorrect assumptions about Aboriginal culture and language. For example, a reference to ‘Indigenous body language’ was removed from the questionnaire.

From his previous employment in an Aboriginal health service, Mr Corlett’s knowledge about health issues with Aboriginal children gave him a good understanding of the need to assess speech and language development. He stated that he thought the tools used in the project were appropriate and were applied appropriately, with no negative feedback from the Aboriginal community.

Nikki Worthington — speech pathologist and clinical educator

Ms Nikki Worthington was asked for her impressions of working within the Small Talk project and with this population of children near the conclusion of the project. As she was a speech pathologist embedded within a social work department and working with the child protection and care population, this was an important perspective to include in the analysis.

The first impression that Ms Worthington noted was the complexity in working with children who have experienced maltreatment and are clients of the protection and care system. Particular examples of this complexity were the large number of people involved, including parents, carers, foster care workers, child protection workers and Take Two clinicians. There are “so many people to keep informed and to organise if anything is to be achieved for the child”.

In terms of the Small Talk tool, Ms Worthington reflected that it would be worthwhile reducing the number of questions, especially some that were less likely to identify four year olds with problems or where practitioners who are not trained as speech pathologists might find it difficult to make an assessment. She considered that “There is definitely a place for something to help workers identify those children at risk as long as we can ensure they are then able to access the appropriate intervention. My gut feeling was many of the children that I recommended intervention for will not have received it. This would be due to a lack of speech pathology services in schools, the frequent changes in the child’s life, competing demands of court appearances etc., and a parent who is hard to locate.”

Ms Worthington noted the importance of a multidisciplinary approach to help place the child in context. She commented that she could count the number of times one of the social workers involved in the project (Ms Jen McConachy) was able to see the child’s — and sometimes the carer’s behaviour — from a completely different point of view. “For example, one kinship carer always dropped the child off for assessment but never stayed. I viewed this as disinterest on her part and was a little affronted by it, but Jen explained that she might have been finding the whole process traumatic based on her previous experiences and may be scared that it might lead to the child being removed from her care.”

Ms Worthington also described the role of the Aboriginal research consultant (Mr Les Corlett) as very valuable. According to Ms Worthington, Mr Corlett was able to identify that some of the materials used to elicit language samples from children would not be appropriate for Aboriginal children and so created other materials for the project. He also provided guidance regarding Aboriginal languages used in Victoria. Finally, Mr Corlett was able to provide feedback on the language samples of two Aboriginal boys who presented with some expressive language difficulties. “Both boys could have been diagnosed with a delay; however, after reading the literature which indicates that some of the markers for language disorder are in fact markers for Aboriginal English and speaking to Les, I was happy to acknowledge that their language was influenced by Aboriginal English and did not refer them for intervention. Les’ commonsense approach of ‘That’s how I used to speak when I was their age’ really helped me make the final decision on my recommendations.”

Ms Worthington also commented on the utility of the SBQ to facilitate the speech, language and hearing assessments. According to Ms Worthington, “The SBQ was invaluable in placing the child ‘in context’ and that information regarding these children needs to be readily accessible to all professionals involved rather than dealing with child’s issues without having that background knowledge.”

Ms Worthington noted that the SBQ provided other benefits including:

- important developmental and medical history including previous assessments;
- information about the child’s interests to facilitate her building rapport with the child;
- information about how the children might present at the assessments sessions in terms of their ability to focus or deal with new environments, allowing her to make adjustments to ensure they felt as comfortable as possible;
- information about their current living situation including whether they were separated from siblings or not. This saved her from asking questions about family life (normal part of building rapport) that they may have found distressing; and
- a guide to the children’s experience of abuse and neglect which in turn helped explain their behaviour in assessments. “For example, one young boy who I saw appeared overly fearful of unexplained noises and took a long time to settle. He also became upset when shown pictures of children crying (part of the assessment to elicit specific word ‘crying’ — occurred twice). However, upon reading his SBQ — as this was provided to me after the first session — I noted that he had been abandoned at railway stations on numerous occasions prior to turning two years of age! That explained everything.”
Ms Worthington concluded that children in the protection and care system need to have potential communication problems identified as soon as they enter the system, especially as this can impact on all areas of development. “Each child's progress should be followed on a much stricter basis and schools need to play a bigger part in this.” She also concluded that more information needs to be provided at a student training level as part of the speech pathology courses on the effects of abuse and trauma on children and their development.

6.7 The experience of providing training to the field and undergraduate students

Students

The project aimed to engage social work and speech pathology students in multidisciplinary training regarding trauma and its consequences for child development, including speech and language. It was considered that if students could learn together they would be more able to utilise the skills and knowledge of each discipline for the benefit of children with complex problems. However, structural issues made the training of students difficult, as the students of the different disciplines had their field work at different times of the year and arrangements for joint classes were not possible.

Three student seminars were offered at La Trobe University over the course of the project; the first was held in June 2009 with subsequent seminars in 2010 and 2011. These seminars were organised by the Small Talk project team and presenters were engaged from partner agencies in the project including Department of Social Work and Social Policy, Department of Human Communication Sciences, Take Two and VACCA.

Fourth year Allied Health students were invited to attend and the vast majority of those attending were from speech pathology. The seminars ran over three hours and provided information on the following areas:

- Understanding trauma and attachment and implications for speech and language development
- Understanding and working with Aboriginal children
- Understanding challenging behaviours and strategies for engagement with children.

Feedback was overwhelmingly positive and in particular the information provided by VACCA representative Ms Sue Anne Hunter on working with Aboriginal children, was well received.

The project was designed to engage speech pathology students in the assessment of children as part of the student's clinical placement. The students are required to complete certain competencies in their training and the work of Small Talk allowed them to do this. Unfortunately the uneven referral rate of children meant that in the latter part of the data collection period, the number of clients during the placement period could not be assured. This reduced the number of students who were able to participate in the project.

A total of eight fourth year speech pathology students were allocated a 12-day clinical placement with the Small Talk team over four separate placements. The cross-disciplinary supervision by the speech pathologist and the social worker in the Small Talk team provided the students with knowledge regarding the child protection system, trauma and attachment as well as different perspectives when interpreting events from their clinical experience. The student feedback through written surveys regarding their placement experiences was very positive.

The workforce

For every service or organisation which nominated an interest in participating in the Small Talk project, a training session by members of the Small Talk team was provided. This covered an overview of the Small Talk project, the data collection process and the Small Talk tool and SBQ in particular. It included an overview of how trauma and neglect may impact on speech and language, what to consider for Aboriginal children, such as Aboriginal English, and some of the areas to consider when determining whether or not the children may have a problem in this aspect of their development.

A number of other opportunities were sought over the course of the project to engage with other practitioners, parents and carers. These included presentations at the National Speech Pathology conferences in 2010 and 2012, a presentation to the National Allied Health conference, attending a foster carer’s support group to talk about communication development and attending a Department of Education and Early Childhood speech pathology stream meeting to present on assessing vulnerable children. The focus of most of these presentations was on multidisciplinary work required for this vulnerable population and approaches to assessment.

In addition to the already mentioned opportunities, the speech pathologist also provided education at an individual level to parents, carers and workers through assessment reports as mentioned in the previous section. Examples of practical suggestions provided to many of the workers, carers and parents during this project are in Appendix 10.

Case study

Jeff and Gary are Aboriginal brothers, who were living with their long-term carers at the time of referral to the Small Talk project. The child protection concerns included neglect, parental substance abuse, and exposure to family violence, with failure to thrive diagnosed for the older of the boys at an early age. They were aged six and seven when assessed within the Small Talk project.

No information was available at the time of their assessments about either boy's developmental history. There were no known medical issues. Jeff was to receive some additional assistance at school for reading and although there are no real concerns about his academic performance, he found it difficult to concentrate. Both children found it difficult to cope with change and Gary was struggling with social skills. His school had concerns about his academic abilities. Both children's first language was English.

The children were assessed separately with one of their foster carers present for two of the three sessions. They presented as friendly and cooperative and were able to focus on tasks during the assessment sessions.

The speech pathology assessment results revealed that both children had good hearing, appropriate pragmatic language and phonological awareness skills and there were no concerns regarding their fluency and voice. Jeff’s speech was intelligible and age appropriate, while Gary had clear speech with only a couple of speech errors evident.

Both boys had a mild receptive language delay and oral narrative skills below average for their ages. Gary had...
appropriate narrative comprehension skills but Jeff’s were mildly delayed. Gary also had a mild expressive language delay with particular deficits in knowledge and use of vocabulary.

As a result of the speech pathology assessment, Jeff was recommended to receive speech pathology services focussing on improving his understanding of time, location and sequence concepts, his overall knowledge and use of a wide variety of words, and his comprehension of and ability to tell narratives.

Gary was recommended to receive assistance to improve his knowledge and use of vocabulary with particular emphasis on concepts of sequence and time, his oral narrative skills in terms of story structure and use of vocabulary to increase meaning and interest.

The worker completing the Small Talk tool identified some issues for both children in terms of particular items in the tool, but had reported overall she did not have concerns about the boys’ speech, language or hearing.
Chapter 7: Discussion

7.1 Prevalence of speech, language and hearing problems for children who have experienced abuse and/or neglect

Regardless of whether it was the speech pathologist or the other practitioners’ perspective, the overwhelming majority of the children in this study were found to have speech, language and/or hearing problems. The speech pathologist identified the highest proportion (88%) of children with problems requiring further intervention, primarily speech pathology services.

Although the speech pathologist and other practitioners often differed as to which areas of communication were a problem, expressive language problems were identified by all as a large area of concern for the majority of these children.

This prevalence of children identified with communication problems in the Small Talk study is high compared to studies of the general population. For example, a study of six year olds in Tasmania reported one of the highest prevalence estimates using the CELF measure (31%) for language problems in the general population (Jessup, Ward, Cahill, & Keating, 2008). Even when only the CELF data in the Small Talk study is used in comparison with the Tasmanian study, it shows a higher prevalence rate, where 44% of children in the Small Talk population had language problems.

In comparing the results from the Small Talk study to other studies of children in the protection and care system, Nathanson and Tzioumi (2007), found a similar rate of hearing problems (28% compared to 26% in this study). Their study based in NSW had a lower rate of speech problems (33% compared to 51% in this study according to the speech pathologist). Overall, both studies demonstrate that children in protection and care are at high risk of speech, language and hearing problems but the Small Talk study found a higher prevalence of problems than what is usually found for children who have experienced abuse and/or neglect. Consistent with other literature, neglect was a common descriptor of many of the children’s life experiences.

There are a number of possible explanations for this higher prevalence of speech and language problems in the Small Talk study. First, although this study aimed to include children with and without speech, language and hearing problems, it is likely there was some degree of bias towards inclusion of those for whom the practitioners had concerns. This potential bias is probable given the motivation for practitioners to refer a child to this study in order to obtain a speech and language assessment. This potential motivating factor was also noted by Jessup and colleagues (2008) in the Tasmanian study as an explanation for their higher than usual prevalence results in the general population. Notwithstanding, a percentage of the referrers noted that they did not consider the child they referred to have a speech, language and hearing problem, even though most of those children were subsequently found to have such a problem.

Second, this study included a population of children rarely studied in child welfare; namely children who have experienced abuse and/or neglect but who are in their parents’ care. Although they were a small proportion in this study, they showed more communication problems. As the CELF measures were the main standardised measures used in this study, they provide a glimpse at a comparison with the general population, at least in relation to the language domains. Again that analysis showed the children in this study had more problems in language than children in the general population, especially with expressive language.

The presence of language problems was associated with other concerns likely to impact on the child’s day-to-day functioning, such as difficulty with reading, performing below expected grade level at school, problems with confidence, and reduced ability to focus. These could be non-directional associations but nonetheless highlight the importance of intervening to improve children’s language especially before or early on in their school career. Problems such as reading have significant implications for children’s capacity to fully participate in education if not identified and corrected early. It is not uncommon to miss the link between problems with oral language skills and reading. This study found a strong association between the children’s problems with confidence and poor social skills and their performing below expected grade level. It is reasonable to postulate that a child who lacks confidence is likely to be inhibited in interactions with peers and teachers, and hence be at risk of not using communication and language optimally for learning. Such children can be described as ‘inactive conversationalists’ according to Fey’s (1986) framework.

In summary, this study supports the findings in other studies that children who have experienced abuse and/or neglect are at high risk of speech, language and hearing problems. This includes not only those who are in out-of-home care but those who have remained in the care of their parents, and is a major area for further attention to ensure these children have timely access to the specialist services many require.

7.2 Gender

This study has a balanced representation of boys and girls and yet another striking finding was the absence of significant differences between them. For example, the literature points to significantly higher prevalence rates of speech and language problems for boys (e.g. Centre for Community Child Health & Telethon Institute for Child Health Research, 2011; FaHCSIA, 2012a; Huttonlocher et al., 1991; Law et al., 1998; Taylor, Maguire, & Zubrick, 2011). However, this study did not find such difference. The older age group in this sample compared to other studies may be one factor, (as is consistent with Huttonlocher et al., 1991) although this is unlikely to be the only explanation.

As with the findings regarding Aboriginal children discussed next, this study’s results may be influenced by the high prevalence rates for speech and language problems across the spectrum, making other differences less apparent. A sample with more children with no communication problems may have elicited more significant differences regarding gender.

7.3 Aboriginal children and communication

A key finding was that Aboriginal children in this study were no more likely to have hearing problems or speech and language problems than the non-Aboriginal children. This finding was unexpected given the literature has consistently reported Aboriginal children have a higher rate of hearing problems and some evidence of more
speech and language problems. For example, three studies found a relatively high rate of Aboriginal children had hearing problems with 10%, 15% and 6% respectively (the National Aboriginal and Torres Strait Islander survey 2008 (Australian Bureau of Statistics, 2009); Footprints in Time study (Bennett, Neelands, Christelow, Neendorf, & Skelton, 2012) and the Victorian report on the state of Aboriginal children (DEECD, 2010). The Small Talk study has found an even higher prevalence of hearing problems (26%) for both Aboriginal and non-Aboriginal children in the child protection and care population. Further interpretation of the differences in the findings of the studies will require a comparison of the hearing tests used and more information on the characteristics of the children in the different studies.

The lack of significant difference in this study between Aboriginal and non-Aboriginal children regarding hearing problems may be indicative that within this high-risk population, where a quarter or more of both Aboriginal and non-Aboriginal children had hearing problems, the experiences of trauma and neglect may be the predominant issue. This may also partly explain why there were no other significant differences found in other aspects of the children's communication, although there are fewer studies regarding speech and language compared to hearing and so further conclusions are not possible. The access to an Aboriginal consultant throughout the study appears to have had some influence on the speech pathologist's interpretation of results and so this is another possible variable.

Although none of the Aboriginal children used traditional language, this is less unusual in Victoria than elsewhere in Australia (DEECD, 2010). However, it was surprising that only two children used Aboriginal English, especially as nearly two-thirds had direct contact with a member of their clan/mob at least once a week. This may be a feature of the referrer's knowledge of Aboriginal English, although that is probably only a partial explanation as a number of the children were referred by the Aboriginal service involved.

The State of Victoria’s Children 2009: Aboriginal Children and Young People in Victoria report noted that just over half of all young Aboriginal people in Victoria (52%) identify with a clan, tribal group or language group (DEECD, 2010). The relatively high connection of Aboriginal children to their community as found in the Small Talk study (64%) is a possible protective factor present for a number of these children.

Another possible protective factor was that Aboriginal children in this study were more likely than the non-Aboriginal children to have had a hearing test in the previous twelve months. This appears reflective of the service system's appropriate response to Aboriginal children as a high-risk population for hearing problems. It may be that early attention to such risk factors has reduced the rate of hearing problems from being even higher and this would be another useful area for further study. However, the high rate of hearing problems in both groups would indicate that emphasis on hearing assessments should be made for all children involved in the child protection system.

This study also found that Aboriginal children were less likely to be distracted or anxious in dealing with new situations compared to the non-Aboriginal children. This may have been a factor in helping them through the assessment process and is an interesting area to study in its own right.

7.4 Children living in their parent’s or other’s care

In contrast to the lack of significant differences by gender, age or Aboriginal identity for many items, a number of differences were found in relation to whether the child was living with a parent or in out-of-home care. For example, children living with their parents were more likely to have information about their developmental history known and able to be shared with others, such as for the purposes of speech and language assessment. This illustrates a significant concern regarding children in out-of-home care; namely limited access to information about their developmental history. Every carer and worker involved with these children, including case managers, clinicians, teachers, speech pathologists and other health and allied health professionals require some access to this type of developmental history and yet too often it is unavailable. It is also possible that workers become erroneously reconciled to the belief that this information is not available. On the other hand, for children who have experienced multiple placements, there may literally be no one in their life who has sufficient continuity to hold this information.

Although more developmental history was known for children living with one or both parents, the majority of the other differences found in this study reflected a higher degree of vulnerability for this group of children. For example, even though both groups were found to be highly likely to have communication problems, this was more so for children living with their parents. This was especially in terms of speech problems, expressive language problems and phonological problems. Consistent with the overall speech pathologist’s assessment, the results of the CELF measures indicated that the children living with their parents were more likely to have an overall language problem. Independent of the speech pathologist’s assessment or the CELF measures, the Small Talk tool results similarly found a pattern that children living with their parents had more problems in some areas of communication, such as voice and being understood by others.

As these children had all been past or current substantiated clients of child protection and as such have experienced some form of abuse and/or neglect, they represent a highly vulnerable population. Remaining in the care of their parents or being reunited with their parents does not mean they had not experienced harmful consequences from past experiences of maltreatment (Coster & Cicchetti, 1993). Bromfield, Sutherland, and Parker (2012) note that children who have experienced abuse and/or neglect are often exposed to other environmental factors, such as parental alcohol and other drug problems, parental mental illness, financial pressures, parental illiteracy, and family violence. If the parents are continuing to wrestle with these and other issues whilst the children are in their care, this may contribute to problems in responding to the children’s developmental needs, such as communication, even when the abuse and/or neglect experiences are no longer occurring. The parents may also actively try to conceal problems in their child if they fear they will be blamed for such difficulties and/or have the child removed from their care.

Given the most commonly reported form of maltreatment was neglect; it is possible that some children may still have been experiencing a suboptimal environment at the time of the study, especially in terms of insufficient developmental stimulation.  "Continuous rearing in non-
optimal environments results in maintenance of adverse learning conditions, so that instead of having opportunity for remediation, children continue to fall behind as they attempt each developmental task with inadequate inner resources or social support.” (Coster & Cicchetti, 1993, pp. 33-34)

Stahmer and colleague’s (2009) study found contrasting results. Although not statistically significant, their study found evidence of positive change in language and communication for children who remained at home and had no ongoing child welfare service involvement, and for children who remained at home but received ongoing support services compared to those placed in out-of-home care. Other variables noted in this study likely to link to progress were having a positive home environment and being female. Children who had experienced physical neglect or physical abuse were less likely to show positive change.

It is beyond the scope of this study to determine the level of current risk to the children or to question whether or not they should be in their parents’ care. In addition, the question regarding whether or not the child was currently living in a high, medium or low verbal environment was insufficiently answered so could not be used to aid the analysis of the child’s exposure to sufficient language within their home environment.

A possible contributing factor to children who are living with their parents having more speech and language problems is reduced access to support services focusing on the child’s developmental needs, compared to children in out-of-home care. This was noted independently as an issue in one of the interviews reported in this study by the home-based care manager. As one example, this study found that children in out-of-home care were more likely to have had a hearing test in the previous twelve months compared to children living with their parents.

The Victorian Government’s Best Interests Framework for Children highlights the importance of meeting the children’s developmental needs including supporting families in providing an enriched and safe environment and helping them to recover from the harms already occurred (Miller, 2012). It is an important and positive reform to focus on the development and health needs of children in out-of-home care, many of whom have for too long not been given sufficient attention. However, this should not be at the cost of failing to see the needs of children who have been identified as at-risk and who have continued to live with their family. Although they have access to family services focusing on preventing further abuse and/or neglect and thereby preventing placement, most of these services are not funded to provide programs to redress the developmental harms that have already occurred.

7.5 Practitioners’ ability to identify children who would benefit from a speech, language or hearing assessment

In this study, there are two key parts to the question of whether practitioners who were not speech pathologists can identify whether a child has a speech, language or hearing problem and therefore would benefit from an assessment. The first part is their response to a question soliciting their general opinion. The second part is analysis of their more detailed responses in the Small Talk tool.

Practitioners’ general opinion of children’s communication A clear finding from this study was that practitioners who are experienced working with children but not as speech pathologists may recognise some children who have a speech, language or hearing problem, and some types of problems more than others, but not at a rate sufficient to reliably identify children within this high-risk population. Practitioners who completed the Small Talk tool did so in the context of a specific speech and language research project and so their attention was focused on the child’s communication ability. Through this study, almost all referrers had participated in a training session about speech and language development, the impact of developmental delays, and the role of trauma in communication development. The question regarding their general opinion of whether or not the child had a hearing, speech or language problem was placed at the end of the Small Talk tool. Therefore, although it was not intended as a summation, it is probable the answer to this question would have been influenced in part by the ‘priming effect’ of earlier items. Despite this greater input than usually available, an insufficient number were able to accurately judge which children did or did not have such problems.

It is not surprising that speech pathologists are more able to identify communication problems than practitioners from other disciplines; however, it remains a dilemma given how few children who are clients of child protection (whether living at home or in out-of-home care) are likely to access assessments by speech pathologists or audiologists.

This is an important finding, because if these results are generalised to the broader population of children who have experienced abuse and/or neglect, the implication is that many children who need speech pathology services or interventions for hearing problems will not be referred to the requisite services. This finding indicates that speech, language and hearing difficulties are not easily recognised by practitioners who are not speech pathologists, and hence the opportunity for children to receive specific and timely assessment and intervention is diminished.

The Small Talk tool

Analysis of the Small Talk tool’s domains compared to the speech pathologists’ assessments supports the proposition that the use of the tool enables greater ability to identify children with speech, language or hearing problems, than simply relying on the practitioners’ general opinion. Nonetheless, the analysis showed that although there was a similarity in the percentage of children who had two or more domains of concern in communication between the speech pathologist and the Small Talk tool results, the detail showed considerable variation.

In looking at the individual domains in this tool, practitioners found it difficult to identify concerns, particularly in the areas of expressive narratives, voice, receptive language and pragmatics and were likely to over-identify problems in speech and fluency. An example of the implications of this in practice is being able to recognise if a child has difficulties in providing a coherent narrative if they are being interviewed as part of a child protection investigation. This concern is also noted in other research (Snow, Powell, & Murphett, 2009) and was mentioned by the home-based care manager as one of her learnings from the Small Talk project. In other words, a child’s difficulty in making disclosures may be
exacerbated by an underlying and possibly undetected communication difficulty in addition to the emotionally laden context of making disclosures about abuse.

According to the analysis of sensitivity and specificity, the Small Talk tool was acceptably sensitive. In other words, it was reasonably able to identify those children who would benefit from a speech and language assessment. However, it was too low in specificity and so could lead to referrals of too many children who did not have such problems. This could lead to unnecessary time and resources being spent in a time and resource poor system. However, as Glascoe (2001) concluded, an overly broad referral to a speech pathologist for an already vulnerable population may not actually be a problem, especially if it leads to the parents or carers being provided with useful suggestions to maximise the child’s communication skills.

More extensive training and education in identifying speech and language problems for practitioners working with this vulnerable group would be beneficial. This study also reinforces the need for children involved with child protection, whether they are in out-of-home care or with their parents, to be routinely considered in terms of possibility of a referral for assessment of speech and language functioning. However, as noted later, the study’s findings reinforce the need for a routine hearing screen for all children involved in the child protection system that is not reliant on the worker’s consideration of whether or not the child has a hearing problem.

7.6 A problem-identification tool or something else

The original aim for the Small Talk project was to explore whether or not a screening tool for speech, language and hearing problems for children in the protection and care system was an appropriate means of identifying which children would benefit from a referral to a speech pathologist. However, it became clear through the review of the literature that the concept of a screening tool is open to various interpretations about its purpose, such as a potential confusion with universal screening tools. As such, the Small Talk tool became more aptly conceptualised as a problem-identification tool.

The research question was, ‘Is there a tool, such as the Small Talk tool, that would assist practitioners who are not speech pathologists to identify which of the children who have experience of abuse and/or neglect would benefit from a referral to a speech pathologist or an audiologist for an assessment and timely intervention to redress hearing, speech and language problems?’

Cautions with relying on a screening or problem-identification tool

Although the Small Talk tool does not aim to be a universal screening tool, some of the problems associated with screening tools for speech and language are still relevant. First, speech and language are multi-dimensional phenomena and so it is not possible to fully characterise children on a single dimension (Centre for Community Child Health, 2002). This caution was supported through this study with the wide-ranging results from one communication domain to another.

Second, there is a wide variation in the speed and quality of language development for younger children, which means that children may move in and out of being assessed as having a language problem (Centre for Community Child Health, 2002). The Small Talk study aimed to reduce this factor by not including children younger than four years of age; however, it may still have been an issue for some children.

Third, and related to the previous point, as human development is not linear, it is natural and healthy for children to regress in different aspects of their development including speech and language as part of their process of mastering new developmental stages (Centre for Community Child Health, 2002). This can complicate one-off assessments. In this study all the children had been known by the referrers for an average of six months. The speech pathologist’s assessments typically took three sessions. On the other hand there was missing information in response to the questions about whether any deterioration in the child’s communication had been noted. This remains an important area for additional study.

Finally, children’s language and other aspects of development and functioning can be affected by their ‘state of arousal’ at a particular point in time. A child under stress will have greater difficulties completing tests and assessments than a child not under stress. For example, when feeling under threat they may be more focussed on nonverbal cues than verbal communication (Perry, Pollard, Blakley, Baker, & Vigilante, 1995). This may also be a feature for the overall higher prevalence rate of communication problems for children with histories of child maltreatment who may be sensitised (in contrast to desensitised) to threat and to formal assessments.

What does this study tell us about what may be useful in a tool or a guide?

The analysis suggests that using a problem-identification tool could provide assistance to practitioners working with children who have been subjected to abuse and/or neglect to identify communication problems, rather than relying on their general opinion. However, an over-reliance on such a tool is likely to lead to some children not being identified with a problem who do in fact have communication difficulties (false negatives) and overly identifying children with a problem, who do not have such difficulties (false positives). This study was limited in how far it could analyse these results due to the very small numbers of children who did not have a confirmed hearing, speech and language problem according to the speech pathologist.

It would seem that although there are some potential costs associated for the child and the system if children are unnecessarily referred for speech and language assessments, there is good reason to take a cautious and inclusive approach with this population. As mentioned by Glascoe (2001), it is possible that vulnerable children, even if they do not have a confirmed communication problem, could benefit from a speech and language assessment. For example, a positive contribution may be to provide suggestions to the parents, carers and teachers about communication strategies within the home and school environment. Such advice could also be useful to child protection workers and clinicians who are often trying to understand the ‘story’ the child is trying to tell.

Overall, the analysis points to the value of having a tool to aid practitioners who are not speech pathologists to know what information to gather and observations to make in
order to understand more about a child’s capacity for communication. However, the analysis also suggests that the Small Talk tool should be revised to focus on items that were more likely to distinguish between children who would benefit from a speech and language assessment and those who would not.

The next question therefore is whether to revise the Small Talk tool (and the SBQ) or to use another tool already available. An ongoing review of the literature will continue to scan the field for other appropriate choices, but it would seem appropriate to continue the development of the Small Talk tool incorporating the findings from this study.

Suggestions for a revised Small Talk tool and guide

In general, the recommendations for the next iteration of the Small Talk tool is that it is revised to contain only the 14 items shown to correlate with the speech pathologist’s assessment and that it be used in conjunction with a revised SBQ. Moreover, the use of the tool should be in the context of education in speech and language development for the workforce and the future workforce; that is, students in speech pathology, social work, psychology, teaching and other relevant professions.

Hearing

As hearing problems appeared to be one of the most difficult aspects for practitioners to identify, yet highly prevalent in this sample, it is strongly recommended that there be a mandatory hearing test for children in the child protection population at identified intervals. A routine system needs to include children in the child protection system who live at home with their parents as well as those in out-of-home care. Although the current policy emphasis in Victoria is for children entering care, especially those entering for the first time, this study shows that children may have these difficulties and have them unrecognised at multiple points along the child protection continuum. Given the likelihood that many of these children have had multiple schools, this cautions against a sole reliance on hearing tests through the child’s school.

As such, instead of having a question regarding whether or not the child has a hearing problem, it is recommended that the Small Talk tool include the question currently in the SBQ about when the child last had a hearing test and what the result was. A hearing test should be organised if the practitioner completing the tool does not know the answer to this question; if the hearing test was more than 12 months ago; or if concerns were identified in that test that require further clarity. This could occur through an audiologist, general practitioner, speech pathologist or a hearing assessment service.

Other questions to remove from the Small Talk tool

Although the conclusion is that there appears to be a value in a problem-identification tool, which was reinforced by the experience of the speech pathologist in the project, it was concluded that such a tool would benefit by being shorter and more focused on questions that a practitioner who is not a speech pathologist could readily verify and answer. For example, although the questions regarding whether there was any deterioration in the child’s communication were an important area for speech pathologists to take into consideration, not enough information was available from this sample to be useful. It is therefore recommended that the section consisting of questions relating to deterioration over time be removed from the tool.

Analysis of the items in the Small Talk tool showed that some items provided a poor ability to discriminate between children who would benefit from a speech and language assessment and those who would not. Other items had a higher number of ‘don’t knows’. These were either due to the referrer not having this type of information or, as they were not a speech pathologist, not understanding how to gather that type of information. It was recommended that these items be removed and a briefer version of the Small Talk tool be created. Thus a 14-item version of the Small Talk tool was developed and analysed in terms of the data from those 14 questions. An improved sensitivity and specificity was found with this briefer tool although the specificity was still too low to be fully acceptable. The 14-item abbreviated version of the Small Talk tool is shown in Appendix 9.

7.7 Utility of the Supplementary Background Questionnaire (SBQ)

In addition to the data extracted from the SBQ for research purposes, consideration was given to its utility in providing the speech pathologists with information that would not otherwise have been available to them. Unfortunately, the assumption that there would be significant gaps in the information available to the speech pathologists about these children, such as their history, was confirmed. The SBQ and the analysis confirmed this absence of knowledge rather than the SBQ being an unpredictable method for gathering information. Despite the absence of some information, the speech pathologist described the SBQ as a valuable tool in the assessment and engagement process, especially given the chaotic situations many of these children were in. A qualitative study may be useful to explore what would be more useful strategies to gather such developmental knowledge about children in out-of-home care.

From a data collection perspective, a standardised measure such as Parents Evaluation of Developmental Status (PEDS) (Brothers, Glascoe, & Robertshaw, 2008) or the Ages and Stages Questionnaire – Third Edition (ASQ-3E) may have been more useful, especially in gathering information about the children’s behaviour and development. However, there would still have been some items, such as the child’s experience of adversity, living situation, school and in particular some of the Aboriginal-specific questions, that would not have been gathered without the SBQ. It is therefore recommended that for future research a briefer version of the SBQ be developed and added to the Small Talk tool. As such, these two documents would become one and together would not be more than two pages. It is also recommended that this tool be accompanied by a standardised measure for children’s development and behavioural concerns. In other words there would continue to be two documents: the new version of the Small Talk tool that includes the 14-items and some of the SBQ items and a standardised measure of the child’s development.

7.8 The challenges in children being formally assessed

Adding to the difficulties for children in need of speech pathology services was the experience of how problematic
it was for some children and their parents, carers or workers to make and attend appointments. Supporting the research evidence that children who have experienced abuse and/or neglect have higher rates of communication difficulty, in the introduction phase of this project, many practitioners recognised that there were many children about whom they were concerned. However, this did not translate to the expected number of referrals into the project.

Both at the time of initial contact and training, and in follow-up contact, many practitioners were positive and supportive of the project and acknowledged its benefits. The difficulties experienced with the referral process were broad and reflect the ongoing difficulties faced by the children, and their families and carers.

Some of the difficulties that led to potential referrals to the Small Talk project not proceeding included:

- Children who were too unsettled to feel safe or to focus in an assessment situation. Examples of this included a child’s recent change of placement or a recent return to the family home.
- Children who had recently undergone other testing or assessment – such as child protection interviews, medical examinations or educational assessments. In these situations a judgement was made that the children should not participate in another assessment so soon afterwards.
- Some referrals did not proceed due to difficulties in obtaining consent from the guardian, especially when the guardianship remained with the parents when the child was in out-of-home care. Some parents were possibly wary of assessments and how the information may be used (e.g. in court) and so chose not to provide consent for the child to be assessed.
- Parents or carers who were overburdened and overwhelmed with other priorities and not able to commit to participate in three sessions.
- In some of the potential referrals, there were competing priorities at the time for the practitioners, carers and children, such as ensuring that parent-child access visits occurred, or working with carers and parents to resolve difficulties so the placement remained stable.

The above findings suggest that even when children are identified as needing assessment or intervention, there are often structural factors that are problematic and impede practitioners, parents and carers in organising and committing to a child’s attendance at appointments.

7.9 The benefits of multidisciplinary work

This study included an education strategy for the various workforces involved in working with children in child protection, out-of-home care, family services and Aboriginal services as well as speech pathologists. There was also an education strategy for undergraduate students. The combination of training on the developmental consequences of abuse and neglect, the speech and language needs, and indicators of problems for children and culturally informed approaches to assessment was consistently well received.

Practitioners (potential referrers) who attended the training sessions reported an increased knowledge of communication development and difficulties. The speech pathologists involved in, or who attended presentations about the project, noted their increased understanding of children who had suffered trauma and neglect. Being able to recognise and anticipate the difficulties that children who have been exposed to trauma may present, allowed:

- Assessment sessions to be planned more effectively.
- Responses to otherwise unexpected answers or behaviours to be more attuned to the needs of the child.
- Interactions with carers and parents to be delivered in a way that was sensitive to their needs, and recommendations written and targeted to what was possible for the child and the situation.

The integrated and collaborative approach to training of practitioners and students was seen as a strong foundation to enhance shared understanding of these children’s developmental needs. The overarching premise of the study was the importance for children who have been subjected to abuse and/or neglect to have access to services that can meet their wide-ranging needs, such as safety from harm, positive relationships with others and to enhance their capacity to receive and express their thoughts and feelings through communication.

The multidisciplinary research team also took us to places in understanding and knowledge that we were unlikely to find as a single discipline. The integration of knowledge of development, trauma, behaviour and speech and language resulted in an understanding larger than the sum of the individual parts. Similarly the multidisciplinary membership of the research team opened up greater opportunities for translational research as well as continuing research.
Chapter 8: Further Research

The Small Talk study has identified a number of recommended areas for further research and action.

1) The study has provided positive findings in relation to the potential value of a revised Small Talk tool to be a guide to identify the need of children who have experienced abuse and/or neglect to have a speech, language and hearing assessment. The revised tool which contains only those items found to be significantly associated with the findings of the speech pathologist’s assessment needs to be further tested. It is important to note that the tool is focused on four to eight year olds and more research needs to occur with this age group as well as considering whether the tool could be adapted to cover other age groups.

2) The study identified the high proportion of speech, language and hearing difficulties for the children in this sample who have experienced abuse and/or neglect. This finding supports previous studies in relation to children who have experienced trauma. With this evidence it is imperative that action be taken to find ways to ensure that these difficulties are identified and intervention occurs in a timely manner to address the difficulties. Further research should occur to determine whether such action makes a difference, and if so, in what way(s). This highlights the importance of translating the results of this study into practice as soon as further exploration of the tool and its reliability can be undertaken.

3) The study has provided a resource to assist in collecting information about the child’s developmental history which may not be known by the carer when the child is in out-of-home care and yet is required by the speech pathologist to make an accurate assessment. The SBQ provides a structure to collect this information. In the trialling of the revised Small Talk tool it is recommended that a reduced number of questions from the SBQ should be included as useful information for the speech pathologist if the child attends for an assessment. However, it is also recommended that a standardised measure such as PEDS or ASQ be completed. This would be both useful for any subsequent assessment and for research purposes.

4) It would be beneficial for further research to include a socio-economically matched comparison group of children who were not known to child protection to ascertain the prevalence of problems for children in and out of the system and to test the revised tool with different populations. For example, a local primary school could be an option.

5) Further work to ensure the cultural appropriateness of the tool for Aboriginal and culturally and linguistically diverse children will also be important and this should be tested through further study. For example, it would be interesting and valuable to see whether non-Aboriginal practitioners of any discipline are able to determine if a child is using Aboriginal English, especially within an urban and rural context.

6) Given the amount of missing information about the children’s communication and also other developmental milestones, it would be useful to explore further how to facilitate greater access to these types of information. The use of Looking After Children documents and other approaches that focus on the importance of record keeping are one area. The broader question as to what gets in the way of this knowledge being available would also be interesting for further study.

7) This study demonstrated that no tool would be sufficient without the education of the relevant workforces involved. This would include social workers, psychologists, workers in Aboriginal services and carers. Moreover, although teachers were not included in this study it is suggested that they be included in receiving professional development in relation to speech and language development. For each of these disciplines, an under-graduate educational strategy is also worth exploring. Further research regarding the different discipline’s understanding and use of communication may provide interesting insights into how to work more collaboratively from a multidisciplinary perspective.

8) Similarly, speech pathologists need access to professional development regarding the child protection and out-of-home care system and the implications of trauma and neglect on children’s communication development and functioning. The study adds to knowledge about an effective approach to speech pathology assessment with children who have experienced abuse and/or neglect. For example, the speech pathologist found that an average of three sessions was required to assess the child in contrast to the two sessions normally required. Having knowledge of trauma and the impact of abuse was of assistance to the speech pathologist. It is suggested that this approach to assessment be further studied and the findings utilised in training of speech pathologists.

9) Children who had experienced abuse and/or neglect and who were living with their parents had a high incidence of speech and language difficulties. There needs to be more investigation of this group of children and their experiences in relation to speech and language development and support for positive development. In this study it was not known how long these children had been involved in the protection and care system. There was also insufficient information recorded about their actual experiences of maltreatment and their age when these experiences began. These questions point to areas of potential further research.

10) Further research would be valuable on the developmental needs of children who have been substantiated clients of child protection but who are now living with their parents. This is almost an invisible group in the current system that warrants greater efforts to see their situation and determine their needs for specific services. Comparison studies about the health and wellbeing of children in the child protection system who are at home compared to those in care would be a useful contribution to our practice and service planning.

11) The findings of this research support other studies reported in the literature review on the association between abuse and/or neglect and speech and language difficulties. What is not known is what factor(s) underlie this association. Knowledge of the contributory factors will provide a greater opportunity to prevent or intervene early when difficulties arise. Recent neurobiological research is important in increasing understanding of this phenomenon and more research is required.
Chapter 9: Limitations of the Study

This study focused on a group of children for whom there are often gaps in knowledge about their developmental history, their families, their abuse and/or neglect history, and placement history. This led to one of the limitations in the study, which is the absence of information.

Although the project developed the SBQ to reduce the amount of missing information, there remained a considerable amount of information that was not available about these children. This limited the interpretations that could be made about the children and the impact of abuse and/or neglect on their development and communication. However, this did not appear to prevent identification of the children’s speech and language difficulties by the speech pathologist. Moreover, the study did not collect sufficient information to distinguish between types of home-based care (i.e. kinship care or foster care). Thus the only differentiation that could be made was whether children lived with their parents or in some form of out-of-home care.

Due to some limitations within the SBQ itself, in terms of some of the wording of questions and the fact that the data was not able to be compared with the general population, analysis to compare this population with other children was restricted. Using a standardised developmental checklist or measure would assist this process in the future (Oberklaid & Drever, 2011).

The dearth of true negatives in this sample confounded some of the analysis and limited some of the conclusions regarding the Small Talk tool. Given that the focus of this study was to test the ability of the Small Talk tool to guide which children should be referred to speech pathologists or audiologists, the large proportion of children in this study that was found to need such referrals limited the ability to statistically test the specificity of the tool.

The sample included data from three different versions of the Small Talk tool. However, as described in the Methodology section, most of these changes were minor and unlikely to have changed the participants’ interpretation of the item. The only item where an extra option was added (whether the voice was nasal) was not analysed as only a small number of tools had this option selected. A decision was made by the project’s Working Group that the changes between the versions were not sufficiently substantial to warrant excluding the earlier versions of the tool from the data analysis.

Although efforts had been made to include children who did not have communication difficulties, this was not reflected in the final sample. The original design had aimed to engage more children to participate in the study (n=150); however, due to the difficulties already mentioned for workers being able to follow through on referrals for speech and language assessments, the sample size was smaller than had been anticipated (n=65). A larger sample size would have facilitated more statistical analysis than was possible.

The absence of a comparison group of children who are not involved in the child protection system is also a limitation.
Chapter 10: Conclusion

The Small Talk study aimed to improve the lives of children who have experienced abuse and/or neglect and who may not have had their communication needs recognised or responded to in a timely way. The study sought to increase the ability for practitioners in out-of-home care, family services, Aboriginal services, child protection and therapeutic services to identify children who have experienced abuse and/or neglect who would benefit from a referral to redress speech, language or hearing difficulties. The approach was to develop and trial a tool which would assist in recognising what information is important to identify speech, language and hearing functioning and needs. The study also explored whether there were particular difficulties in relation to communication-related needs for Aboriginal children given their over-representation in the child protection and out-of-home care population. Finally, it drew upon a multidisciplinary approach to enhance responses to this complex issue and to provide education to the various workforces and students of different disciplines. The implications of studies such as this have the potential to change the developmental trajectory of vulnerable children.

The Small Talk study aimed to contribute to an area of childhood development that is given insufficient attention despite its intrinsic importance; that is, a child’s ability to communicate with others. Much has been learnt; however, much is still unknown.

The children in this study had experienced multiple risks and multiple harms. All of these children were at risk of abuse and/or neglect. They were either separated from their families, or at risk of being separated. Most had been at risk of not having people in their lives who can tell the stories about when they first said ‘mum’ or when they took their first step. Most had been at risk of not having lags in their development noticed or understood. Most had been at risk of not being able to communicate with others or understand what others have tried to communicate to them. With each of these risks are compounding psychological, relational, physical and developmental harms that must be recognised in order to be attended to.

An area of developing research relevant to this study is the application of neuroscience to provide a greater understanding of the impact of abuse and/or neglect on brain development and functioning, including the impact on communication. This type of research can assist in explaining how abuse and neglect affects the developing brain, such as the development of speech and language. As this knowledge develops, more options for early intervention may be identified.

This study shows promising results in terms of a problem-identification tool that increases the ability of practitioners who are not speech pathologists to recognise when children may benefit from a speech, language and hearing assessment. Although there is further work to be done before the tool would have sufficient specificity, even in its current state it is acceptably sensitive and certainly more so than leaving it to a practitioners’ general opinion. Caution is required and it is important not to assume that any tool can, without error, identify communication difficulties in children traumatised by abuse or neglect. Nor would a tool supplant the need for a speech pathologist to provide more accurate and detailed assessments and interventions. However, we have to devise ways of improving these vulnerable children’s access to such services.

The findings regarding Aboriginal children were of particular interest. The Aboriginal children in this study were at greater risk of hearing, speech and language problems than reported in most other studies. However, within this sample the non-Aboriginal children were equally at high risk. From a different aspect, this study incorporated a culturally informed approach from the outset through the governance of the project, the design of the tool and guidance through the assessment process. The study demonstrated that it is possible to develop a tool which can include a culturally informed approach which allows the tool to be used appropriately with Aboriginal children in the first instance, not as an adaptation. More work is still needed as this is an ongoing process of working towards rather than achieving cultural competence.

The study has identified a way forward through a revision of the Small Talk tool that is ready to be trialled further and provides a hopeful pathway to achieving earlier intervention for vulnerable children. A questionnaire that provides some developmental information to assist the speech pathology assessment was also considered valuable to be used in conjunction with the Small Talk tool. This questionnaire along with a standardised developmental measure can provide a way to share information often not held by one person for these children, but nevertheless required to assist the assessment process.

Integral to the multidisciplinary approach is mutually informed education and cross-fertilisation and integration of knowledge across the relevant fields. Only a multidisciplinary approach can address the multiplicity of complex needs for children who have experienced harm from within their family. As communication is an essential component of learning, healing and relationships, it is imperative that efforts continue through every relevant discipline to give children optimal opportunities to communicate with the world in which they live.

If trauma isolates, then recovery is through relationship (Herman, 1997). Helping a child to hear, chatter, ponder out loud, ask ‘why’ and play is a part of the ordinary life that many children who have experienced the trauma of abuse and neglect do not get to enjoy to the fullest extent. Helping a child to communicate is to help the child more fully participate in the social world in which they live. Whether we are parents, carers, teachers, therapists, case managers or friends we all benefit from giving voice to the child.
References


National Aboriginal Community Controlled Health Organisation, & Royal Australian College of General Practitioners (2005). *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people.* South Melbourne, Australia: Royal Australian College of General Practitioners.


Appendix 1 — Agencies Participating in the Small Talk Project

- Anchor Foster Care
- Anglicare Victoria
- Baptcare
- Berry Street (Northern Home Based Care)
- Berry Street (Hume region)
- Berry Street Take Two program
- Bethany Family Services
- Department of Human Services (Child Protection)
- Kildonan Family Services
- MacKillop Family Services
- Oz Child Southern
- Salvation Army Westcare
- Victorian Aboriginal Child Care Agency (VACCA)
Appendix 2 — Glossary of Key Terms and Acronyms

Aboriginality
The most generally accepted definition within Aboriginal and Torres Strait Islander communities is that an Aboriginal or Torres Strait Islander person is someone who identifies as Aboriginal or Torres Strait Islander, has Aboriginal or Torres Strait Islander blood connections and is accepted by the Aboriginal or Torres Strait Islander community as Aboriginal or Torres Strait Islander.

Aboriginal or Torres Strait Islander languages
Aboriginal and Torres Strait Islander languages are diverse, specific to traditional tribes or clans, inseparable from culture and play a significant role in the wellbeing of young indigenous people (House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, 2012, 1.6). People who identify themselves as either Aboriginal or Torres Strait Islander may speak a traditional tribal language as well as a local form of Aboriginal English which has its own characteristics. In some parts of Australia, Standard Australian English may be a third or fourth language for Aboriginal or Torres Strait Islander children. In Victoria, like much of Australia, invasion and subsequent policies of forced removal and assimilation have resulted in decimation of many Aboriginal languages and English has replaced traditional Aboriginal languages once common throughout the country. Fortunately, there are many Aboriginal language revival programs, resources and projects occurring across the country which aim to ensure that Traditional Owner groups are able to revive and maintain their language for future generations.

Child Protection Services
Functions of government that receive and assess allegations of child abuse and neglect, and/or harm to children and young people, provide and refer clients to family support and other relevant services, and intervene to protect children (SCRGSP, 2015).

Community Service Organisations (CSOs)
A non-government organisation registered and funded by the Department of Human Services to deliver community-based child and family services and/or home-based care services. The CSO has the responsibility for recruiting, assessing, training, supervising and supporting home-based carers. Registered services providers are required to demonstrate compliance with DHS Standards (DHS, 2014).

Core Language Score (CLS)
A component of the CELF-4. It is a measure of general language ability that quantifies a child or young person’s overall language performance and is used to make decisions about the presence or absence of a language disorder. It is derived by summing the scaled scores from the subtests that best discriminate typical language performance from disordered language performance (PsychCorp, 2008).

CELF-4 Australian
The Clinical Evaluation of Language Fundamentals — Fourth Edition, Australian Standardised Edition (CELF–4 Australian) is an individually administered test for determining if a child or young person (ages 5 to 21 years) has a language disorder or delay. CELF–4 Australian assesses four aspects of language, morphology and syntax, semantics, pragmatics and phonological awareness and can be administered in 30-60 minutes (Semel, Wiig & Secord, 2006). The CELF–4 Australian tool was used by speech pathologists in the Small Talk project for assessment of participants’ language.

CELF Preschool 2 Australian
The Clinical Evaluation of Language Fundamentals (CELF P2) is used to evaluate those aspects of language necessary for preschool children to make the transition to the classroom. The CELF P2 measures a broad range of language skills for children aged 3-6 years.

Culturally and linguistically diverse heritage
Australia has a culturally and linguistically diverse population, with many residents born overseas and originating from non-English speaking countries. Providing health services within a multicultural context requires understanding of the differences that arise through cultural and linguistic diversity. Many barriers prevent people from culturally and linguistically diverse backgrounds, particularly those from non-English speaking backgrounds, from accessing services that are culturally safe and appropriate (Rickwood, 2006). A person’s language and culture may be different; for example, a person may identify primarily with Egyptian cultural background but speak Arabic. The actual language that is spoken by children from culturally and linguistically diverse backgrounds is an important element to consider in assessing communication and plays a key role in the child’s cultural resilience.

Department of Human Services (DHS) Victoria
The Department of Human Services is a Victorian Government department that plans, funds and delivers community and housing services in line with the government’s policies. Note: The department name is to change to Department of Health and Human Service (DHHS) in January 2015 (State of Victoria, 2014).

Expressive language
The ability to convey thoughts, feelings and ideas through spoken or written words. The emphasis in the Small Talk project, especially given the young age of the children, is on oral language.

Oral narrative
The ability to tell a logical sequence of ideas in sentences that convey a story to the listener (Speech Therapy Resources, 2014).

Out-of-Home Care (OOHC)
Out-of-home care is the term used by the Department of Human Services Victoria to describe the placement of children away from their parents, due to concern that they are at risk of significant harm. The purpose of out-of-
home care is to provide these children with a placement that ensures their safety, enhances their development and achieves stability. Care teams comprised of child protection practitioners, community services organisation staff, educators and other professionals take responsibility for decision making in collaboration with children and their families (DHS 2012c).

**Phonological awareness**

Recognising and manipulating different sounds in words which occurs in pre-literacy, encompasses skills at a sentence, word and syllable level such as identifying rhyming words and sound awareness. It includes the ability to discriminate, identify and manipulate sounds in words (Owens, 2012). A typically developing 4-year old-child can discriminate words in sentences, and syllables in words, and be familiar with rhyme. They will usually have an awareness of books and print and have some knowledge of the alphabet (Hulitt, Howard, & Fahey, 2010). Once at school children learn to recognise letter names and the sounds as they progress into middle school, and reading becomes more fluent as word recognition improves.

**Pragmatics**

The rules of communicating with others relates to the ability to use language appropriately, including the quality and quantity and relevance of information provided. It requires awareness of the context and appropriate use of non-verbal behaviours such as body language, tone of voice, volume, intonation eye contact and facial expression. In addition, pragmatics covers conversational skills such as turn-taking and other social uses of language (Speech Therapy Resources, 2014).

**Receptive language**

Understanding words and sentences within language, the ability to understand what is being said. This requires attentiveness, concentration, comprehension and timely processing of information. This is where the child’s ability to hear auditory signals is key. Integral to a child’s ability to understand and respond to communication is his or her ability to hear clearly and to process those sounds so they make sense, referred to as auditory processing.

**Semantics**

The meanings of words and phrases, vocabulary knowledge and the relationships between words (James Cook University, 2013).

**Speech**

Relates to sounds used to convey language orally, including fluency and voice characteristics (such as pitch and volume) and requires a coordination of breathing, vocal chords and the muscles of the mouth and tongue.

**Syntax**

The rules that govern the way that words can be combined to form phrases and sentences within a given language. Syntax includes word structure and the relationships between words (James Cook University, 2013).

**Therapeutic Services**

Therapeutic services provided by CSOs like Berry Street, aim to provide reparative experiences that promote healing and recovery for children and families who have experienced abuse and neglect. In therapeutic care foster carers and residential carers are trained and supported to provide safe, nurturing relationships, stability and care that integrates the child’s experience and promotes healthy development. Rather than providing basic care and managing behaviour, therapeutic care emphasises relationships and considers and responds to the child’s underlying needs.

A thorough biopsychosocial assessment provides an understanding of the child’s developmental history and needs from which an intervention plan is formed. Carers are well trained and supported by a Senior Clinician who provides intensive support to carers and children. Care Teams are an important aspect of therapeutic care helping to provide a ‘therapeutic web’ in the system around the child (Berry Street, 2010).

**Voice**

Voice adds a unique quality to a person’s speech that can be recognised by family and friends over distance or on the telephone. Voice can add an element of emotion to a speaker’s message that sometimes words fail to convey (Prakup & Angell, 2009).
Appendix 3 — The Small Talk Tool (Version 3)

<table>
<thead>
<tr>
<th>How to collect information on how the child uses and understands language</th>
</tr>
</thead>
<tbody>
<tr>
<td>In order to screen to see if a child has a communication problem, we need to obtain an impression of how the child speaks and understands. For example, you can listen to the child’s voice, fluency and pronunciation and decide if each of these areas appear to be similar to other children of the same age. You can also take note of how the child constructs sentences and if he/she responds appropriately to questions. Additionally you can observe whether the child can start and continue a conversation and use nonverbal communication (e.g. gestures/facial expressions) well. Finally you can observe whether the child is able to find and use words and order sentences in a way that makes sense. An accurate picture of how the child usually talks is likely to emerge if he/she is comfortable, relaxed and interested and also if the person gathering this information from the child is relaxed.</td>
</tr>
<tr>
<td>Talk to the child as you normally would. Keep the number of questions you ask, and the comments you make, about the same. Use conversational starters like:</td>
</tr>
<tr>
<td>‘Let’s talk about what you see in this picture of people in a park’</td>
</tr>
<tr>
<td>‘Tell me about your weekend’</td>
</tr>
<tr>
<td>‘My favourite food is pizza’</td>
</tr>
<tr>
<td>‘Where were you yesterday?’</td>
</tr>
<tr>
<td>‘You ask me some questions’</td>
</tr>
<tr>
<td>Use the screening tool to help you think about this child’s communication. For each question:</td>
</tr>
<tr>
<td><strong>YES</strong> = you have observed the child doing this on occasion, and/or other adults (parents, carers teachers) have reported to you they have observed this behaviour</td>
</tr>
<tr>
<td><strong>NO</strong> = you have never observed the child doing this, and have heard no reports of this</td>
</tr>
<tr>
<td>Thank you for your time in completing all sections of the screening tool.</td>
</tr>
</tbody>
</table>

**Note:**

- Due to the research component of this project, the screening tool will not be sighted as part of the full speech therapy or audiology assessment
- Only copies of the General Information are provided to the speech pathologist/s who will be conducting the full assessment
- All documents are sent to the Small Talk Project as per the front page, and the Small Talk team will separate out the forms.
### Changes in language, speech and hearing

<table>
<thead>
<tr>
<th>C.1</th>
<th>Has there been deterioration in language, speech and/or hearing? If no go to Q. C.5</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

| Since when has deterioration occurred/been noticed? |

<table>
<thead>
<tr>
<th>C.2</th>
<th>Tick any of the following boxes that describe the child. In terms of this deterioration, the child....</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>Responds less</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has started to use long pauses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has increased use of baby talk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has started interrupting others during conversation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Uses fewer words</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has stopped using a large and varied vocabulary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Appears to have increased difficulty in hearing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Responds less non-verbally</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has reduced sentence length</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has started talking softly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Has started stuttering</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Uses less gestures</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Appears less able to be understood</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C.3</th>
<th>Do any of these behaviours reflect a change in the child’s life?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

| If known, please outline the event/s |

<table>
<thead>
<tr>
<th>C.4</th>
<th>Have there been improvements? (Please comment if yes)</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

| The following two sections involve information about the child’s current voice and fluency. As the child speaks, the worker should listen carefully to his/her voice and then to his/her fluency, so as to get a clear impression of what you think about these aspects of communication. |

### Child’s voice

<table>
<thead>
<tr>
<th>C.5</th>
<th>Is the child’s voice hoarse?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.6</th>
<th>Tick any of the following boxes that apply. Is the child’s voice ...</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>□</td>
<td>Too loud</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Too soft</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Too high</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Too low</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>Nasal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□</td>
<td>None of these</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fluency

<table>
<thead>
<tr>
<th>C.7</th>
<th>Does the child struggle to start speaking?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.8</th>
<th>Does the child speak very quickly and stumble over words?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.9</th>
<th>Does the child stutter more than other children his/her age?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

### Understanding Sentences and Vocabulary

<table>
<thead>
<tr>
<th>C.10</th>
<th>Does the child appear to hear what is said to him/her?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.11</th>
<th>Does the child understand simple questions and instructions (e.g. ‘what colour is your shirt’)?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.12</th>
<th>Does the child understand and respond appropriately to complex instructions (e.g. ‘before you eat your food, wash your hands’)?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.13</th>
<th>Does the child understand words like “if” (e.g. ‘if you’re a boy, clap your hands’)?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>C.14</th>
<th>Does the child understand words like “in front of,” “inside of,” or, “behind” (e.g. ‘what picture is in front of me’)?</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expression</strong></td>
<td><strong>Yes</strong></td>
<td><strong>No</strong></td>
<td><strong>Don’t know</strong></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>---------</td>
<td>--------</td>
<td>---------------</td>
<td></td>
</tr>
<tr>
<td>C.15 Does the child have the words to say what he/she wants?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.16 Can the child make their needs known to others in his/her cultural community?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.17 Can the child make long sentences?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.18 Can the child use words to start an activity (e.g. ‘let’s play’)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.19 Can the child ask questions?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.20 Does the child jumble his/her words?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.21 Does the child choose correct words and put them in the right order in sentences (e.g. ‘not him go’ instead of ‘she didn’t go’)?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Having conversations</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
<th><strong>Don’t know</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.22 Do the child’s answers match the questions of the person he/she is talking to?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.23 Can the child start a conversation?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.24 Can the child continue the topic of conversation?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Relating or talking about events</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
<th><strong>Don’t know</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.25 Does what the child tells you make sense?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.26 Can the child tell a story that you can follow?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Nonverbal communication</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
<th><strong>Don’t know</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.27 Does the child use hands and/or body movement to help communicate?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.28 Does the child use facial expressions to help communicate?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.29 Does the child focus on you during a conversation?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Speech sounds</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
<th><strong>Don’t know</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.30 Is the child’s speech difficult to understand?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.31 Does the child make mistakes when pronouncing speech sounds (e.g. ‘tar’ for ‘star’)? If yes tick which box applies.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ One or two mistakes □ Many mistakes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.32 Can the child sound out words?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e.g. m-a-t says mat)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Overall impressions</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
<th><strong>Don’t know</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>C.33 Do you have any concerns about the child’s speech, language and/or hearing?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.34 Amount of time spent with child in completing this form</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C.35 Other comments</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Signature of worker: ____________________________ Date completed: ____________________

Name of child: ________________________________________________________________

Thank you for your time in completing this form
Appendix 4 — The Supplementary Background Questionnaire (SBQ) in the Small Talk Project

The Small Talk Project

Overview

The Small Talk project is a partnership between the School of Human Communication Sciences and the School of Social Work and Social Policy, La Trobe University, Berry Street Home-Based Care Northern Region, Victorian Aboriginal Child Care Agency (VACCA) and the Take Two program (auspiced by Berry Street in partnership with Austin CAMHS, La Trobe University, Mindful and VACCA). The project aims to develop a screening tool for use by non-speech pathologists to identify children with previously unidentified speech and language difficulties that may benefit from a speech and language assessment. The project is focused on children aged 4 to 7.11 years who are clients of Child Protection and have experienced disrupted attachment and severe trauma.

Language is a key aspect of development in childhood. The importance of speech and language in children’s overall wellbeing must not be underestimated. Children who have experienced disrupted attachment and trauma in the context of child abuse and neglect are particularly vulnerable to speech and language difficulties. The development of a screening tool will help workers to identify children who would benefit from a speech, language and hearing assessment. This could lead to greater assistance for children with previously unidentified communication difficulties.

The screening tool has been developed in consultation with VACCA, and the cultural appropriateness of the tool will be an ongoing consideration of the current project.

This pack is made up of two documents (1) General Information & (2) Screening Tool. Please return both forms to:

Confidential
Take Two – Small Talk Project
Carly Black
Berry Street Central Office
1 Salisbury Street
Richmond, VIC 3121.

A. General Information

IDENTIFYING INFORMATION ON THE PERSON COMPLETING THE FORM

1. Name of worker completing the form:______________________________________________

2. Role:___________________________________________
   Organisation:____________________________________

3. How long has the worker known this child? (e.g. 6 months, 2 years)
   _______ weeks _______ months _______ years

4. Is the person completing this form Aboriginal or Torres Strait Islander?    □ Yes □ No

5. Is a parent or carer also involved in filling in this form? (If No, go to Q. 8)
   □ Yes □ No

6. Are they a parent or carer? □Parent □Carer

7. How long has the child been in the care of parent/carer? (e.g. 6 months, 2 years)
   _______ weeks _______ months _______ years

DETAILS ON HOW INFORMATION WAS COLLECTED

8. Was an interpreter used to assist completion of tool? □ Yes □ No

9. Was a cultural consultant used?    □ Yes □ No
   If Yes, include name of organisation:___________________________________________
**IDENTIFYING INFORMATION ON THE CHILD**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Child's first name: ___________________________</td>
</tr>
<tr>
<td>11</td>
<td>Child's age at time form completed:</td>
</tr>
<tr>
<td>12</td>
<td>Child's gender</td>
</tr>
<tr>
<td>13</td>
<td>Who is child living with at time form completed?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Name of parent/carer:</td>
</tr>
<tr>
<td>15</td>
<td>Address of parent/carer:</td>
</tr>
<tr>
<td>16</td>
<td>Telephone number of parent/carer:</td>
</tr>
<tr>
<td>17</td>
<td>Is child involved with any of the following services (can tick more than 1)?</td>
</tr>
<tr>
<td></td>
<td>□ Take Two</td>
</tr>
<tr>
<td></td>
<td>□ VACCA – Extended Care</td>
</tr>
<tr>
<td></td>
<td>□ Other – please describe:</td>
</tr>
</tbody>
</table>

**ABORIGINAL AND TORRES STRAIT ISLANDER QUESTIONS**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Is child Aboriginal or Torres Strait Islander?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(If No or Don’t know — go to Q.25)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Is child in regular direct contact with their culture/mob/clan (at least once a week)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Is child placed with an Aboriginal or Torres Strait Islander carer?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Does child speak some:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aboriginal English?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Traditional language?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How much is the worker completing this tool aware of . . .**

<table>
<thead>
<tr>
<th></th>
<th>Somewhat</th>
<th>A lot</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>The child’s mob or clan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Indigenous communication patterns; e.g. Aboriginal English and body language?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CULTURALLY AND LINGUISTICALLY DIVERSE QUESTIONS**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>Does child come from a culturally and linguistically diverse community?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(If No or Don’t know — go to Q. 27)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Describe child's cultural identity:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### First language questions

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 Is English child’s main language?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 What languages does the child speak?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28 What language does the child’s primary carer speak?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29 If the child’s environment is multilingual, what age was the child when English was introduced?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30 Is the child currently living in an environment where other people are: (Tick one response only)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Low verbal (e.g. not a lot of words are spoken, questions and answers but not a lot of conversation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Medium verbal (e.g. a mixture of short sentences and some level of conversation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ High verbal (e.g. lots of conversation around and with the child)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Do not know</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31 How long has the child lived in this environment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 6 months or less</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 7 — 12 months</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ 13 months or more</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Do not know</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### B. Background Information For Assessment

**Please provide recent written reports (including test results) that could provide further information regarding the child’s behaviour and communication**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
<th>Don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 Medical: Has the child ever been hospitalised?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes: is the □ Information attached □ Information unavailable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 Does the child currently suffer from:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Recurrent ear infections □ Epilepsy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Other medical condition, please describe:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34 Hearing: Has a hearing test been performed in the last 12 months?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, give date and details:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 Does the child have a hearing loss?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36 Medication: Is child currently taking medication that could be affecting his/her concentration and behaviour?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes, give details of medication and dosage:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37 Speech &amp; Language: Has a language test such as the Clinical Evaluation of Language Fundamentals (CELF) been done within the last year?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If Yes: is the □ Information attached □ Information unavailable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>-----</td>
<td>----</td>
</tr>
<tr>
<td>38</td>
<td><strong>Neuropsychology:</strong> Has child had a neuropsychological assessment in last 2 years?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39</td>
<td><strong>Cognitive:</strong> Has an IQ test been done in the last 2 years?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td><strong>Other:</strong> Are any relevant reports available?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**GENERAL BEHAVIOUR IN RELATION TO NEW SITUATIONS**

<p>| | | | | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>Tick any of the following boxes that describe the child: The child generally seems...</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>42</td>
<td>Information to assist engagement of child in assessment Please describe the activities and toys the child enjoys and list some of the child’s interests</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FAMILY HISTORY**

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>43</td>
<td>Mother’s name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44</td>
<td>Father’s name</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>Does the child have any siblings?</td>
<td>Brothers: how many? _ Sisters: how many? _</td>
<td></td>
</tr>
<tr>
<td>46</td>
<td>Is the child current living with any siblings?</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

**DEVELOPMENTAL HISTORY**

Where possible please supply the following information

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>Please indicate by ticking the boxes if there were any difficulties relating to the child’s:</td>
<td>Birth</td>
<td>Sucking</td>
<td>Swallowing</td>
</tr>
<tr>
<td>48</td>
<td>Please indicate the approximate age at which the child achieved the following:</td>
<td>Sit _</td>
<td>Walk _</td>
<td>First words _</td>
</tr>
<tr>
<td></td>
<td>Use sentences _</td>
<td>Toilet trained _</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**ACADEMIC HISTORY**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>49</td>
<td>Does the child attend any of the following? Tick appropriate box/es</td>
<td>Childcare</td>
<td>Kindergarten</td>
<td>School</td>
</tr>
<tr>
<td>50</td>
<td>What grade is the child in and have they repeated any grade?</td>
<td>Prep</td>
<td>G1</td>
<td>G2</td>
</tr>
<tr>
<td>51</td>
<td>Please tick appropriate box/es that describe the child’s current presentation at school/childcare</td>
<td>Poor social skills</td>
<td>Difficulty concentrating</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Behaviour issues</td>
<td>Difficulty reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Struggles with change</td>
<td>Disorganised</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performing below expected grade level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>52</td>
<td>Has the child attended more than one school?</td>
<td>No</td>
<td>Yes</td>
<td>If ‘Yes’, how many (if known) _</td>
</tr>
<tr>
<td>53</td>
<td>Where possible and with consent please provide information about the child’s adverse life experiences that you feel would be relevant to the assessment process and at what age the child was when these experiences occurred.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix 5 — Descriptive Information about the Sample

This data table relates to Chapter 5 in this report

<table>
<thead>
<tr>
<th>Table A.1. Referring organisation type and descriptive information about the children (N=65)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of referring organisation</strong></td>
</tr>
<tr>
<td>Age (mean) 4-&lt;6y/6y&lt;8y</td>
</tr>
<tr>
<td>Gender (M/F)</td>
</tr>
<tr>
<td>ATSI</td>
</tr>
<tr>
<td>Metro/Rural</td>
</tr>
<tr>
<td>Child’s living with parents at time of project</td>
</tr>
</tbody>
</table>
### Table A.2. Number and percentage of domains of concern according to the speech pathologist’s assessment out of a possible 10 domains of concern (N=65)

<table>
<thead>
<tr>
<th>Number of domains of concern</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No concerns</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>One domain</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Two domains</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>Three domains</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Four domains</td>
<td>16</td>
<td>25</td>
</tr>
<tr>
<td>Five domains</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Six domains</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Seven domains</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Eight domains</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Note. Ten domains is calculated by separating Oral Narration and Oral Comprehension as two domains.
## Appendix 7 — Overview of CELF-P2 and CELF-4 Measure results

### Table A.3. Number and percentage of children who met the criteria for language impairment according to the CELF measures based on number of standard deviations below the mean

<table>
<thead>
<tr>
<th>Test</th>
<th>Mean and s.d.</th>
<th>1 s.d. or more below mean (n)</th>
<th>1 s.d. or more below mean (%)</th>
<th>2 s.d. or more below mean (n)</th>
<th>2 s.d. or more below mean (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CELF-P2 (n=14)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Language score (n=14)</td>
<td>M=86.9 s.d.=10.3</td>
<td>7</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Receptive Language index (n=14)</td>
<td>M=89.4 s.d.=11.1</td>
<td>7</td>
<td>50</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Expressive Language index (n=14)</td>
<td>M=84.9 s.d.=11.9</td>
<td>6</td>
<td>43</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Language Content index (n=14)</td>
<td>M=87.6 s.d.=14.4</td>
<td>7</td>
<td>50</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Language Structure index (n=14)</td>
<td>M=85.8 s.d.=10.7</td>
<td>6</td>
<td>43</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>CELF-P2 with one or more scores with 1 s.d. or more below the mean</td>
<td></td>
<td>9</td>
<td>64</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CELF-4 (n=47)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Language score (n=47)</td>
<td>M=82.3 s.d.=16.9</td>
<td>20</td>
<td>43</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Receptive Language index (n=47)</td>
<td>M=85.4 s.d.=17.2</td>
<td>22</td>
<td>49</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Expressive Language index (n=46)</td>
<td>M=83.1 s.d.=17.1</td>
<td>22</td>
<td>48</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Language Content index (n=47)</td>
<td>M=84.4 s.d.=16.4</td>
<td>22</td>
<td>47</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Language Structure index (n=44)</td>
<td>M=84.6</td>
<td>20</td>
<td>46</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>CELF-4 with one or more scores with 1 s.d. or more below the mean</td>
<td></td>
<td>31</td>
<td>65</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CELF-P2 and CELF-4 combined (n=61)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Language score (n=61)</td>
<td>M=83.4 s.d.=15.7</td>
<td>27</td>
<td>44</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Receptive Language index (n=61)</td>
<td>M=86.3 s.d.=16.0</td>
<td>29</td>
<td>48</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Expressive Language index (n=60)</td>
<td>M=83.5 s.d.=15.9</td>
<td>28</td>
<td>47</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>Language Content index (n=61)</td>
<td>M=85.2 s.d.=15.9</td>
<td>29</td>
<td>48</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td>Language Structure index (n=58)</td>
<td>M=84.8</td>
<td>26</td>
<td>45</td>
<td>8</td>
<td>14</td>
</tr>
<tr>
<td>CELF-P2 &amp; CELF-4 combined with 1 or more scores with 1 s.d. or more below the mean</td>
<td></td>
<td>40</td>
<td>66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### A.4. Number and percentage of concerns noted by each item and domain in the Small Talk Tool

<table>
<thead>
<tr>
<th>Domains of Small Talk Tool items</th>
<th>Number with concerns</th>
<th>Percentage with concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hearing Concerns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does child hear what is said (n=64)</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td><strong>Speech concerns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is child’s speech difficult to understand (n=65)</td>
<td>35</td>
<td>53.8</td>
</tr>
<tr>
<td>Does child make mistakes when pronouncing speech sounds (n=57)</td>
<td>39</td>
<td>68.4</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>54</td>
<td>83</td>
</tr>
<tr>
<td><strong>Phonological awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does child sound out words (n=52)</td>
<td>25</td>
<td>48.1</td>
</tr>
<tr>
<td><strong>Receptive Language</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does child hear what is said (n=64)</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>Understand simple questions (n=64)</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Understand and respond appropriately to complex instructions (n=62)#</td>
<td>15</td>
<td>24.2</td>
</tr>
<tr>
<td>Understand “if” (n=53)#</td>
<td>6</td>
<td>11.3</td>
</tr>
<tr>
<td>Understand “in front of”, “inside of” or “behind” (n=59)</td>
<td>10</td>
<td>16.9</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>20</td>
<td>30.8</td>
</tr>
<tr>
<td><strong>Expressive Language</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have words to say what he/she wants (n=64)</td>
<td>10</td>
<td>15.6</td>
</tr>
<tr>
<td>Make their needs known to others (n=64)</td>
<td>5</td>
<td>8.1</td>
</tr>
<tr>
<td>Make long sentences (n=62)#</td>
<td>18</td>
<td>29</td>
</tr>
<tr>
<td>Use words to start an activity (n=60)</td>
<td>4</td>
<td>6.7</td>
</tr>
<tr>
<td>Ask questions (n=63)</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>Jumble his/her words (n=62)</td>
<td>29</td>
<td>46.8</td>
</tr>
<tr>
<td>Choose correct words and in right order (n=59)#</td>
<td>11</td>
<td>18.6</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>34</td>
<td>52.3</td>
</tr>
<tr>
<td><strong>Voice concerns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoarse voice (n=62)</td>
<td>7</td>
<td>10.8</td>
</tr>
<tr>
<td>Too loud (n=65)</td>
<td>15</td>
<td>23.1</td>
</tr>
<tr>
<td>Too soft (n=65)</td>
<td>7</td>
<td>10.8</td>
</tr>
<tr>
<td>Too high (n=65)</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>Too low (n=65)</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td>Nasal (n=50)#</td>
<td>3</td>
<td>4.6</td>
</tr>
<tr>
<td>Any voice concerns (n=65)</td>
<td>27</td>
<td>41.5</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>25</td>
<td>38.5</td>
</tr>
</tbody>
</table>
## A.4. Number and percentage of concerns noted by each item and domain in the Small Talk Tool

<table>
<thead>
<tr>
<th>Domains of Small Talk Tool items</th>
<th>Number with concerns</th>
<th>Percentage with concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fluency Concerns</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Struggles to start speaking (n=61)</td>
<td>19</td>
<td>31.1</td>
</tr>
<tr>
<td>Speaks very quickly and stumbles over words (n=62)</td>
<td>23</td>
<td>41.9</td>
</tr>
<tr>
<td>Stutters (n=59)</td>
<td>11</td>
<td>18.6</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>33</td>
<td>51.6</td>
</tr>
<tr>
<td><strong>Pragmatics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Answers match the questions (n=64)</td>
<td>6</td>
<td>9.4</td>
</tr>
<tr>
<td>Can start a conversation (n=64)</td>
<td>7</td>
<td>7.8</td>
</tr>
<tr>
<td>Continue the topic of conversation (n=63)</td>
<td>18</td>
<td>28.6</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>19</td>
<td>29.2</td>
</tr>
<tr>
<td><strong>Narrative Comprehension</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No items in this tool</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Oral Narration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does what the child tells you make sense (n=64)</td>
<td>5</td>
<td>7.8</td>
</tr>
<tr>
<td>Can child tell a story that you can follow (n=61)</td>
<td>12</td>
<td>19.7</td>
</tr>
<tr>
<td>Total – One or more concerns</td>
<td>14</td>
<td>21.5</td>
</tr>
<tr>
<td><strong>Non-verbal Communication (not reported on by speech pathologist)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses hand and/or body movement to help communicate (n=61)</td>
<td>19</td>
<td>31.1</td>
</tr>
<tr>
<td>Use facial expression to help communicate (n=63)</td>
<td>8</td>
<td>12.7</td>
</tr>
<tr>
<td>Focus on you during a conversation (n=64)</td>
<td>11</td>
<td>17.2</td>
</tr>
<tr>
<td><strong>Overall view by referrer as to whether child had a speech, language or hearing problem (n=61)</strong></td>
<td>39</td>
<td>63.9</td>
</tr>
</tbody>
</table>

# = some changes made to these items over the three versions.
# Appendix 9 — Revised 14 item Small Talk Tool

## Small Talk Tool, revised version

### Child’s voice

1. Tick any of the following boxes that apply. Is the child’s voice...
   - [ ] Too loud
   - [ ] Too soft
   - [ ] Too high
   - [ ] Too low
   - [ ] Nasal
   - [ ] None of these

### Fluency

2. Does the child struggle to start speaking?

### Understanding Sentences and Vocabulary

3. Does the child understand and respond appropriately to complex instructions (e.g. ‘before you eat your food, wash your hands’)?

4. Does the child understand words like "in front of," "inside of," or, "behind" (e.g. ‘what picture is in front of me?’)?

### Expression

5. Does the child have the words to say what he/she wants?

6. Can the child make long sentences?

7. Does the child jumble his/her words?

8. Does the child choose correct words and put them in the right order in sentences (e.g. 'not him go' instead of 'she didn't go')?

### Having conversations

9. Can the child continue the topic of conversation?

### Relating or talking about events

10. Can the child tell a story that you can follow?

### Nonverbal communication

11. Does the child use facial expressions to help communicate?

12. Does the child focus on you during a conversation?

### Speech sounds

13. Is the child's speech difficult to understand?

14. Does the child make mistakes when pronouncing speech sounds (e.g. ‘tar’ for ‘star’)?
Appendix 10 — Examples of Suggestions by the Speech Pathologist to Parents, Carers, Teachers and Workers

Following are a list of examples of suggestions by speech pathologist to parents, carers, teachers and workers regarding how to encourage and support the child’s communication within the home or school setting.

Fostering a communication environment

- Use child’s name to attract their attention before you start speaking to them.
- Encourage good listening behaviours including sitting still, looking at the person speaking and thinking about what that person is saying.
- Don’t turn away your face until you’ve finished speaking. If you turn away with only half a sentence spoken, the child may miss out on the rest of your message.
- Use the right level of language for the child. Keep instructions short and simple, long explanations may only confuse them.
- Eliminate distractions when talking to the child (e.g. turn off the TV and find a quiet corner).
- Keep the atmosphere fun so the child associates communication with having a good time.
- Talk to the child about their favourite topics.
- Give the child time to respond. Children process language slower than adults so they need more time to formulate answers. Don’t jump in and try to fill the gap.
- Use everyday activities to encourage and model great communication.
- Have pictures and symbols in their environment that are culturally relevant. Use a cultural consultant to advise rather than choosing stereotyped imagery.
- Be an active listener when the child is talking and respond to what is said. In this way, the conversations becomes child-centred and the child will want to talk more, getting more exposure to language.
- When a child makes a mistake do not ask them to correct it themselves but say it back to them the correct way.
- In school seat the child towards the front and facing away from the window to avoid distractions from outside or provide an isolated area for independent work away from distractions.

Receptive language development

Understanding and listening

- Practise and teach certain concepts in game of ‘Simon Says’. Instructions could include:
  Simon says put your hand behind you
  Simon says stand next to the window
  Simon says jump over the teddy bear
- Vary this game by letting the child tell you what to do as this will allow them to practise using the concepts as well as understanding them.
- Make sure you have the child’s attention before providing instructions.
- Break lengthy instructions into short, simple steps that the child can complete individually before moving on to the next part of the instruction.
- Ask the child to repeat the instructions back to you. This can be as simple as, “So, what do we have to do first?”
- Provide plenty of opportunities for the child to experience actual examples of concepts such as ‘before’, ‘after’ ‘first’, ‘early’ and ‘late’. This will enable them to make links in their thinking and learn to generalise the word to new situations.
- Time concepts (e.g. when) can be particularly hard for a child with receptive language difficulties. Use visual clues such as timetables, and actual examples from their own experiences, such as “When you have had your drink, then you can play outside.” With the help of a clock that has hands that the child could manipulate, you could ask questions like, “When do we eat breakfast?” The child can show the time on the clock as well as replying, “At 7 o’clock.”
- Try not to overload the child with language, particularly complex words such as ‘particularly’ and conjunctions such as ‘therefore’, ‘however’, etc. When this happens children can become quickly frustrated and may ‘switch off’ from what you are saying.
- When children learn the meaning of the word they need to hear it in context. For example, begin by using the words (e.g. first and last) in everyday activities, for example getting dressed in the morning. You could say, “Put your socks on first and put your shoes on last.” Later you can see if the child understands the meaning of the words by asking “Can you put your t-shirt on first?”
- Temporal concepts (before and after) can be used in a similar way to the above. For example, “we will have dessert after dinner”, making sure you put emphasis on the word ‘after’ to expose the child to the words. When playing games you can see if the child understands by saying, “Put your plate away before you play.”
- Go outside on a listening walk. Explain to the child that he must listen carefully to all the sounds around him and get him to tell you what they are.
- When reading a book ask the child to make a certain noise whenever certain characters or actions are mentioned. E.g. every time he hears the name ‘Thomas the Tank Engine’ he has to make a train noise. This means he will listen more carefully to the book.
- Create a reward system for good listening. This may be as simple as a high five or a sticker chart, or simple verbal praise such as “I can tell you are listening, that’s fantastic” every time the child finishes a task.

Expressive language development

Vocabulary

- Read to the child as much as possible to expose
them to new language and vocabulary. The books should be of high interest to them to ensure they remain engaged.

- **Vocabulary** – Brainstorming is a great way to get the child to think about a variety of ideas that fall under the one theme. For example start with the word ‘animals’ and then brainstorm any words that are related to the chosen theme.

- You can then elaborate further by thinking of categories within categories and having him make lists. For example, he can make lists of farm animals, jungle animals, large animals, sea animals, desert animals, etc...

- Encourage the child to then describe individual objects, animals, etc... For example, sticking with the animal theme, you can encourage the child to develop a mind map about a dog whereby he should be saying four legs, eats meat, large and small dogs, sharp teeth, puppies, etc...

- You name four items including one that is different to the rest. See if the child can figure out which word is different from the rest; e.g. say “The words are train, tram, car and candle, which word doesn’t belong?” Encourage the child to tell you why the word he has chosen doesn’t belong.

- Find ‘odd one out’ books and ask the child to tell you what doesn’t belong; e.g. ‘dog, cat, tree, mouse’.

- Play a game where the child has to talk about a specific topic for 20 seconds. Have a set of cards with topics written on them. You may want to discuss some of the topics before the game begins.

- Play a “What If...” game. Examples: What would you do if you found $500 on the playground? What would you do if you were locked out of the house?

- Use day-to-day experiences to put words to emotions; e.g. “I’m excited about going to the show” or “Jenny looks upset in the story, I wonder why?”

- Play word games that review counting, letters and numbers. Games could include counting the number of fingers being held up or identifying everything that’s red in a room. Word games can include naming as many words that begin with the letter D or answering simple riddles like, “What comes after the number 5?”

- Go on a treasure hunt. You can both have buckets or a bag and you have to collect different things such as leaves and tan bark. At the end of the treasure hunt lay the items on the table and talk about what you have found. Prompt the child to provide more detail, “How does it feel to touch?”

- Ask the child to think of other words you can use to describe things such as ‘big’ and ‘smart’.

- If the child is bilingual; e.g. Dinka or Aboriginal English as well as Standard Australian English, encourage the use of words in both languages.

- Have regular library visits and encourage the child to choose books they are interested in. Ask them to explain why they chose that book, if there are pictures encourage the child to tell you what is happening in the pictures.

**Elaboration**

- Probe the child for more information when they are telling you about something. Use statements such as “What else happened?” and “Tell me more about that.” This will encourage them to expand on their use of language.

- If you introduce a new word; for example ‘pineapple’ ask the child a number of questions including:
  - What colour is it?
  - How big is it?
  - What does it feel like?
  - What do we do with it?
  - Where do we keep it?
  - Where do we buy it?

This will help him generate a clear idea of this new word and all its associated links.

- When reading through books together point out different people and objects in the pictures and talk about them.

- When playing games together talk about what you are doing, “Look, I’m going to make my car flip.”

- To support the child’s use of complex grammatical structures and improve their story-telling skills prompt them to expand on what they are saying and join it together. For example the child says, “I went to the park” you could respond “What did you do?” Then with the response they give you combine with the first response, “Oh you went to the park and played on the swing.”

- Create a ‘Sound and Word Book’. Using a scrap book cut out items from catalogues and magazines. Discuss what they are and how they are used or what they might taste like. Then stick the items in the scrapbook based on the sound they start with. Try to focus on the sound rather than just the letter name.

- You can also think about scenarios or games that would allow you to practise a particular target many times over. For instance playing the memory game “I went to the shops and I bought…..” taking turns to add to the list until someone forgets an item, allows you to practise strategies to support the child’s short-term memory such as ‘verbal rehearsal’ (see memory strategies) but it also focuses on the irregular verb ‘to buy’ which children frequently articulate as ‘buyed’. The game allows for many attempts at this particular target.

- Play word association games. ‘A pilot goes with… plane’, ‘Leash goes with…dog’; etc.

- Talk about why things are related, ‘A cat and a dog are both...’
Narrative

- Read regular stories to the child and discuss the story after reading. Talk about the characters and identify the problem and how it was solved.
- Read books with stories and themes and possibly language from the child's cultural background.
- Once the child is familiar with a story ask her to re-tell it to you. Prompt her with questions if she needs help with the detail.
- Ask the child to tell you about what they did on the weekend or at school and expand on their response. For example, if the child says "I went to the park" you could ask "What did you do?" Then with the response they give you combine with the first response, "Oh you went to the park and played on the swing."
- Ask the child to provide you with more information through such questions as "Tell me more."
- Play a game where you both take turns saying a sentence to make up a story. "Once upon a time there lived a girl called Emily" and then the child has to add a bit to the story.
- Provide the child with pen and pencils and ask him to draw out stories of interest to him. When he has finished drawing he can tell you the story.
- Cut out pictures that represent events in a story and give them to the child. Provide them with a separate sheet of paper and glue and ask them to order the pictures to make a story. At the end ask them to tell you the story, ensure you expand on their sentences and prompt them to provide more detail.
- If the child has difficulties with fine motor skills be the best way to help develop these skills. Writing practising narratives solely through writing may not be the best way to help develop these skills. Writing can be very tiring for children who have difficulties holding a pen correctly. Instead encourage them to dictate a story to you so that they can practise narrative skills without the constraints of writing, or help them to type up a story on the computer.

Grammatical structures

- Pronouns – when reading a book together make a point of talking about a boy or girl in the picture and describing what they are doing. For example, "Look at the girl, she is playing with the ball."
- Pronouns – you can introduce 'she' and 'he' into everyday conversations; for example, "You know Jack? He is going to the movies tomorrow", thus providing a correct model for the child.
- Word order – when the child makes a grammatical error such as "About to that tall" don’t correct them; instead repeat it back the correct way, "Oh it's about that tall."
- Past tense – you could talk about events that happened the day before. "We saw a movie yesterday." In this way you are modelling the appropriate form for the child and they can have a go at saying it too.
- Expansion (elaborating a child's comment) can be used as a technique to provide real examples of sentence structures and words. For example, if the child says "The man is running," you may respond with "Yes, the man is running because he wants to get fit."

Speech

- If the child pronounces a word incorrectly, do not ask them to repeat it properly as they may not be able to. Instead, repeat the word yourself correctly so that the child can hear the proper pronunciation. Try to repeat this word as often as possible in different sentences.
- If the child says the incorrect form of a word; e.g. "He was brush his teeth," do not ask them to say it correctly. Instead, repeat the word correctly to them so he can hear the correct version (e.g. "Okay he was brushing his teeth").
- If you do not understand what the child has said ask them to repeat it using different words.
- Once the child receives speech pathology intervention please ensure all practice homework provided by the speech pathologist is completed as this will ensure progress is made.

Phonological awareness

- Talking about the sounds that letters make will help the child's letter to sound knowledge which is vital for early reading skills.
- Singing nursery rhymes such as 'Baa Baa Black Sheep' and 'Incy Wincy Spider' will help the child begin to recognise rhyming words.
- Play games where you have to think of as many words as you can that start with a different sound in the alphabet (e.g. choose the sound 'b' and take turns to think of examples such as 'boat' or 'bee').
- Read rhyming books such as Dr Seuss.
- Practise tapping out the syllables in words. (e.g. 'helicopter' is hel-i-cop-ter = four claps or taps or jumps).
- Group children within the classroom according to the number of syllables for example, "Anyone who has two parts in their name can go to recess."
- If the child is struggling to say a multisyllabic word, help them break down words with more than two syllables into individual syllables; e.g. if the child is having difficulties saying the word 'caterpillar', break the word down into cat-er-pil-lar. This will help them say the word.

Memory

- Encourage the child to keep a diary so that they may remember tasks that have to be completed. This might include keeping to-do lists that they will review regularly or at specified times each day.
- Keep a whiteboard in an obvious place with reminder messages for the child.
- Provide instructions both in written and verbal form.
- Encourage the child to use the memory strategy 'verbal rehearsal' which requires her to quietly repeat an instruction until she is able to either complete it or write it down.
Pragmatics

Parents/carer

- Provide opportunities at home to demonstrate good social skills such as the use of ‘polite’ terms and how to share and take turns.
- Provide opportunities for the child to socialise with his peers outside of school. Initially provide supervision of these visits whilst the child learns to integrate new social skills.
- Encourage conversation by commenting on what the child might be doing, rather than asking him questions; e.g. “That drawing looks like me” rather than “Who is that person?”
- Encourage the child to ask for help if he does not understand. Respond positively if he does.
- Enrol the child in activities out of school that will help with behaviour but encourage socialisation such as team sports (e.g. netball or martial arts).

Teacher

- Provide the child with an older ‘buddy’ at school who will be able to guide them both in the classroom and in the playground to negotiate with peers and encourage interaction with children of their age level.
- Sit the child next to a more capable, caring student in the classroom who will be able to help them learn new routines.
- Target certain social skills as a whole class as most children can benefit from learning how to use social language. For example to teach how to greet someone – place children in a circle and provide one ball. Ask one child to roll the ball to another child in the circle. Before they roll they must acknowledge who they are going to roll the ball to by looking at that person and saying “Hello David”. David will then choose another child to roll the ball to and acknowledge them.
- Teach negotiating skills – have the children work in small groups to construct something with blocks.

Emotional development/self-regulation

- Encourage the child to talk about her feelings and frustrations. Help them to label any emotions they may be feeling so they can express themselves through words rather than inappropriate behaviour.
- Help the child become aware of her own feelings and those felt by others by identifying the names of emotions they and others express; e.g. “I can see you are frustrated by that.”
- Vividly demonstrate vocal, facial and bodily characteristics of an emotion while you are labelling it.
- Pantomime or role play emotions.
- Model appropriate requesting behaviour; e.g. if the child becomes aggressive or yells because she wants something, demonstrate the appropriate way of asking for it “I think ‘Can I please leave the room now’ is what you are trying to say.”
- Demonstrate alternative nonverbal responses to an emotion such as taking deep breaths or counting to 10.
- Read stories about emotional experiences.
- Help the child develop coping strategies such as telling you when they are feeling anxious or upset about something so that they have a chance to be removed from the environment before it escalates.
- Implement positive behaviour supports such as:
  - Allowing the child a ‘cool down break’.
  - Allowing a reflective time after poor behaviour.
  - Listen actively to the child’s concerns.
  - Proactively interrupt the child’s anger early before it escalates.
  - Emphasise positives in your requests (e.g. don’t say “If you don’t return to your seat I cannot help you with your work”, say “I will be over to help with your work just as soon as you return to your seat.”)
  - Give specific praise to a positive behaviour.
  - Ensure you relax yourself before responding to a tense situation.
  - Reward positive behaviours.
  - ALWAYS validate the child’s emotion by labelling it.
Useful websites

- Ziptales
  Website of downloadable activity worksheets including phonological awareness skills and story-telling
  http://www.ziptales.com/

- Spectronics
  Program designed to extend vocabulary and word usage

- Department of Education and Early Childhood Development
  Website focused on primary school age children with links to resources for reading and writing; etc.

- Raising Children’s Network
  A parent resource website
  http://raisingchildren.net.au/

- Let’s Talk 2 – 4
  4th Year Speech Pathology Students project with useful tips and activities on how to improve child language.

- K-3 Teacher Resources
  A fantastic website with free downloadable printable worksheets focusing on concepts, reading, rhyming etc.
  http://www.k-3teacherresources.com/

- www.abcfastphonics.com/words
- www.readingeggs.com.au
- www.learnenglish.org.uk/kids/antics/monkey.swf
- www.nickjr.com
- www.storyconnection.net
- http://classroom.jc-schools.net/basic/la-read.html
- www.adrianbruce.com/reading/comprehension/reading_comprehension.htm

Note. Further examples of strategies to engage Aboriginal children are described in the Not One Size Fits All Report (Bamblett et al., 2012).
Reading Materials

Bruce D. Perry, M.D., PH.D.
Australasian Speaking Tour
Transforming Childhood Trauma:
A neuroscience approach to healing and recovery

Melbourne    Hobart    Perth    Adelaide    Canberra    Sydney    Brisbane
Auckland    Wellington    Christchurch