



Deaf Studies Research Unit
Department of Linguistics and Applied Language Studies

The Vitality of New Zealand Sign Language project

Parents of deaf and hearing impaired children: Survey report

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Abstract

This report describes the results of 112 responses to a survey of parents with a deaf / hearing impaired child, carried out between June – August 2013. The survey was part of a larger research project assessing the linguistic vitality of New Zealand Sign Language, of which child language use is a critical component. The survey aimed to investigate the language use of deaf and hearing impaired children and their families, and to identify factors in parental choices that may influence the transmission of NZSL to future generations. Key findings include the following: 65% of the children in the sample are cochlear implant users; approximately a quarter of families in this sample use some form of signing with their child (19% identified as NZSL); more children use sign language at home than at school; a minority of parents regard bilingualism in English and NZSL as a future language profile for their child; while almost half the parents received professional advice that included the use of sign language with their child, 35% reported explicit advice against signing. Parents who are interested in using NZSL with their child report a lack of practical support for learning it and limited opportunities for social contact with other child or adult signers. Overall, these findings echo previous recent New Zealand studies on this topic, and suggest that the transmission of NZSL to deaf/hearingimpaired children is precarious under current conditions for the acquisition and use of NZSL in the family domain.

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1. Aims of the Survey

A survey of parents / carers of deaf and hearing impaired children was carried out by the Deaf Studies Research Unit as part of a larger research project on the health and status of New Zealand Sign Language and its future. The research project, *The Linguistic Vitality of New Zealand Sign Language (NZSL)*, gathered data through a mixture of methods including interviews, statistical information, a Communication Development Inventory and two surveys (of parents, and of the Deaf community). Findings of the overall research project will be made available on the Victoria University of Wellington, Deaf Studies Research Unit website in the first quarter of 2014.¹

The aims of the survey were:

1. to gain further information about the population of deaf and hearing impaired children, their language use and the language(s) used by their families;
2. to examine factors that may influence the likelihood of NZSL transmission to future generations.

Findings from the report may potentially inform policy makers, educational and other specialist service providers, parents themselves, and NZSL community stakeholders.

2. Administration of the Survey

The survey was administered online between 5th June and 5th August 2013.

The target population for the survey was defined as parents and caregivers of deaf/hearing impaired children. Although the primary aim was to survey parents and caregivers of children still living at home, participation was not restricted to a particular age group.

Participants self-selected by completing the anonymous online survey. The survey was advertised through websites of parent organisations and social media groups. Information about the survey was also distributed to:

- New Zealand Federation for Deaf Children (NZFDC)
- Regional NZFDC member groups: Northland, Auckland, Canterbury, Nelson, Otago, Manawatu, South Canterbury, Southland, Wellington, Taranaki and Waikato.

¹ (See: <http://www.victoria.ac.nz/lals/centres-and-institutes/dsru>)

- Deaf/Blind Parents Group
- Kelston Deaf Education Centre preschool programme
- Northern Cochlear Implant Programme
- Southern Cochlear Implant Programme
- Hearing House
- Individual teachers and researchers who were known to have contact with parents of deaf/hearing impaired children.

Parents who were interviewed as part of case studies in the *Linguistic Vitality of NZSL* study were also invited to complete the survey and to distribute the link to other parents.

Survey questions are shown in Appendix 1.

2.1 Response rate

In total, 112 respondents started the online survey and 98 completed it. Response rates for individual questions varied slightly, with the highest response (to questions that were applicable to all respondents) being 104 and the lowest being 87.

Based on estimates of the number of deaf children below the age of 18 in New Zealand², this response rate represents between 3.2 – 4 % of the maximum potential respondents in the target category.

² Estimates are based on two sources. The first source is 2008 Ministry of Education database, which contained records of 2,600 deaf/hearing impaired children as reported in the Fitzgerald report (2010). The second estimate of 3060 children is the estimated number of deaf children born in New Zealand each year (170), multiplied by 18 to reflect the 0-18 age category (source: <http://www.deafchildren.org.nz/>). however this calculation is likely to be inflated as some parents have more than one deaf/hearing impaired child.

3. Results

3.1 Profile of respondents and their families

3.1.1 Role of respondents in the family

The first section of the survey included questions concerning the respondents' role in the family (i.e. whether they were the mother, father, or other primary caregiver of a deaf child); their own hearing status, and the hearing status of their partner and family members.

The majority of respondents (81 %) were the mother of a deaf / hearing impaired child. Fathers represented 14 % of the respondents and 4 % were other primary carers, as shown in table 1.

Table 1: Respondents' role in the family

<i>Role</i>	<i>Responses</i>
Mother	79 (81.44 %)
Father	14 (14.43 %)
Other primary caregiver	4 (4.12 %)
Total responses	97 (100 %)

3.1.2. Hearing status of respondents and their families

Respondents' hearing status

The majority of respondents indicated that they were hearing, i.e. that they had no hearing impairment (88%). The remaining respondents identified themselves as deaf (4%), hearing impaired (7%) and deafblind (1%).

Table 2. Hearing status of respondents

<i>Hearing status</i>	<i>responses</i>
Hearing (no hearing impairment)	86 (87.76 %)
Deaf	4 (4.08 %)
Hearing impaired	7 (7.14 %)
Deafblind	1 (1.02 %)
Total responses	98 (100 %)

Partner's hearing status

When asked about the hearing status of their partner, 7 % of respondents indicated that they did not have a partner. Of the remaining respondents, the majority (84%) had a hearing partner, 5 % had a deaf partner and 4 % had a hearing impaired partner.

Table 3. Hearing status of partner

<i>Partner's hearing status</i>	<i>responses</i>
Hearing (no hearing impairment)	82 (83.67%)
Deaf	5 (5.10%)
Hearing impaired	4 (4.08%)
No partner	7 (7.14%)
Total responses	98 (100%)

Cross-tabulation of the respondents' own hearing status with that of their partners showed that the vast majority of families responding to this survey (93%) have at least one hearing parent/caregiver and 89.5% have two hearing parents/caregivers. 5% of families have at least one deaf parent/caregiver and 3 % (3 families) have two deaf parents/caregivers. [These figures assume that only one parent/caregiver replied to the survey on behalf of each family.]

This distribution generally aligns with the estimate that 90 - 95% of deaf children are born in families with at least one hearing parent (Karchmer & Mitchell 2004³). In our survey of the Deaf community for this project, 8% of Deaf respondents indicated having a Deaf child(ren). The larger category of Deaf / HI / Deafblind parents who have a Deaf / HI / Deafblind child(ren) came to 13-14%. The higher figures reflect the likelihood that a survey targeting those who identify with a Deaf community may capture a disproportionately higher number of respondents who also have deaf family members.

Deaf / hearing impaired relatives

The survey asked whether respondents had any other deaf/hearing impaired relatives (excluding relatives with hearing loss due to old age). Nearly 80% of respondents do not have any other deaf / hearing impaired relatives. Over 95% of these respondents are themselves hearing, indicating that in the majority of cases, the deaf child is the only deaf person in their extended family.

³ Mitchell, R. E., & Karchmer, M. A. (2004). Chasing the mythical ten percent: Parental hearing status of deaf and hard of hearing students in the United States. *Sign Language Studies*, 4(2), 138-163.

The remaining 20% have one or more deaf/hearing impaired relatives. Of these respondents, 45% are themselves deaf, hearing impaired or deafblind.

Table 4. Other deaf / hearing impaired relatives

<i>No. of relatives who are deaf / have a hearing impairment</i>	<i>Responses</i>
None	78 (79.59 %)
One	9 (9.18 %)
Two or more	11 (11.22 %)
Total responses	98 (100 %)

Deaf / hearing impaired relatives using sign language

The next question asked whether deaf/hearing impaired relatives used sign language. This question was displayed differently depending on whether respondents had ticked that they had one relative who was deaf / hearing impaired, or more than one relative. The combined results of these questions are shown in Table 5.

60 % of deaf / hearing impaired relatives do not use sign language.

Table 5. Relatives using sign language

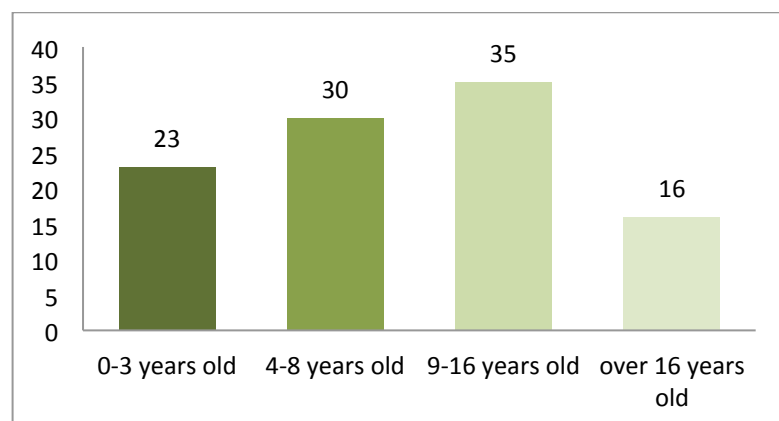
<i>No. of relatives who use sign language</i>	<i>Responses</i>
One	2 (10 %)
Some	1 (5 %)
All	5 (25 %)
None	12 (60 %)
Total responses	20 (100%)

Cross-tabulating respondents' hearing status with these results shows that deaf/hearing impaired respondents were more likely to have deaf/hearing impaired relatives who used sign language. 6 of the 8 respondents (75%) who indicated that at least one of their deaf/hearing impaired relatives used sign language, were themselves deaf / hearing impaired.

3.1.2 Age of children

The age of the deaf/hearing impaired child(ren) is shown in the figure below.

Table 6. Number of deaf/hearing impaired children per age category



The age category for which the most responses were received was 9-16 years old (36 %), followed by 4-8 years old (32 %) and 0-3 years old (24 %). A further 17 % of responses came from parents who have a child (or children) over 16 years old. This indicates that just under 85% of all responses were received from the main target group of parents of pre-school and school-aged children.

It was possible to choose multiple age categories if the respondent has more than one child who is deaf/hearing impaired. 9 responses were received from respondents who chose more than one age category. Of these 9 responses, 4 had at least one deaf/hearing impaired child in the over 16 age category as well as one or more deaf/hearing impaired children in the target age range.

The remaining 12 respondents in the over 16 category responded for only one child.

3.1.3. Cochlear implants

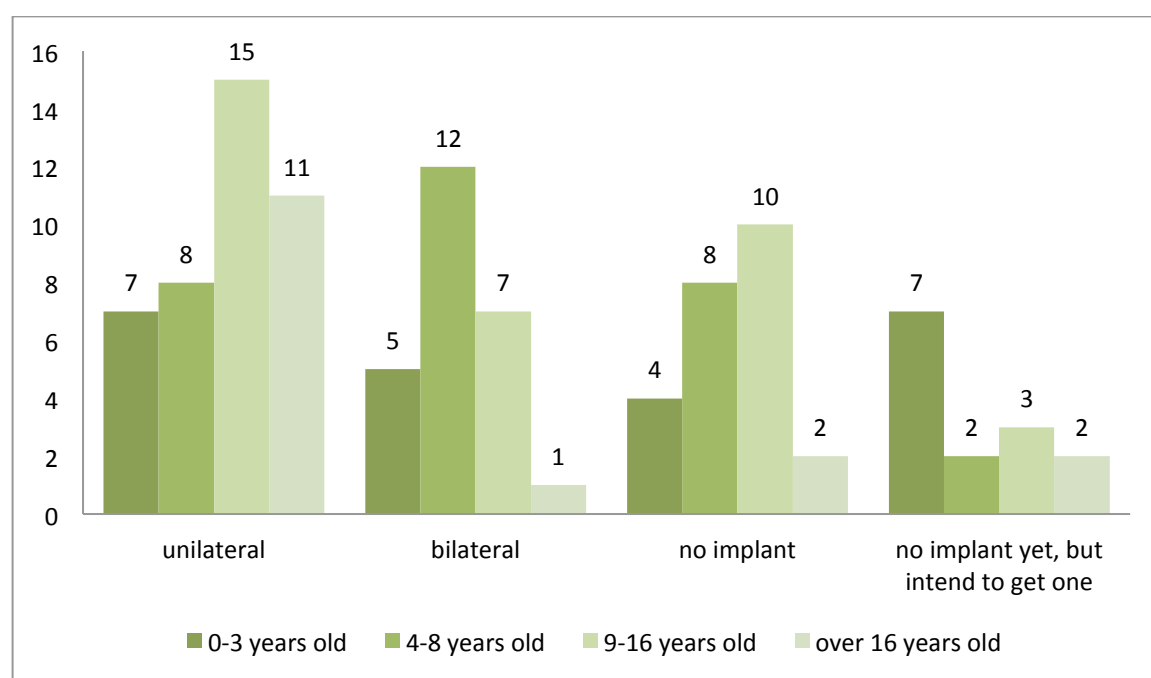
The majority of children represented in this survey have one or two cochlear implants (65%). Of the children who currently have an implant, 39% have bilateral implants.

Table 7. Does your deaf/hearing impaired child have a cochlear implant (CI)?

<i>Cochlear implant status</i>	<i>Responses</i>
yes – unilateral (in one ear)	38 (40.00 %)
yes – bilateral (in both ears)	24 (25.26 %)
no	21 (22.11 %)
not yet, but intend to get one	12 (12.63 %)
Total responses	95 (100.00 %)

Results of cochlear implantation status by age category are shown in table 8 below.

Table 8. Cochlear implant status per age category



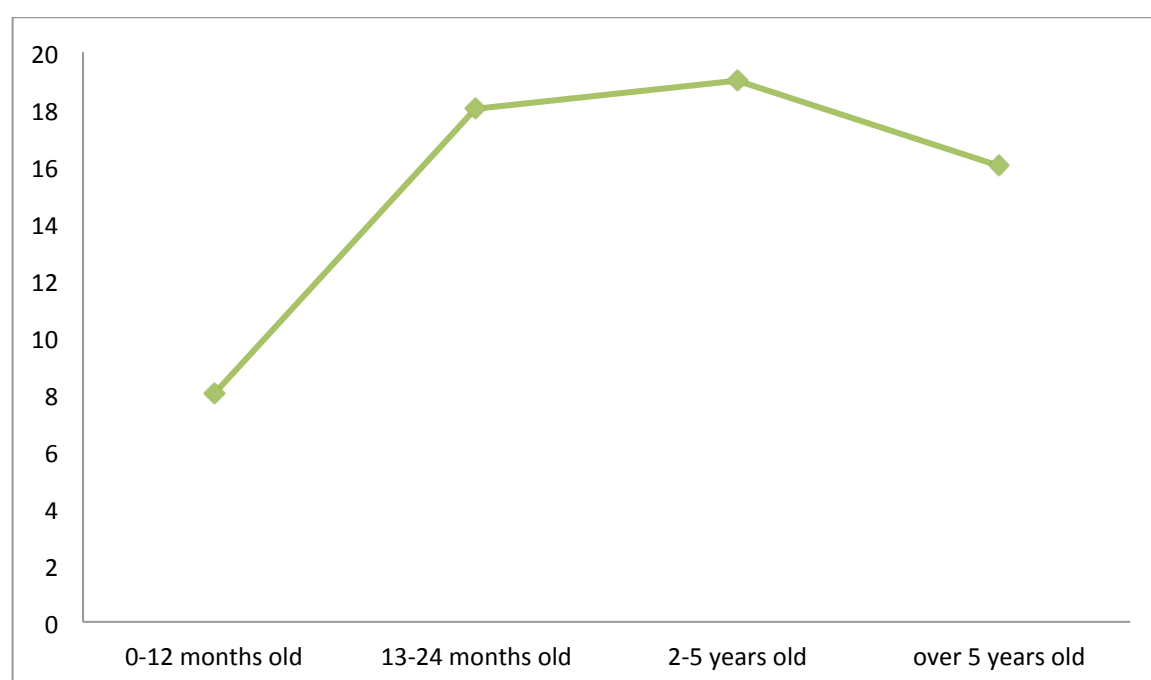
The rate of cochlear implantation in this sample is proportionally highest in the 16 and over age category (75%)⁴ and lowest in the 0-3 category (52%), which however has the highest rate of intention to get a cochlear implant (30%).

⁴ The age group 16+ years might be over-represented in relation to actual prevalence of CI in this age group, as a result of one source of survey dissemination being through CI provider programmes.

Exactly half of the children with bilateral implants were in the 4-8 years old category. Children with bilateral implants represented 40 % of responses in this age category, compared with 21% with a unilateral implant.

The survey asked about the age of the child when they first received a cochlear implant. The results are shown in table 8. This table shows that just under 60% of children were between 1 – 5 years old when they received their first cochlear implant, with just under half of these being between 1 – 2 years old. Fewer children in the sample (13 %) received an implant before they were 12 months old. Slightly over one quarter of the respondents' children received their first implant after the age of 5.

Table 9. Age of first implant



<i>Age when first implanted</i>	<i>Responses</i>
0-12 months old	8 (13.11 %)
13 – 24 months old	18 (29.51 %)
2 – 5 years old	19 (31.15 %)
Over 5 years old	16 (26.23 %)
Total responses	61 (100 %)

Comparing the responses for the different age categories in our sample shows that none of the children who are currently over 16 years old received an implant before the age of 2; whereas 75 % of the currently 4-8 year old group and 58 % of the 0-3 year old group were implanted before the age of 2. Although our sample may not be representative of the population, these results reflect the trend of earlier implantation. Most of those reporting bilateral implantation were in the 4-8 year old group.

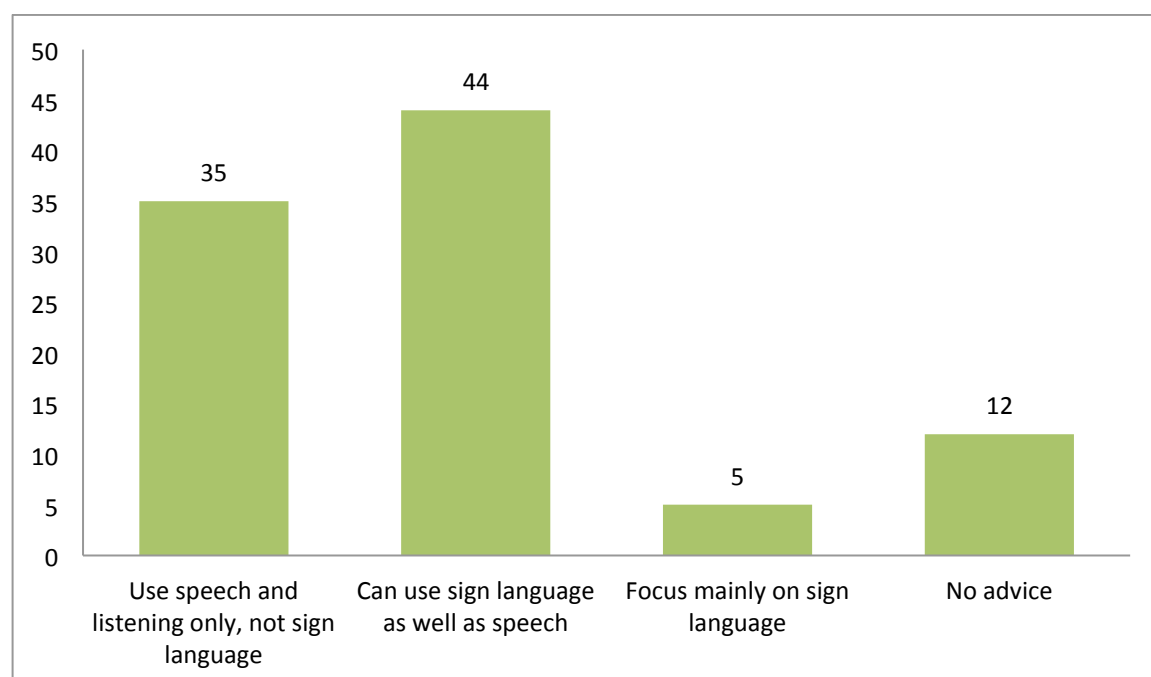
3.2 Advice about developing language and communication

3.2.1 Advice from Adviser or other professionals when child was a pre-schooler

Respondents were asked about the advice received from professionals about developing language and communication with their pre-school child.

A sizeable group (12.5% of the total respondents) stated that they received no advice around language development from Advisers or other professionals. The largest category of respondents received advice that suggested both sign language and speech could be used. Just over 5% were given the advice to focus mainly on sign language, while over 35% of respondents reported being advised against the use of sign language.

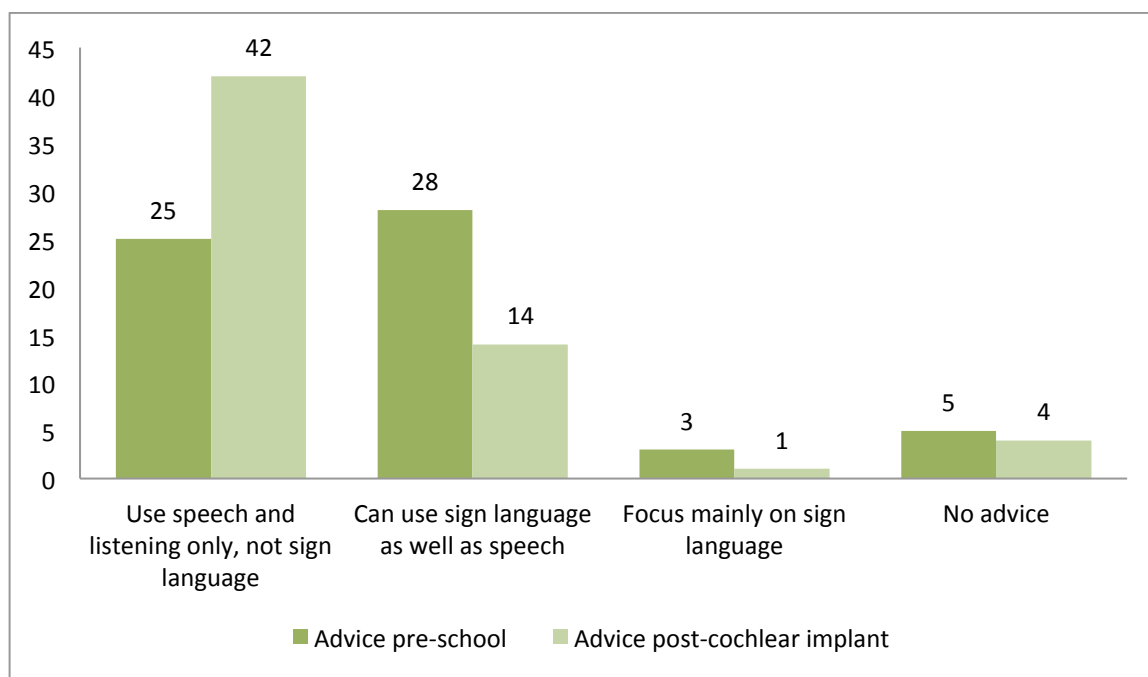
Table 10. Advice pre-school about developing language and communication with your child



3.2.2 Advice from CI Programme

For those respondents who indicated that their child has a cochlear implant, the advice from the CI programme about developing language and communication with their child was also recorded. Table 11 shows a comparison for this group of advice received during pre-school years, and specifically after implantation.

Table 11. Advice pre-school and advice from the CI programme after implantation about developing language and communication with your child



The emphasis on speech and listening in advice given by the CI programme is higher (69 %) than that given by the Adviser on Deaf Children and other professionals (36 %). Less than one quarter of respondents received advice that sign language could or should be used with their child after getting a cochlear implant.

The great majority of respondents who received the initial advice to use speech and listening only, received this same advice from the CI programme (92%). However, of those respondents who were advised that they could use sign language as well as speech with their pre-school child, 60% were advised to use only speech and listening after the child received a cochlear implant. Only one out of the three respondents in this survey who were initially advised to focus mainly on sign language continued to receive this advice post-implantation.

3.2.3 Comments on advice

Respondents were invited to comment further on the advice they received. 47 responses to this question were received. A selection of representative comments is shown in Table 12.

Overall, parents who predominantly use speech with their child were more likely to be satisfied with the advice they received.

Nearly all responses from parents who predominantly use sign language mention either that sign language was actively discouraged, that it was not mentioned, or that the parents got the impression that it was not encouraged. Only one comment noted support for signing with speech.

Table 12. Parents' comments on advice received about language and communication with their child

Theme	Representative quotes
Advice was impartial	"All professionals have been super impartial. Once we as parents made a decision, they supported us 100%." "We got great advice from the professionals around us - we weren't "told" what to do whether to do sign language or not, but we choose to talk more so we have opted not to learn sign language yet!"
Advice was helpful	"We have only ever received positive information about sign language supported with speech. Our daughter has lost her hearing due to a neuromuscular condition. She understands a lot of sign, and lip reads extensively but it unable to sign proficiently back due to upper limb weakness. When sign is used in a sign supported way in conjunction with speech she is able to follow a face to face communication well. " "We were part of the Hearing House program and did weekly therapy sessions. The support and advice we received from the Hearing House was outstanding." "Every step after the CI, they have given advices in numerous ways, therefore we are so happy to be a part of it."
Advice and choice made were based on the individual child's circumstances	"This advice was based on the individuality of our son and what was going to work best for him as he is also on the autism spectrum. The advice has proved the right thing for us so far." "Because my child was able to hear at birth and started to lose her hearing at 5, leading to total (non augmented) deafness by age 12, she had already learned to speak effectively before deafness." "We were aware that we could learn sign ourselves but made a very conscious decision as to what was best for our family in the current circumstances that we were in - that we only had the capacity to focus on teaching 1 language to our child and we felt most able to help our deaf child with our first language rather than trying to put what little spare time and energy we had at the time into learning a whole new language (sign) and trying to teach that to our child when we were total novices in that second language. We were playing a major game of catch up with our child's language and given the 2 year gap we had to make up - we wanted to keep the situation simple and just focus on catching up with one language."

Parents made a choice that went against the advice given	“Because she had the implant late it was impossible to use just speech and listening as she missed enormous amounts. She was accessing most of her information from signing. After a while we chose to continue to sign as we felt it was her right to be able to easily access the curriculum. We felt pressured whenever we returned to the CI team to try and show she was making progress with her listening skills and speech. She no longer uses the cochlear implant, she gradually stopped using it when she was at high school as the noise levels gave her very bad headaches.” “Initial advice to sign was based on audiogram alone, not family choice. Chose to ignore advice and follow a speak-only programme. Child is fully oral.”
Different advice from different sources	“Advice was variable from different sources - CI programme -at that time- advocated speech only. Advisors and Teachers of Deaf were more inclined to suggest we go with what worked for us.”
Reasons given for advice to maximise speaking / sound input after cochlear implant	“Advice to make sure that all sound was "meaningful" (no radio on in the background etc), so that she could make an association with the sound and what it related to.” “The reason for the advice after implantation was to help our child learn to listen with the CI's.” “My daughter has only recently received a cochlear implant and we had switch on 2 days ago. Advice we have had thus far has been that we can still use sign support, but to use spoken language only when we're doing our habilitation exercises until my daughter adjusts to the implant.”
Signing not actively discouraged, but not promoted or portrayed positively in advice	“We were not told not to use sign language but got the impression they did not want you using it and certainly were not encouraged.” “We were fortunate that SCIP didn't tell us NOT to use sign, however they don't strongly advocate for using sign, although the habilitationist did acknowledge our daughters signs and did use sign with her as well where appropriate which we were grateful for.” “I suspect the reason I was not given advice with the younger 2 of my 3 children is that from before they were identified, I was clear about my intention to make sure they are raised with the best exposure possible to both NZSL and English. I was simply told "That's good, for now". Though I have been told not to show a preference for signing (advice I choose to ignore), it hasn't been

	completely discouraged like it was in my childhood. All of the professionals I have encountered so far have seemed to tread fairly carefully - possibly because I have had interpreters there for all appointments so it was always clear we will sign. “
Signing actively discouraged • cautions about loss of resources if parents choose to pursue this option. • because of negative impact on speech	“I was just advised if I decided to go with NZSL I would not be entitled to an Advisor. At the time I was interested in NZSL but was very new to the Deaf World and so did not understand the workings of the education system around NZSL etc.” “SCIP advised speech only, and a vague threat that funding could go if sign became too much. RTD Van Asch and deaf adviser both encouraged sign.” “I contested the advice to use only speech and listening to communicate but they insisted that if I didn't it would slow down his progress in learning to speak. This advice has isolated my child from the Deaf community and I feel it has also made life more difficult for my child because he feels he does not belong in the hearing world or the Deaf world. He sits in between.”
Lack of advice and resources about sign language / visual communication options • Lack of resources to learn NZSL • Regrets at not being advised about sign language earlier	“No resources available to learn NZSL. We wanted wider family members to be able to learn, but nothing was available.” “Some training /advice regarding visual communication early on for me and my husband and for all teachers involved would have made a great difference I believe.” “Although we brought up our child to be oral in hindsight I think it would have been beneficial to have had more exposure and literature on NZSL especially as we had previously had no knowledge of the deaf community.” “We come from a hearing family so knew nothing about sign language. We were told not to use sign language with our son. He spent the first 15months in total silence with no form of communication while we waited for hearing aid trials and a cochlear implant, no English nor NZSL. We wish that we had started signing straight away so that he would at least have some form of communication. “ “In hindsight I am annoyed that I wasn't encouraged to use sign language as I understand research shows that it does not hinder the ability to learn spoken language. Our AVT therapist at the time had no idea of what it was like

	to raise a deaf toddler who would often refuse to wear her CI, couldn't use it in the bath etc and had night terrors. We used our own clumsy family sign language out of necessity during these years. We continue to use basic sign language every day."
Not enough advice / guidance about communication – parents left without support	"Mainly speech, and exercises with speech, really I didn't receive much rehabilitation at all." "We were pretty much left in the dark. However, there was an information pack we were given by our deaf advisor which contained a book about finding out that you have a deaf/hearing impaired child, and it covered options for communicating with him." "My girl has had a very supportive deaf adviser. Few months ago we got a letter informing that all advisors have been taken and we will be having a support from Kelston Auckland (we are in Hamilton). We never heard of anyone who is trying to contact us till today. My girl is in the process of getting a cochlear implant which is a very big decision/step for her. Taking her adviser away feels like having no one along side really. Please we do hope something will be done about it."
Advice from other parents more helpful than 'official' sources.	"Most of the helpful advice I got when both my children were diagnosed was from another parent of a deaf child. It was very difficult to get support from WINZ, Ministry of Education and the hospitals. We only got support from all services for 2 years. My children are now 7 and 9 and they both have different types of hearing loss. We receive no funding and support from WINZ and the Ministry even though my younger son's hearing loss has worsened in 6 months and he is now completely deaf in one ear. The Auckland Parents of Deaf Children community and Kelston Deaf Education Centre have been very helpful and my children have learnt sign language in their classes."

3.3 Communication

3.3.1 Communication at home

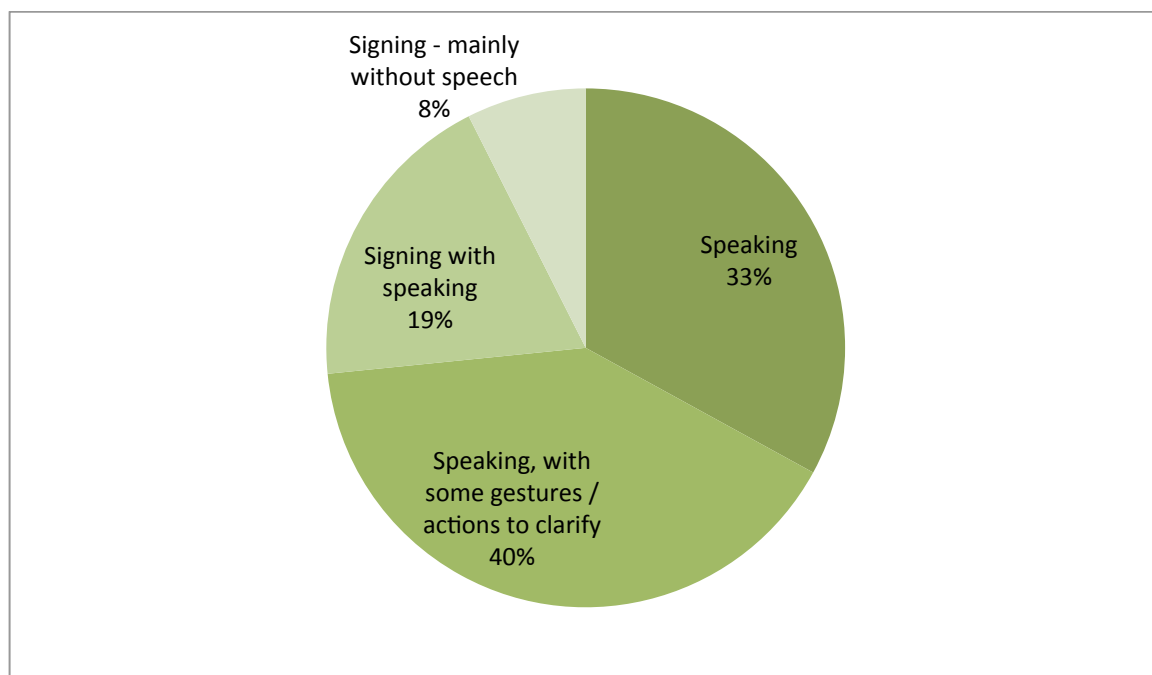
Parents/caregivers communicating with the child

The survey asked respondents to indicate how they usually communicate with their deaf/hearing impaired child at home.

One-third of respondents communicate by speech only. A further 40% mainly speak but use some gestures or actions to clarify. The remaining respondents use some form of signing, with 19% using signs along with speech, and 8% signing mainly without speech.

A comment was made that the response options did not describe a situation where parents use speech when the child is wearing a cochlear implant, but sign in situations where the implant is not in use.

Table 13. How do parents usually communicate with their deaf / hearing impaired child at home?

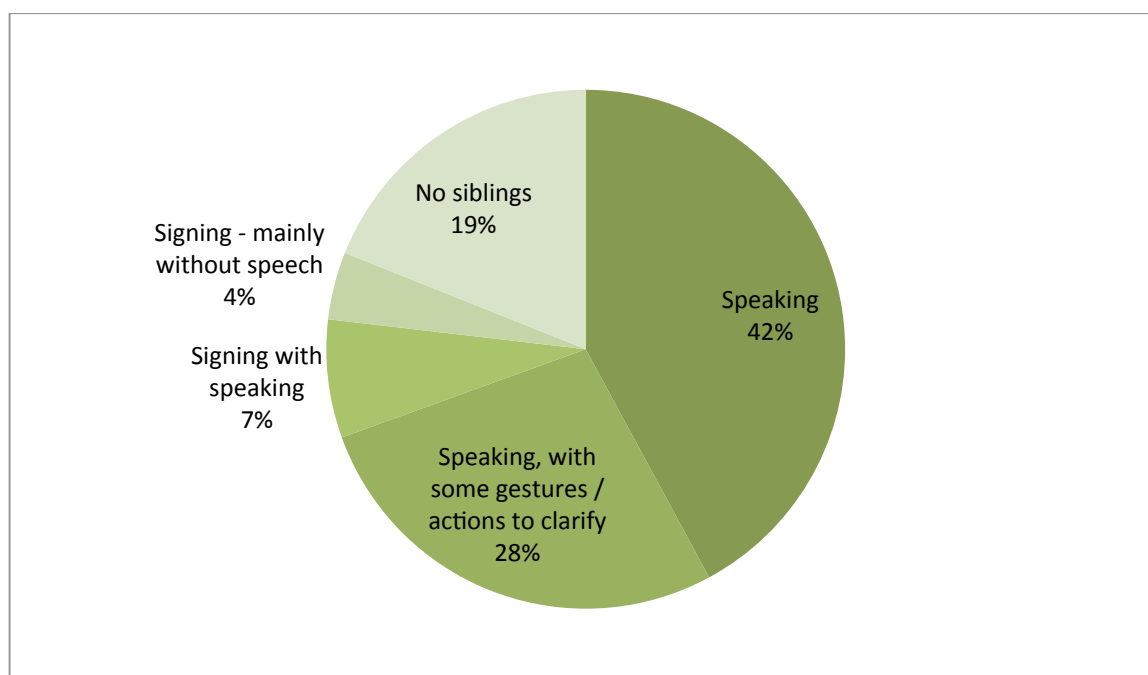


Siblings communicating with the child

Proportionally, siblings of a deaf/hearing impaired child in the survey sample are more likely to use speech alone than the parents. 42% of siblings usually communicate with the deaf child in this way. A further 28% use speech with some gestures / actions to clarify. 7% use signing with speaking, and only 4 % of siblings sign mainly without speech.

Finally, in 19% of families the deaf child has no siblings.

Table 14. How do siblings usually communicate with the deaf / hearing impaired child?

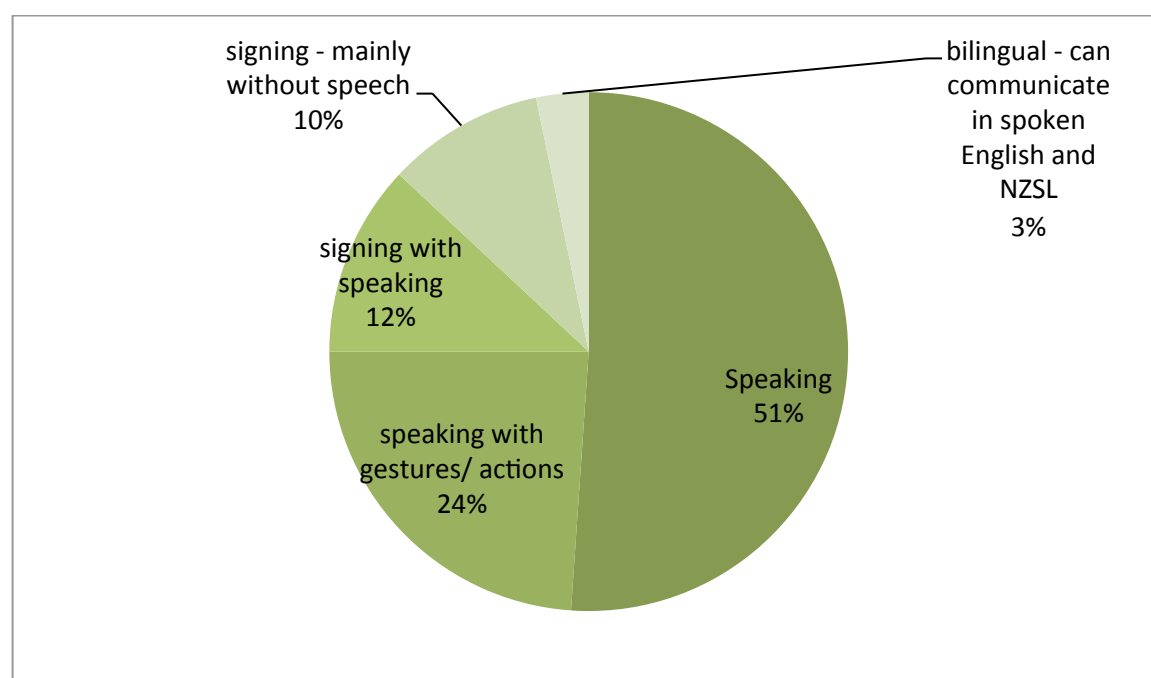


A comparison of the results of these two questions about communication at home shows that 25 families sign (with or without speech) with their child. However, in 14 of these families the parents are the only ones at home to communicate regularly with the child using sign language.

Deaf / hearing impaired child's own communication

The survey asked which communication mode best describes the deaf child's strongest way of expressing themselves with people in their family. Around half of the responses (51%) indicated that the child's strongest way of expressing themselves was through speaking. A further quarter of the children used speech with some gestures/actions. The remaining quarter used some form of signing. Within this category, 3% of children were said to be bilingual in that they can communicate in spoken English and NZSL, while 10% of children use signing without speech and 12% use signing with speaking.

Table 15. Deaf child's strongest way of expressing themselves with people in their family



Comparing these results with the parents' / caregivers' usual mode of communication with the child showed that many parents are likely to supplement speech with gestures / actions or with signs (42% report speaking only) even when the child does not use gestures or signs (51% reported as preferring speaking only). The survey did not ask about the child's comprehension of different communication modes separately from his/her strongest way of expressing themselves. This may account for the difference in results.

Cross-tabulating the respondents' own hearing status with the child's strongest communication mode showed that the children of a deaf or deafblind parent used signing with or without speech; the children of a hearing impaired parent used speech or signing with speaking. The three children who were said to be bilingual had hearing parents.

3.3.2 Families who use sign language

The decision to use sign language

If respondents indicated that they usually communicated with their deaf child through signing (with or without speaking), they were asked to comment on the decision to use sign language with their child. 18 responses were received. Overall, comments emphasised the greater accessibility of communication and learning through the medium of sign language, and some noted the role of NZSL in the social identity of deaf people. A sample of typical responses are shown in table 16 below.

Table 16: Why did you decide to use sign language with your child?

Theme	Representative quote(s)
Signing is the only communication option: other communication modes would not work or have already been tried and were seen not to work well for the child	"Tried speech only but child couldn't understand it was very upsetting. So we started using gestures which were understood so learnt signing awesome results." "It was our only option. Without sign language, my daughter would have seriously struggled to communicate at all and vice versa, family members would have struggled to communicate with my daughter."
Signing is the best communication option: Evidence that deaf children learn more easily with sign language	"We met other families, one doing this (speech and sign) and one just using hearing aids and speech. We agreed the Deaf child signing was learning more. "
Advised or decided to use signing - Because of the child's profile - To establish early communication	"Our daughter was diagnosed at 7 weeks old, she had other health issues so we weren't sure whether she could have a CI or if it would be successful so started signing with her straight away. " "She is still under 12 months and is profoundly deaf (with no hearing at all) therefore it was advised that we use sign in our everyday language with her. " "To communicate with and teach my son at an early stage."
Signing as part of wider communication - Signing to support speech development - To provide the child with a range of communication options	"Because there are some words and concepts our son couldn't say or understand. By having a sign he is grasping words & phrases a lot faster & is clearer in his speech." "It was a no brainer, she understands so much more when speech is supported by sign." "Our Deaf Advisor told us it would be very hard for her as she was so Deaf and to use everything, signing, speech (hearing aids) and the written word. "
Signing as a family language in Deaf families, therefore a natural choice	"Most natural for us as a Deaf family, parents already fluent in sign language." "Natural language, we went to deaf school they taught us oral, was not allowed to sign, but it's not working. We rather sign so I rather my kids sign as well NZSL is a language for Deaf people and it's so beautiful."
To provide the child with access to the Deaf community	"Because we realized that he is Deaf. He has friends who are Deaf. NZSL is their language. When he doesn't have his cochlear on he is Deaf. Without sign language we would not be able to communicate. Without sign language he would not have the freedom he has to be able to choose whether or not he wants to wear his cochlear."

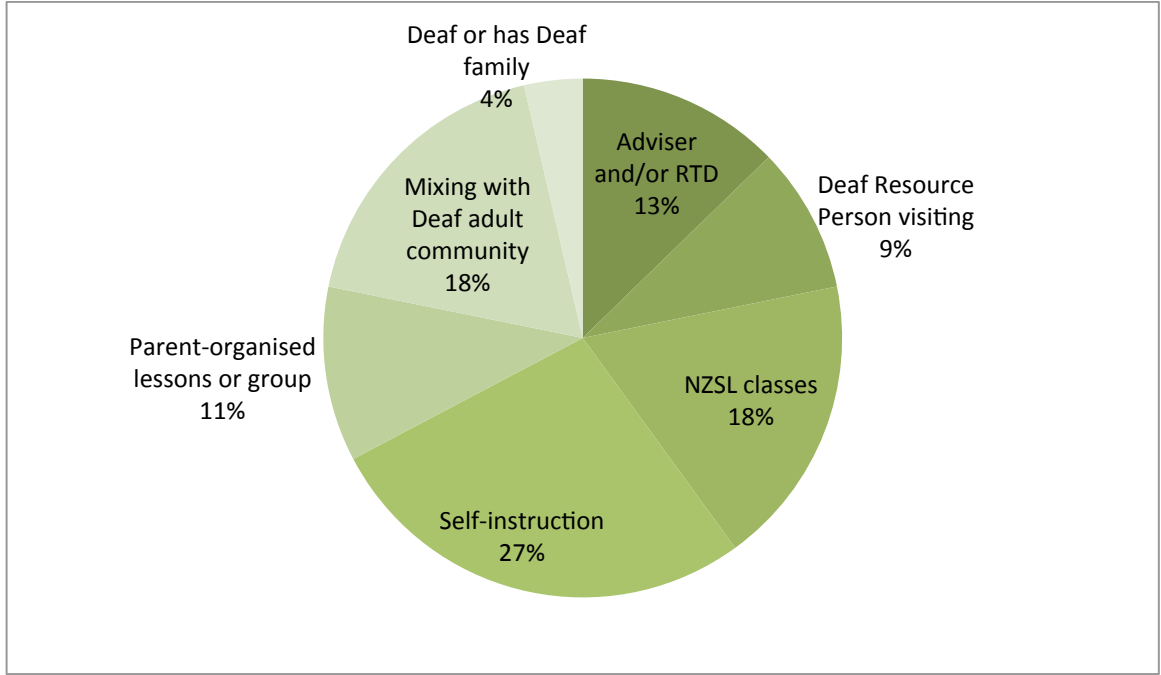
	"I want my daughter to have access to the Deaf community. She understands all my signing but doesn't sign back much. I'm hoping in her teens she will explore this part of her identity independently."
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Learning sign language

Respondents who indicated they used sign language were asked how they learned, or are currently learning, the language. This question was answered by 22 respondents. Multiple responses were possible. Apart from the 2 people who already knew NZSL because they were themselves Deaf or had Deaf family, all respondents indicated that they were learning sign language through more than one route.

Nearly one-third of respondents (27%) are learning through self-instruction using video and online resources. The next most frequently used routes were through mixing with the Deaf adult community or attending NZSL classes through an adult education provider or a Deaf organisation (both at 18%). 13% of parents are learning sign language from their Adviser on Deaf Children and/or Resource Teacher of the Deaf. 11% of parents organise their own lessons or groups, and 5 families (9%) are learning sign language through visits from a Deaf Resource Person employed by a Deaf Education Centre.

Table 17. How did you learn, or are learning, sign language?



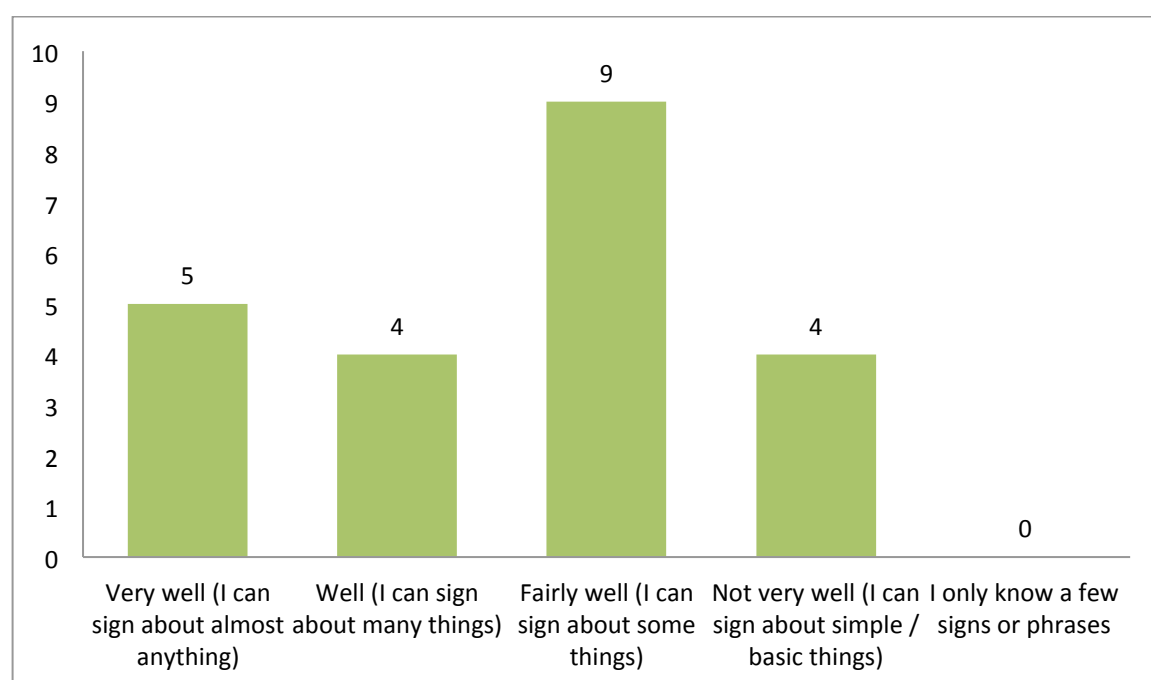
Sign language competency

Parents / caregivers who sign with their child were asked to rate their own understanding and use of sign language. Response descriptors were phrased in terms of functional ability to communicate, rather than in terms of language fluency or accuracy.

Productive

When asked how well they can sign, the majority (41%) of respondents indicated that they could sign fairly well, i.e. that they can sign about some things. 23% of respondents stated that they could sign very well, i.e. that they could sign about almost anything. 18% stated that they could sign well (sign about most things) and the same percentage of respondents said that they could not sign very well, i.e. they could sign about simple / basic things only. No respondents said that they only knew a few signs or phrases.

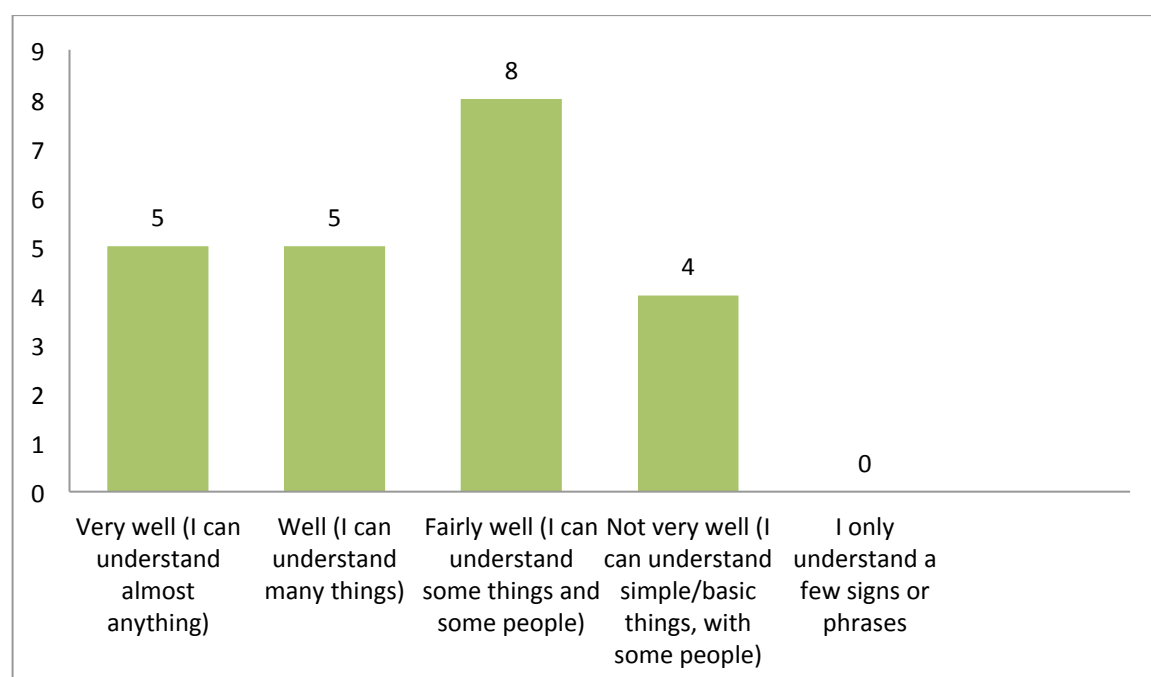
Table 18. How well can you sign?



Receptive

The question "How well can you understand signing?" did not specify whether comprehension was in relation to their own child or the signing of Deaf adults, as it was assumed that exposure to adult NZSL use may be limited for many parents. Respondents' self-assessment of their understanding of signing was comparable to their own ability to sign. 23% stated they can understand almost anything, and a further 23% can understand many things. 36% can understand some things and some people, and 18% can understand simple/basic things, with some people.

Table 19. How well can you understand signing?



3.3.3 Families who communicate through speech

The decision to use speech

If respondents indicated that they usually communicate with their deaf child through speech (with or without gestures / actions to clarify), they were asked to comment on their decision. 64 responses were received.

The question was phrased as follows:

“What is the main reason you decided to communicate only through speech with your child (not to use sign language)?”

Some respondents commented that the wording of this question did not reflect the reality of a decision to use speech, since they may at other times use signing, or they may have signed in the past but do not use that as their main communication mode with the child now.

“Your question is out of kilter with those before. I did not decide to “only communicate through speech” we are both but the more oral he heard/ lipread / spoke the better he got at oral vocab which meant his ability to communicate with “non signers” ie majority would make it easier for him thru life, now at age 21, we

see results of that . Your next question is, once again, biased in context so it delivers a certain response. ie Our son has used (and still does) [signs] from birth but was brought up with oral as well, so a CI at 9 yrs of age but still signs fluently and will use it all his life as well. “

“We DON'T! It was not a decision. It's just how things have worked out. We have followed the lead of our child. We use two different sign languages as well as spoken English, but our child prefers to use speech when she is wearing the CI.”

Other respondents did not comment explicitly on the wording of the question, but mentioned that signing as well as speaking is used although the main focus is on speech. Some respondents stated that their child might use sign language at a later stage in life, or that signing is an option they would consider if the child's hearing profile changes.

The most mentioned reason for the decision to (mainly) use speech was because this is the way that the family, and the wider community, communicate. Respondents strongly desired their deaf child to be a part of the wider community and some felt that sign language would limit opportunities to communicate with a wide range of people. Some comments mentioned a desire for their child to “have a normal upbringing” or to “be like the rest of our family”. Other comments felt that encouraging a deaf child to speak helps them to “cope” or “manage” better in a hearing world.

Some respondents commented that learning / using any language requires a rich language environment and as a hearing, speaking family with limited access to sign language, they would not be able to offer their child a suitable environment for developing sign language.

Many comments reflect a point of view that signing is an alternative that should only be used where speech is not an option. For example, comments mentioned that the child did not ‘need’ to sign because they could ‘cope’ with speech. Such comments mostly referred to children with a slight or progressive hearing loss.

A small number of respondents (7) stated that they had been advised against signing or were not told that signing was an option.

Further themes from the responses are shown in Table 20.

Table 20. Main reason to communicate only through speech (not to use signing)

Theme	Representative quote(s)
The family uses speech and does not know sign language	“everyone in the family is hearing and she's the first deaf person we know; no one in our family/relatives/friends know sign language.”
The wider community is hearing / speaking: want the child to	“So she was like the rest of our family and life we live.”

- fit in with the hearing world - Be like hearing peers - Attend a mainstream school	"I wanted my child to participate as fully as they could in the community they were likely to be a member of, whether that was school, sports, work, friends etc. I did not want to limit their community to only signing people." "We wanted him to interact with speaking people and fit into a hearing environment and have a normal upbringing like any other child." "Because I wanted my child to be part of mainstream schooling, and also so she could communicate with our large extended family, all who have no experience with sign language."
Teaching the child to cope / be able to mix in a hearing world	".... I want her to be able to participate fully in the world, for which you need good English. ..." "I feel that my child will need to have as much speech language as possible to be successful in the hearing world as an adult." "To teach them to cope in a hearing world. Being able to speak will be an advantage later on if they go completely deaf. Also, neither of them have hearing aids or cochlear implants so it's not obvious on first appearances that they have hearing loss, their teachers and friends can be forgetful. So they need to learn to be independent and be their own advocates when I'm not around to help them."
The signing community is small and signing would limit interaction to a small group	"We wanted our daughter to be able to be involved at communicate in both the spoken and unspoken communities. The technology is there to be able to give her access to sound and we believe it is the best option for her and for our family. We want to give her every opportunity to participate fully in her community, and initially we felt that sign language would be isolating for her. We are still all learning sign language as a family and will continue to do so, because at the end of the day our child is still deaf. "
Speaking (without signing) is the best way to develop spoken language	"We are a speaking family. Also the research supports this is the optimal way of developing spoken language." "To encourage language development."
Advised / decided to use speech - Because of the child's profile - To establish early communication	"To keep have her English language clear, wide range of vocabulary from a young age, ready for when she does lose her hearing." "We believe the more you sign, the less you talk, and we want our children to learn to talk before we learn sign

	language at a later time.”
Advised to use only speech, or advised against using sign language	“Because that’s what we were told to do by the professionals”. “Because the so called experts insisted I not sign. I kind of continued anyway until my son told me to stop he found it embarrassing.” “Because unaware of signing option early on.” “We were advised against using sign language by our AVT therapist.”
Signing not needed - Child has already developed speech - Child has a moderate hearing loss	“Not deaf enough.” “Our child has not had the need to use signing. Her hearings aids were sufficient, until both ears began fluctuating hearing loss at different times. It was suggested that signing may be an option or getting a cochlear implant if she was accepted into the programme. She now has an implant in one ear which has overcome this, whilst the other still fluctuates periodically.” “His loss has been progressive and we have always managed with speech only.”
Child prefers speaking	“... We have followed the lead of our child. We use two different sign languages as well as spoken English, but our child prefers to use speech when she is wearing the CI.” “Both of my children could hear well enough when they were younger. As the years went by they both had more severe hearing loss. Both of my children did not want to learn sign language.”
Difficult to access NZSL classes / resources to learn sign language	“Difficulty in accessing NZSL classes. Discussions with other parents of deaf/ hearing impaired children who said that they had been discouraged from using sign language. However, my son is now keen to learn as he does not like being so reliant only on a hearing aid.” “Inability to get traction learning and lack of accessibility of courses.” “We don't know enough sign language to fully support our son.”

3.3.4 Future use of sign language

Expectations of child's use of NZSL at any later time in their life

Respondents were asked whether they thought their child might use NZSL at any later time in their life. Just under half (49%) of the respondents said that this was likely. A further third (34%) was unsure. 17% of respondents felt that it was unlikely that their child would use NZSL in later life.

Table 21. Likelihood of child using NZSL at any later time in their life

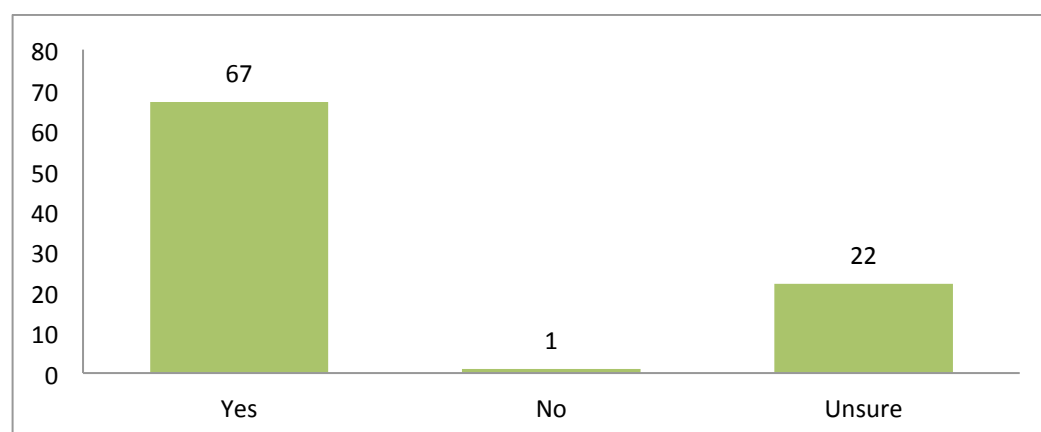
<i>Likelihood of using NZSL in later life</i>	<i>Responses</i>
No – unlikely	15 (16.67 %)
Yes – likely	44 (48.89 %)
Maybe – unsure	31 (34.44 %)
Total responses	90 (100 %)

If these results are compared with the percentage of children who use sign language at present, it can be seen that nearly double the current number of signing children are seen as likely to use sign language in later life.

NZSL as a school curriculum subject

When asked “*If in the future your child attends a school where NZSL is taught as a language option in the school curriculum, would you want your child to participate?*”, a large majority of respondents said that they would want their child to take part (74 %). 24% were unsure. Only one respondent would definitely not want their child to participate in NZSL as a subject at school.

Table 22. Would you want your child to participate in NZSL classes as a language option in the school curriculum?



3.3.5 Contact with other deaf / hearing impaired people

Contact with other deaf / hearing impaired children

To investigate possible transmission routes of NZSL outside the family, the survey asked whether the deaf child had contact with other deaf/hearing impaired children.

A small majority of children had occasional contact with other deaf/hearing impaired children (around 40%). A further 37.5 % of children had regular contact. The remaining 23% of children did not have any contact with other deaf/hearing impaired children.

Table 23. Contact with other deaf/hearing impaired children

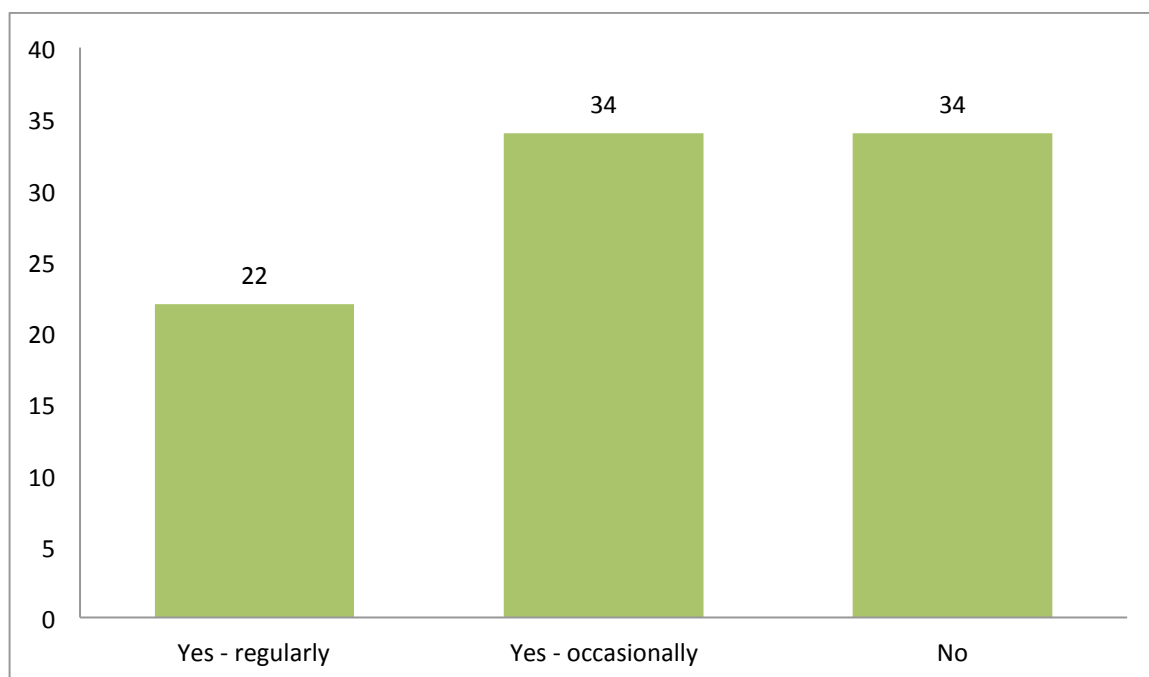
Contact	Responses
Yes – regularly	33 (37.50 %)
Yes – occasionally	35 (39.77 %)
No	20 (22.73 %)
Total responses	88 (100 %)

Broken down by the child's preferred communication mode, results show that nearly all children who signed (with or without speech, or bilingual) had at least occasional contact with other deaf / hearing impaired children. One signing child did not have any contact with other deaf children. Of the children who mainly communicated through speech, 25% had no contact with other deaf children.

Contact with deaf / hearing impaired adults

Fewer children have contact with deaf adults than with other deaf children. 38 % of respondents and their children have no contact with deaf / hearing impaired adults at all. A further 38 % have occasional contact, and a minority of respondents (24 %) have regular contact.

Table 24. Do you and your deaf child have contact with deaf / hearing impaired adults?



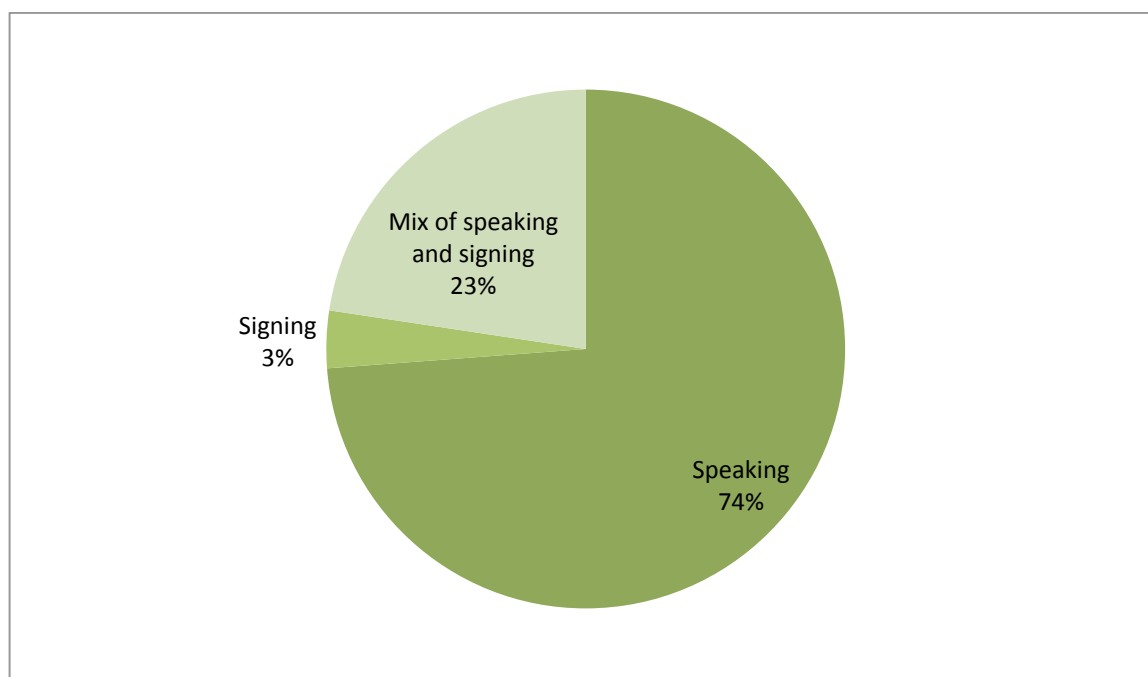
Of the 34 children who do not have any contact with deaf / hearing impaired adults, 18 (just over half) also do not have any contact with other deaf/hearing impaired children.

Comparing the child's strongest way of expressing themselves with whether they have contact with deaf / hearing impaired adults shows that children who sign (with or without speaking, or bilingual) were more likely to have some contact with deaf/hearing impaired adults. Only 2 children in this category did not have any contact with deaf adults; 9 had occasional contact and 10 had regular contact.

3.3.6 Communication at childcare or school

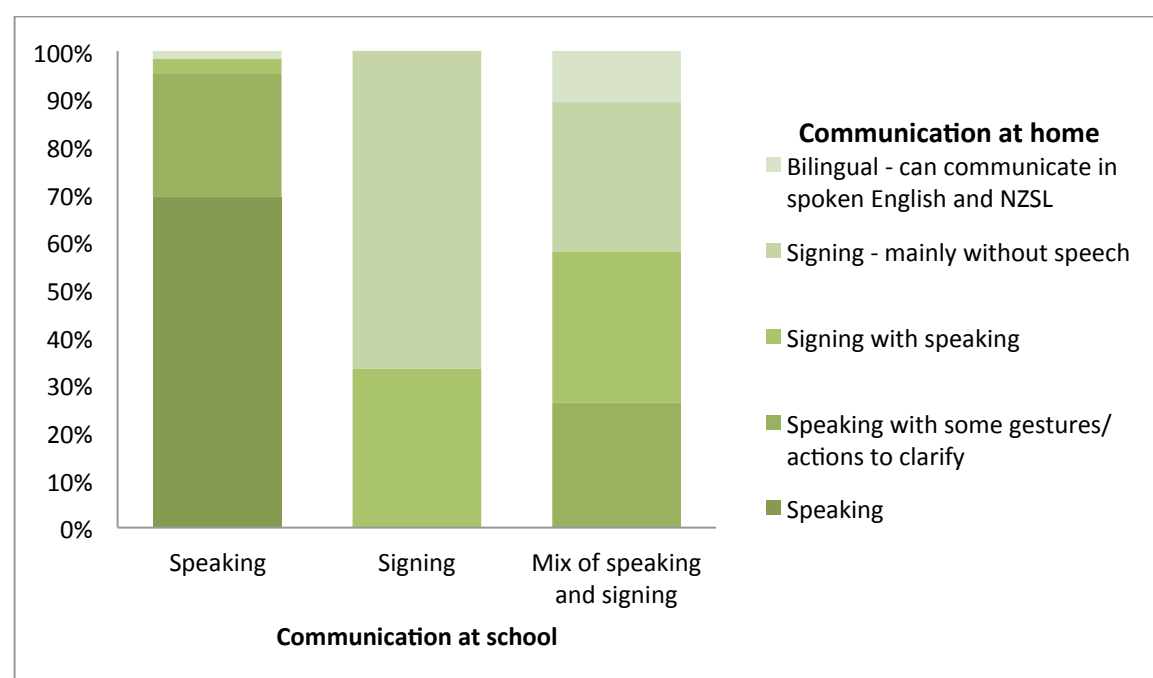
This question asked about the deaf child's main way of communicating at school or childcare. 84 respondents answered this question as compared with 90/92 for previous questions. Results are shown in table 25.

Table 25. Communication at school



A comparison of the child's communication at school and at home shows that the proportion of children who mainly use speaking at school (74%) is significantly higher than at home (51 %). The category of children who use a mixture of speaking and signing at school was made up of children who use a variety of communication modes at home, from speaking with some gestures / actions to clarify (24 %), signing with speaking (32 %), signing mainly without speech (32 %) and bilingual (11 %). Only 25% of children who sign mainly without speech at home communicated in the same way at school; the other 75% used a mixture of signing and speaking. No children who use speech at home use signing at school.

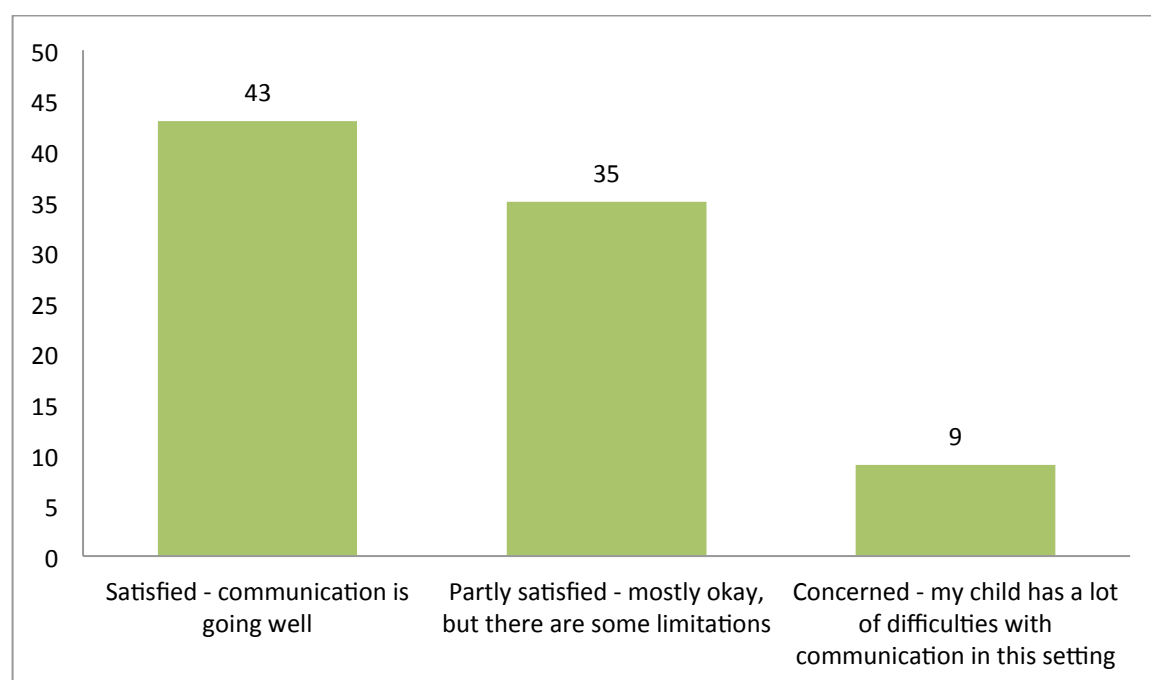
Table 26. Comparison of communication at home and at school



3.3.7 Satisfaction with access to communication at school / preschool

Roughly half of the respondents were satisfied with their child's access to communication at school or preschool. 10 % had concerns and felt that their child had a lot of difficulties with communication in the school or preschool setting. The remaining 40 % were partly satisfied but felt there were some limitations.

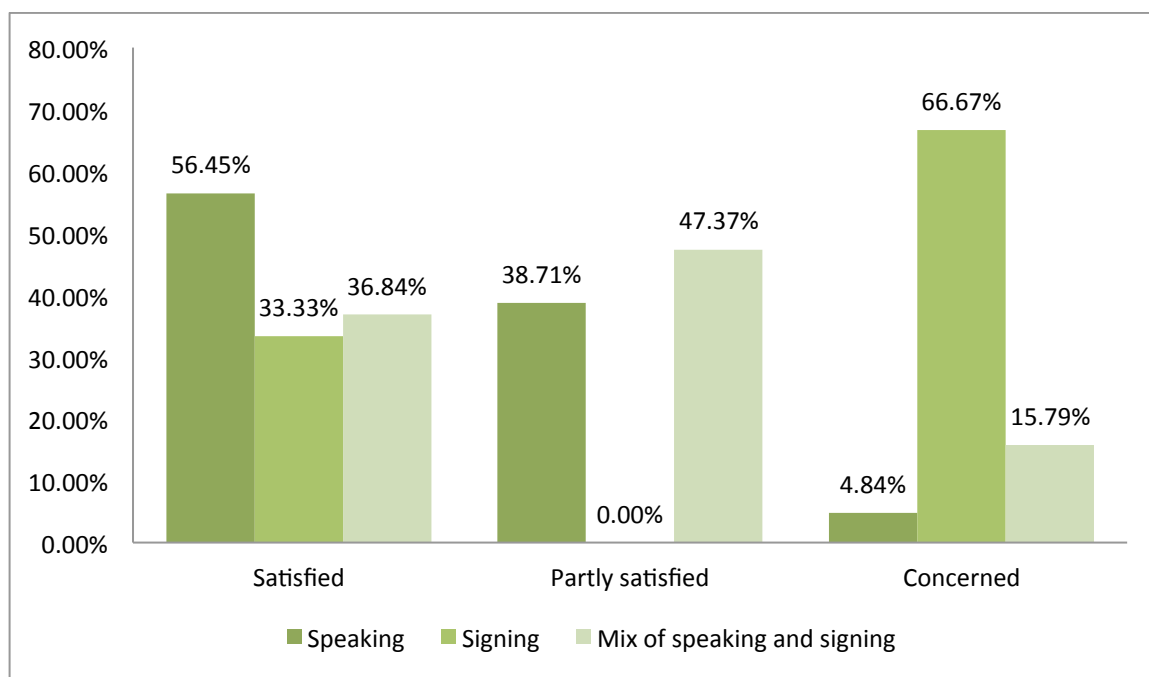
Table 27. Satisfaction with access to communication at school / preschool



Further analysis shows that satisfaction is highest in the group of respondents whose children communicate through speaking at school (56%); however, a further 39% of this group are only partly satisfied and 5% are concerned.

The group of respondents with children who sign at school were the most likely to be concerned, with 67% of parents of signing children expressing concerns compared with 5% of parents of children who speak at school or preschool and 16% of children who use a mixture of signing and speaking.

Table 28. Parental satisfaction grouped by child's communication at school



3.4 Language Goals

3.4.1 Goals

Respondents were asked to describe their language goals for their deaf/hearing impaired child: for example, how they imagined their child to communicate with others in 10 years time and as an adult.

85 responses were received to this question.

9 comments (9%) focused on broader communication or social goals without specifically mentioning speech or sign language. Of these responses, 5 mentioned the child's choice and access to a range of communication options as the main factor: for example,

"I hope that he communicates in the language of his choice."

"For our son to feel like he is understood & able to be successful in what ever he chooses to be. "

Consistent with responses to previous questions about current communication of the deaf child and their family, the majority of responses stated language goals related to speaking.

32 responses (38 %) explicitly stated that communicating only through speech was the goal, whether specifically around clear speech or more broadly around communicating in the language spoken by the mainstream community. Within this group, 7 respondents had as

their goal for the child to be living a “completely normal life”, “just as any other person”, to “speak as a fully hearing person” or to “operate just as we do”.

9 respondents in this category mentioned cochlear implants, hearing aids or future technology developments as a reason for their child’s communication through speech being both a goal and a possibility.

5 respondents commented on their child’s current age-appropriate communication in spoken English and how this was envisaged to stay the same in the future. By contrast, a further 5 respondents commented about concerns or fears they had about their child’s communication or social interaction in the future.

3 responses mentioned that while the child was expected to continue to communicate through speech, the parents / caregivers wondered if access to signing would have been a better option.

4 respondents had speech supported in the short term by signs or gestures as a language goal.

18 respondents (22 %) had bilingual goals and expected the child to become fluent in both spoken and sign language. The majority of these responses envisaged NZSL as a second language for children who currently mainly communicate through speech.

NZSL was the main language goal for 4 respondents, who mentioned that they expected their children to be part of the Deaf community but also be able to communicate with the hearing world.

2 respondents talked about their child’s additional physical or intellectual disability being a factor in determining language goals, with body language, gesture, communication boards as well as talking and signing being mentioned as communication modes.

Finally, there were 3 comments from parents of children who felt it was too early to tell what the child’s communication would be like in future, either because the child was still too young or because they were scheduled for a cochlear implant operation.

A further 2 comments were from parents whose children are over 18.

Table 29 summarises the themes outlined here and provides quotes representing each theme.

Table 29. Parents' / caregivers' language goals for their deaf/hearing impaired child

Theme	Representative quote(s)
Communication goals independent of a particular language / communication mode	"I want our daughter to be able to operate in both hearing and non hearing worlds." "To be able to communicate confidently with her peers and employers." "That our son can confidently get his message across and hold a conversation with anyone that he wants to whether it is through sign or language." "To be able to communicate at some level when not wearing hearing aids. To stay engaged socially. To be assertive to others when not following communications."
Speaking	"I image my 2 deaf children to be communicating with speech in 10 years from now and as an adult."
- Specific speech skills	"I want my child to be able to communicate her thoughts/ideas, her emotions, her opinion in a clear voice; for her to be able to enunciate the words that others can understand very well; for her to have age appropriate language." "We hope that he can continue to increase his vocabulary and clarity of speech. Ultimately we want him to be able to communicate clearly and quickly with anyone he chooses to. " "For my 8 year old, for him to continue to have access to all sounds and words and for his speech to be clearer. For my 1 year old, for us to get the correct hearing aids on him, for him to stop pulling them out, and then work hard to get language and sounds into him so he can start talking."
- With the aid of CI or other technology	"With his implants' help, he should be able to carry on with his life as a common person apart from when he goes for swimming or is sleeping and is without his speech processor. In very rare occasions he has had some minor issues with his speech processors." "I imagine them to be communicating well in

	the future as the C I allows them to hear very well. Well at least on the side of the implanted ear anyway.” “I hope that 10 years from now, when our daughter will be 21, that there will have been a breakthrough discovery in repairing damaged cochlear hairs and that they perhaps can be "regrown" or similar to give her full hearing, and allow her to participate in the hearing world as easily as others can now.”
- Because the child already meets age-appropriate spoken language goals	“My son's language has been assessed as significantly higher than his hearing peers. He is gifted academically and has read from a very early age, which has helped his ability to build his spoken language. I imagine him participating fully in life in whatever way he chooses without having language or hearing loss as a barrier.” “Her communication skills are the same as those of her hearing peers, so ten years from now and as an adult I expect they will be the same as those of her hearing peers still.” “My deaf children aged 5 have already met their language goals as they are significantly above their age in all aspects of their language. I expect them to continue communicating orally successfully for the rest of their lives.”
- To lead a normal life	“Our child will be able to listen and speak as a fully hearing person.” “Effectively communicating through speech, living a completely normal life.” “We intend our child to have full access to spoken language and to be able to operate just as we do in the hearing and speaking world.”
- With some concerns around language or social development	“I expect (my daughter) will use spoken language. I have some fears around her

	accessing learning at a tertiary level. She will not have her teacher of the deaf to advocate for her then and I don't know how well the tertiary institution of her choice will cater to her needs.” “Has big problems socially because of lack of confidence but can speak well. Needs to go out more.” “She is in year 9 now. She always strives for her best at school. At Primary school she maintained high school achievements. She is trying to cope the same in high school, with different teachers and new friends. Apparently she needs much more effort for that and seems to be frustrated. She can ask any teachers which she does, to wear the FM system to help her hear better the subjects. At the end of the class she would go finding the teachers to catch up what she has missed. This is very tiring of course. But on top of this, she can't do the same to her new friends. As such she finds it hard to get along or be in group conversation with friends and always find it hard to make friends. I am worried about her social and emotional development lately. I have gone back to Hearing House to reconsider a cochlear implant. But like 2.5 years ago I would leave it for her to decide. She has realised that this situation would be harder and harder for her in the near future... especially when she is in Tertiary study or at work. “
- Wondering if sign language would have been a better alternative	“He has always relied on speech but found hearing information increasingly difficult at college and has dropped out of University. Perhaps if he had used signing and lessons were signed he may have understood more.” “There has not been opportunity for my child to learn sign language as he has attended a regular school. I would like him to have had the opportunity to learn sign language and be able to communicate with

	deaf people who only sign. My goals are to support my child to be able to communicate as well as he is able."
Mainly speech, with some signs	"My goal for both my children is to be able to speak and have sign language/gestures to help if they are having trouble communicating. In 10 years' time both my children will be adults and I would like them to mostly be able to communicate by talking. They are both very bright and already have ideas of what careers they would like to do and need to know how to communicate well." "We hope our boy is happy to use both sign and speech but speech is the big thing at the moment as only early days with CI. Really speech is needed in "The Real World" as not many people know sign."
Bilingual	"My goals for my Deaf boy are that he will be bilingual. That he will be involved in both the hearing and Deaf worlds. " "We want her to have both options. Boating and swimming for example are time where the CI does not work. We also want her to feel part of the deaf community, so sign is important to us. Speech is also important so she can communicate socially with no NZSL people." "Our daughter's cochlear implants have been very successful; many people on meeting her remain unaware that she is deaf. However, even at her best she is hearing impaired, and without her implants has no sound perception at all. I would like to see her becoming fluent in sign as well as English." "I imagine my child to be a native communicator in spoken English. However, I want her to have access to NZSL as a second language. She recognises NZSL as part of her culture, even though she is not exposed to it a lot. I believe that having this access will

	give her better access to the deaf community as a whole, if she chooses to be a part of it. “
NZSL	“I hope that my daughter is able to sign fluently, identify and mix with the Deaf community but also to be able to live and communicate with the hearing world.” “Expect my child to achieve an appropriate literacy age level of literacy and numeracy and support her to keep up with her reading at home. She's already fluent in NZSL and is capable to reach her full potential. Can see her with some leadership qualities and as an advocate for her community since she is a native signer and from a Deaf family. Would expect her to travel extensively and learn about international Deaf communities. She will continue communicating in NZSL and other sign languages.” “Communication within the Deaf community who use NZSL is not a problem, and communication in general with the hearing population will continue to be difficult. There is not enough access for the hearing community in general to tuition, and even families of children who need to use NZSL struggle to learn to keep up with their child. This will always be a problem and will continue to isolate NZSL users in the community.”
Communication when the child has an additional disability	“My child has intellectual disabilities as well. Her mode of communication includes purely body language and this includes physically bringing stuff to me. I am currently frustrated with her current situation, that I am not setting goals for her at all. The school uses PECS, which is a picture or an object that is associated with something which my daughter has to hand over to a teacher aide. Then they hand her over what she is asking for.” “My son is not only hearing impaired, he also

	has cerebral palsy, his hearing is less of an issue than his ability to speak due to his limited control of his muscles in the mouth. I think my son will talk as an adult, probably not by 10 years old, he communicates in many ways - speech, gesture, communication board, sign."
Too early to tell	"Hopefully no different than any other child of the same age - but really unsure. It's a month by month as to how he's progressing." "Still my child is only 20 months, and he has got CI very recently, it's just under 2 months yet, so difficult to answer many questions mentioned here yet..."

3.4.2 What helps achieve language goals?

When asked what is helping them to achieve their language goals for their child, the majority of the 81 responses mentioned more than one kind of support.

Support from specialists and advisers was seen as helpful. The services / specialists mentioned included:

- RTD / Teacher of the Deaf
- AODC / Adviser
- Deaf advisers from Deaf Education Centres
- AVT / Hearing House
- Speech and Language Therapist
- Audiology
- Cochlear Implant team / habilitationist

The wider education setting was also seen as supportive to achieving language goals. Respondents mentioned:

- Ministry of Education
- Mainstream teachers
- School (mainstream and Deaf school)
- Teacher aid
- EAP meetings

Cochlear implants (including a second cochlear implant), better hearing aids and FM systems at school were mentioned by some respondents as the main thing that supports their child to achieve their language goals.

NZSL classes for the child and their family were also seen as helpful. Some parents are unable to attend classes and commented that they are teaching themselves sign language through the Online Dictionary of New Zealand Sign Language, the Ministry of Education's 'Thumbs Up' online resource and other books and online materials. Others commented on the role of Deaf friends and family. One respondent commented:

"Other Deaf people – the mainstream education system cannot support families with learning NZSL since the Deaf Resource staff roles were lost. Some parent groups are able to provide limited support with NZSL classes."

A significant number of respondents commented on the hard work that parents themselves put into their child's language and social development:

"We have great support at school, from staff, deaf educators, and students. We try to follow through at home. It's taken a lot of work."

"We are very dedicated parents who spend A LOT of time and energy teaching our child to talk. I am looking into formal study for NZSL."

"Nobody but me working with him."

The kind of activities that parents / caregivers believe helps the child achieve their language goals includes:

- Daily speech lessons
- Lots of talking and/or signing in all sorts of environments
- Reading
- Language saturation
- Talking about parent's own social experiences when young
- Using games / exercise books / teaching resources at home
- Working closely with RTD and other specialists
- Being an advocate for the child by being visible in the school

One respondent mentioned helpful and extensive support overseas along with concerns that the same level of support will not be available when the family returns to New Zealand.

3.4.2 Barriers to achieving language goals

The final question in the section about language goals asked whether parents / caregivers had come across barriers to achieving their language goals for their child. This question was answered by 70 respondents. 14 of these respondents (20%) said that they had not (yet) experienced any barriers.

Lack of support for NZSL

The most prevalent barrier mentioned was lack of support for NZSL. 15 comments (21%) were made about the difficulties families experience in getting access to NZSL classes due to timing, location and cost; having limited resources and curricula available to study NZSL themselves; and no classes targeted at children. Lack of teachers, teacher aids and support workers fluent in sign language at school and preschool was also mentioned as a barrier. One respondent noted the lack of sign language interpreters.

Lack of specialist support

Lack of specialist support (whether with technological aids or communication) was a common theme, with respondents noting difficulties in accessing Speech and Language Therapists and AVT as the main barriers.

Funding

Funding was mentioned as a barrier, with 2 comments about funding a second cochlear implant; 1 about the process of obtaining a replacement for a lost hearing aid (funded through ACC) and 1 about funding for teacher aid support “for a child who is seen as successful”. Another respondent stated:

“Our child, having been implanted in another country, was not originally eligible for ongoing therapies in New Zealand. We had to get a LAW CHANGED in order to get those much needed services.”

Issues around advice and access to services

Slow response from the medical profession, audiology services and the Ministry of Education were also noted.

3 responses commented on being given the wrong advice by specialists, resulting in delays to diagnosis of deafness or establishing communication with the child.

A poor understanding of verbal only approaches by professionals outside the CI programmes (until recently) was mentioned by one respondent.

Hearing loss and the limitations of technology

8 respondents (11%) saw the child’s hearing loss itself and the limitations of hearing aid / cochlear implant technology as a barrier. Children pulling their hearing aids out or the external cochlear implant component falling off were a problem for 3 respondents. 2 respondents felt that a second cochlear implant would benefit their child.

Barriers at school

Barriers at school were another common theme (7 comments, or 10 %). Teachers' attitudes or lack of understanding about the child's needs were the main barrier at school.

Respondents noted that their child missed out on information in the classroom because teachers did not consistently write information down or refused to use FM systems. A noisy and distracting classroom was another factor. One parent commented on the fact that their NZSL using child was supported by teacher aides and other teachers who were less fluent in NZSL than the child. Another respondent noted that there were *"many barriers, predominantly those narrow minded people in the sector of deaf education who have firm beliefs that only 'their' way can work."*

Attitudes

7 comments (10%) mentioned the attitudes of other people as a barrier, with 3 comments around people being 'arrogant' or 'close-minded', and 4 comments noting that people are just not aware of the child's needs. One respondent stated:

"People were so helpful in the beginning but they have slowly become complacent about my daughter's actual needs or even difficulties in certain situations and because she won't say if she's having a hard time hearing or understanding they just assume she is ok and I fear that she may miss out on valuable opportunities later on in life."

One respondent talked about the negative attitudes of the Deaf community towards cochlear implants.

Other barriers

The remaining 8 comments were around barriers particular to the child's / family's situation, such as the child's behaviour, developmental complications, and a parent's own hearing loss causing difficulties in communicating with their child. Time to devote to the deaf child's communication was mentioned as an issue, in a situation where there are other children or where a single parent works full-time.

4. Conclusion

4.1 Key findings

- Approximately a quarter (27%) of the children represented in this survey use sign language, including 8% who are described as combining signing with speaking.
- More children use sign language with family members at home than at school.
- Most deaf children have limited contact with other deaf children or Deaf adults.

- Advice to parents about language, especially following CI surgery, emphasises the exclusive acquisition of spoken language.
- While advice by AODCs and other professionals was sometimes perceived as neutral or supportive of signing as a support for speaking, parents noted that NZSL / signing was rarely promoted and occasionally actively discouraged.
- Specialist advice and services were mentioned as helping families to achieve language goals; lack of access to such services was a barrier.
- Lack of availability of sign language classes for children and their families was noted as a significant barrier. Nearly one-third of respondents reported learning through self-instruction using video and online resources, which are currently limited.
- Levels of satisfaction with communication at school / preschool showed that just under half of parents have some concerns and 10 % have serious concerns. Concern is highest among parents with children who use NZSL at school.
- A number of parents with older children expressed regret at not pursuing sign language as a communication option.
- Most parents have some expectation that NZSL will be used by their deaf child at some point in their life, even if not used currently.
- Strong support was expressed for NZSL as a language option in the general school curriculum.

4.2 Limitations

Findings are based on approximately 98 complete surveys (out of a total of 112 responses). Estimates of the target population suggest this is a response rate of 4% or less, so we have to be cautious about assuming the results are representative of all parents of deaf and hearing impaired children.

While efforts were made to make the survey available to all parents of deaf / hearing impaired children in New Zealand, parents in regions without a parent support group and parents in lower socioeconomic groups who are less likely to have access to the internet were probably less likely to receive information about the survey and may therefore be under-represented in the results. It is possible that parents who are under-represented as survey participants may also experience higher barriers to accessing information and support in relation to their deaf child, generally.

Sampling issues

- As noted, the target group was parents of pre-school and school-aged deaf / hearing impaired children. However, since this was not explicitly stated in the survey introduction, 12 responses were received from parents of now adult deaf children.

- 81.44% of respondents indicated that they were the mother of a deaf child, compared with 14.43% fathers and 4.12% other primary carers.
- 12.24% of parent respondents were either deaf, hearing impaired or deafblind. 4.08% of respondents were deaf. Combining respondents' own hearing status with that of their partners, the survey showed that 92.87% of responding families have at least one hearing parent. (This figure assumes that only one parent replied to the survey on behalf of each family.)
- Due to one avenue of survey distribution being through the Northern and Southern Cochlear Implant Groups, parents of children with a cochlear implant may have been more likely to receive information about the survey.
- Although the introduction to the survey and requests to distribute the survey were worded in a way that encouraged any parents to reply regardless of preferred communication mode, the fact that the title of the study includes "New Zealand Sign Language" may have made it more likely for parents to respond if they had particular opinions towards New Zealand Sign Language.

4.3 Implications

The aims of the survey were:

1. to gain information about the use of NZSL or signing by deaf and hearing impaired children, and their families;
2. to examine factors that may influence the likelihood of NZSL transmission to future generations.

The primary finding of the study is that a relatively small proportion (a quarter) of deaf children and their families in this sample use sign language at home or school. For the purpose of the survey, 'NZSL' was not narrowly defined⁵, so this figure includes any form of signing reported by parents. The figure of 27% is slightly lower than that found in a study of deaf and HI children in mainstream schools approximately a decade ago (McKee and Smith 2003), although the two survey samples are not matched: the 2003 study surveyed only parents of children verified as 'high' or 'very high needs' (and thus more likely to be severely/ profoundly deaf and/or sign language users), whereas the current survey included parents of any deaf/HI children. Nevertheless the finding that approximately one quarter report using sign language suggests that NZSL is not widely available to deaf children in the family context.

Lower reported use of sign language at school than at home (only a quarter of those who use 'mainly signing' at home do so at school) suggests that the ongoing acquisition and use

⁵ The rationale for not narrowly defining NZSL in the parent survey is that children who use a variety of forms of signing in childhood are potentially NZSL users later in life, following contact with a wider group of signers.

of sign language in school contexts is not well supported. The survey did not investigate the reasons for differing use of signing at home and school, but reasons are likely to include the absence of signing peers in mainstream schools, which increases social pressure for a child not to use sign language, and a lack of NZSL proficient staff, role models and NZSL resources relevant to curriculum instruction. It seems unlikely that deaf/HI children who find sign language useful for communication at home would not find it useful in the more demanding communication environment of school. Dis-use of sign language at school hinders the development of NZSL proficiency beyond the interpersonal domain of home use, and may limit a deaf child's participation at school. Indeed, 67% of parents of signing children expressed concerns about their child's access to communication at school compared with 5% of parents of children who speak at school or preschool, and 16% of children who use a mixture of signing and speaking. Without observing individual children in situ (which was beyond the scope of this study), it is not clear whether differing levels of parental concern about communication at school reflect a reality that children who use mainly spoken language actually participate more effectively at school, or whether the parents of signing children are just more aware of the barriers their deaf/HI child experiences in an auditory-oral communication context.

A discrepancy between reported home and school language use suggests that data reported by the school system regarding communication modes of deaf/HI students may not entirely capture the communication strengths of individual children across all contexts.

A low level of contact with other deaf children or adults, even for children and parents who do use sign language, indicates limited opportunity to develop communicative proficiency in NZSL, which requires interaction with multiple speakers in a variety of social contexts

Results about parental language goals for their deaf/HI child show that most hope for the development of spoken language competence, while a minority want their child to become bilingual in English and NZSL (most commonly, with English established first). This balance reflects the emphasis in advice and practical interventions that parents report from education and CI professionals. Parents who express a wish for their child to be bilingual articulate an understanding that NZSL is a source of connection and social identity with deaf peers, and an awareness that many deaf adults utilise more than one communication mode.

However numerous responses to the effect that a deaf child "can always learn sign language later", after spoken language is established, indicates that NZSL is not widely considered an important medium for the early development of language and cognition, but is seen as an optional addition for social purposes later in life, or as fall-back strategy if spoken language development becomes problematic. This approach assumes that a context for later NZSL learning - ie, a signing community - will be self-sustaining and available to young adults, independently of whether or not NZSL is acquired and used by the current generation of deaf children. Considering the conditions required for maintenance of a language community and transmission across generations, this is not a well-founded assumption.

It is concerning that parents who choose to use NZSL with their child, and indeed some who have chosen not to, continue to report systemic barriers to learning NZSL that have been

well documented; these include a lack of instructional guidance by professionals, limited learning materials, and few suitable learning opportunities facilitated by either education or community sources. For instance, only 11% of parents who report learning NZSL did so directly via the education system: the remainder turned to self-instruction, parent-organised groups, or adult community education classes. Self-reported levels of proficiency in NZSL in the survey were accordingly not high. These conditions for families to learn NZSL do not support an adequate context for deaf children's acquisition and use of NZSL as a medium of social and academic development.

Looking back, a 2003 (McKee & Smith) study reported similar findings about the nature of advice to parents regarding speech/sign, practical opportunities to learn NZSL, and parental concern about the quality of inclusion of signing children in schools. Such gaps were reiterated in Fitzgerald & Associates' report for the Ministry of Education, and again in a 2012 (McKee, Manning & Noble) survey of NZSL stakeholders, which included parents. Apparently, there has been little positive change in the past decade in practical measures that promote acquisition of NZSL by families of deaf children in either home or school domains. This is concerning with regard to the future vitality of NZSL. Although the primary community of NZSL users will continue to be deaf people, the acquisition and use of sign language by hearing family members – such as parents of deaf children, and the hearing children of deaf parents – is vital to sustaining the wider environment in which NZSL functions as a language of learning and daily life.

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Appendix 1: Survey Questions

Note: The survey was administered online. Circles indicate that a single answer had to be selected, while squares show that multiple answers were possible. In the online version, survey logic organised the exact the sequence of questions that were contingent upon previous responses.

The Deaf Studies Research Unit at Victoria University of Wellington is researching the status of New Zealand Sign Language (NZSL) and its future. Rachel McKee and David McKee are leading the project. We are collecting information from various groups who have a potential connection with deaf people. It is important that we receive opinions from a range of people, including people who do not themselves use NZSL. We'd like to find out about how families communicate with deaf and hearing impaired children. The survey will take about 15 minutes. Your answers are anonymous: we will not know your name or be able to identify you. When we write about the survey, the report will focus on numbers and groups, not individuals. When you press 'submit' at the end of the survey, this means you give permission for us to use your information in the research. This research has been approved by a Human Ethics Committee at Victoria University.

☐ I have read this information and I am ready to take the survey.

Q1 Are you:

- ☐ mother of a deaf / hearing impaired child
- ☐ father of a deaf / hearing impaired child
- ☐ other primary caregiver of a deaf / hearing impaired child

Q2 Are you:

- ☐ hearing (no hearing impairment)
- ☐ deaf
- ☐ hearing impaired
- ☐ deafblind

Q3 Is your partner:

- ☐ hearing (no hearing impairment)
- ☐ deaf
- ☐ hearing impaired
- ☐ I do not have a partner

Q4 How old is your child who is deaf or hearing impaired? (If you have more than one child who is deaf or hearing impaired, you can choose more than one age group).

- ☐ between 0-3 years old
- ☐ between 4 - 8 years old
- ☐ between 9 - 16 years old
- ☐ over 16 years old

Q5 Do you have any other deaf / hearing impaired relatives? (excluding relatives with hearing loss due to old age)

- ☐ no
- ☐ yes - one other relative
- ☐ yes - two or more relatives

Q5a Does your deaf / hearing impaired relative use sign language?

- ☐ yes
- ☐ no

Q5b Do any of your deaf / hearing impaired relatives use sign language?

- ☐ yes - all of them
- ☐ yes - some of them
- ☐ no - none of them

Q6 When your child was a pre-schooler (or if your child is a pre-schooler now), what advice did you get from the Adviser or other professionals about developing language and communication with your child?

- ☐ use speech and listening only, not sign language
- ☐ can use sign language as well as speech
- ☐ focus mainly on sign language
- ☐ no advice

Q7 Does your deaf / hearing impaired child have a cochlear implant (CI)?

- ☐ yes - unilateral (in one ear)
- ☐ yes - bilateral (in both ears)
- ☐ no
- ☐ not yet, but intend to get one

Q8 How old was your child when they first got a cochlear implant?

- ☐ between 0 - 12 months old
- ☐ between 13 - 24 months old
- ☐ between 2 - 5 years old
- ☐ over 5 years old

Q9 After getting a cochlear implant, what advice did you get from the CI programme about developing language and communication with your child?

- ☐ use speech and listening only, not sign language
- ☐ can use sign language as well as speech
- ☐ focus mainly on sign language
- ☐ no advice

Q7a / 9a Do you have any further comments about the advice you got?

Q10 Thinking about your everyday life at home, how do you usually communicate with your deaf child?

- ☐ speaking
- ☐ speaking, with some gestures / actions to clarify
- ☐ signing with speaking
- ☐ signing - mainly without speech

Q11 How do your other children (siblings) usually communicate with your deaf child?

- ☐ speaking
- ☐ speaking with some gestures / actions to clarify
- ☐ signing with speaking
- ☐ signing - mainly without speech
- ☐ no siblings

Q12 Which of these best describes your deaf child's strongest way of expressing themselves with people in your family?

- ☐ speaking
- ☐ speaking with some gestures / actions to clarify
- ☐ signing with speaking
- ☐ signing - mainly without speech
- ☐ bilingual - can communicate in spoken English and NZSL

Q13 Why did you decide to use sign language with your child?

Q14 How did you learn, or are learning, sign language? (Choose all that apply)

- ☐ from Adviser and/or Resource Teacher of the Deaf
- ☐ Deaf Resource Person visiting
- ☐ NZSL classes through adult education provider, or Deaf organisation
- ☐ self-instruction using video and online resources
- ☐ parent-organised lessons or group
- ☐ mixing with Deaf adult community
- ☐ I am Deaf or have Deaf family - already knew NZSL

Q15 How well can you sign?

- ☐ Very well (I can sign about almost anything)
- ☐ Well (I can about many things)
- ☐ Fairly well (I can sign about some things)
- ☐ Not very well (I can sign about simple / basic things)
- ☐ I only know a few signs or phrases

Q16 How well can you understand signing?

- ☐ Very well (I can understand almost anything)
- ☐ Well (I can understand many things)
- ☐ Fairly well (I can understand some things and some people)
- ☐ Not very well (I can understand simple / basic things, with some people)
- ☐ I only understand a few signs or phrases

Q17 What is the main reason you decided to communicate only through speech with your child (not to use signing)?

Q18 Do you think your child might use NZSL at any later time in their life?

- ☐ no - unlikely
- ☐ yes - likely
- ☐ maybe - unsure

Q19 If in the future your child attends a school where NZSL is taught as a language option in the school curriculum, would you want your child to participate?

- ☐ yes
- ☐ no
- ☐ unsure

Q20 Does your deaf child have contact with other deaf / hearing impaired children?

- ☐ yes - regularly
- ☐ yes - occasionally
- ☐ no

Q21 Do you and your deaf child have contact with deaf / hearing impaired adults?

- ☐ yes - regularly
- ☐ yes - occasionally
- ☐ no

Q22 If your deaf child attends regular childcare or school, how do they mainly communicate there?

- ☐ speaking
- ☐ signing
- ☐ mix of speaking and signing

Q23 How satisfied do you feel with your child's access to communication at school / pre-school?

- ☐ satisfied - communication is going well
- ☐ partly satisfied - mostly okay, but there are some limitations
- ☐ concerned - my child has a lot of difficulties with communication in this setting

Q24 Can you briefly describe your language goals for your deaf / hearing impaired child? For example, how do you imagine them communicating with others in 10 years from now, and as an adult?

Q25 What is helping you to achieve your language goals for your child?

Q26 Have you come across barriers to achieving your language goals for your child? If so, what barriers?