



firstvoice
THE FUTURE IS HEAR

report on education, employment & social
outcomes of first voice member centre graduates
(18-28 years)

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SUMMARY

ABOUT FIRST VOICE

First Voice is a member-based organisation that advocates for evidence-based early intervention services that give children who are deaf or hearing impaired the listening and spoken language skills necessary to achieve fluent spoken communication, mainstream education, employment of choice and social integration within the hearing world. First Voice members provide services to over 1,000 children who are deaf or hearing impaired, which is one of the largest cohorts of such children in the world. Member organisations include the Cora Barclay Centre (SA), Hear & Say (Qld), Taralye (Vic), Telethon Speech & Hearing (WA), The Shepherd Centre (NSW & ACT) and The Hearing House (NZ).

First Voice members publish outcomes for listening, speech, language and comprehension annually for children in their pre-school (0–6 years) programs. These outcomes show that children in First Voice members' early childhood intervention programs regularly match or surpass their hearing peers, with over 70 per cent of children achieving age-appropriate results by the time they commence school ⁽¹⁾.

PROJECT AIM AND METHOD

The aim of the project was to gather information on the social, educational and employment outcomes of children graduating from First Voice members' early childhood intervention programs in the years 1993 to 2002. These young men and women are now aged between 18 and 28 years. The method used was a short online survey, which was also available in hard copy. One hundred and fifty-four (154) responses were received from the 839 persons contacted, yielding a response rate of 18 percent; a rate achieved in spite of the fact that contact with most children and their families had been lost years ago when the child commenced school.

SURVEY RESULTS

The results show that the overwhelming majority of respondents have developed into independent, contributing members of society, with high levels of education, social participation and full time employment.

Key results include:

- **95%** of respondents attended a mainstream high school
- **86%** of respondents completed Year 12
- **82%** of respondents had been accepted into a tertiary (higher education or vocational/technical) study course
- **62%** of respondents have a tertiary level qualification
- **77%** of respondents have at some point been in regular paid employment for a period of six months or more
- **84%** of respondents have been involved at some stage in community activities or organisations
- **65%** of respondents were willing to share their major achievements, awards or life events.

Interestingly, these results are broadly comparable to two North American surveys of graduates from similar listening and spoken language programs ^(2,3) and to those independently reported in the Cora Barclay Centre School Leavers' Outcomes Report 2015 ⁽⁴⁾.

CONCLUSION

While comprehensive outcomes data are routinely reported for children attending First Voice members' early childhood intervention programs, little is known about their subsequent education, employment and social participation outcomes. This survey aimed to fill this information gap.

The results show that the respondents had achieved academic and employment rates equivalent to or better than those reported for the general Australian population ⁽⁵⁾.

In the context of the challenges facing Australian children who are deaf or hearing impaired under the National Disability Insurance Scheme (NDIS), First Voice believes that these survey results add weight to our submissions; firstly, on the need to maintain rigorous, evidence-based clinical pathways and protocols to optimise the outcomes of hearing-impaired children and, secondly, for the provision of adequate funding to families of these children to cover the costs of First Voice listening and spoken language programs now and in the future.

OVERVIEW

About First Voice

First Voice is a member-based organisation that advocates for evidence-based early intervention services that give children who are deaf or hearing impaired the listening and spoken language skills necessary to achieve fluent spoken communication, mainstream education, employment of choice and social integration within the hearing world.

First Voice represents six member organisations in Australia and New Zealand that provide listening and spoken language early intervention services to more than 1,000 children who are deaf or hearing impaired. This is one of the largest cohorts of children receiving early intervention services for hearing loss in the world. First Voice centres provide family-centred, multi-disciplinary early childhood intervention services following a parent-based model of therapy, where one or both parents are taught how to teach their hearing-impaired child to listen and speak.

First Voice members include:

- Cora Barclay Centre, South Australia
- Hear and Say, Queensland
- Taralye, Victoria
- Telethon Speech & Hearing, Western Australia
- The Shepherd Centre, New South Wales and Australian Capital Territory
- The Hearing House, New Zealand.

First Voice plays a leadership role within the early childhood hearing loss sector, influencing public policy and clinical practice related to services for children who are deaf and hearing impaired. We are committed to providing evidence-based research to inform and influence public health policy in our region. First Voice members maintain an active research agenda and work with research institutions to conduct hearing research relevant to young people with hearing loss.

First Voice member centres deliver world-leading outcomes in the development of fluent speech and language in pre-school-aged children with hearing loss and in their subsequent education, social participation and employment. Published early childhood intervention outcomes (0-5 years) show that over 70% achieve speech, language, comprehension and articulation equivalent to children of the same age with normal hearing ⁽¹⁾.

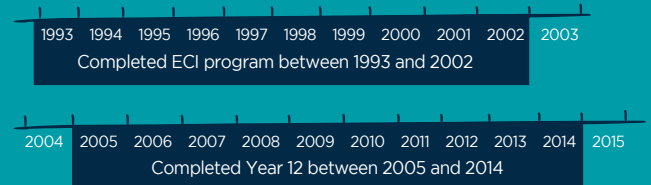
Background

The project aimed to collect data on children who received early childhood intervention (ECI) therapy from First Voice member centres and have now finished school. The purpose was to gain a better understanding of their social, educational and employment outcomes.

First Voice member centres routinely publish audition, speech and language outcomes for children in their pre-school (0-6 years) programs, but little is known of how these children fare educationally and socially at school and beyond, with the exception of those attending the Cora Barclay Centre in South Australia, which provides continuing services and supports to children with hearing impairment during their school years (6-18 years). Thus, this current survey of outcomes at school and beyond promised to improve knowledge of the longer term impact of First Voice member programs and provide input for improving programs in pursuit of even better outcomes.

Scope

The project aimed to capture data for children (now young adults) who graduated from a First Voice member early childhood intervention program in the years **1993 to 2002** and who would have completed their schooling in the 10 year period from 2005 to 2014 as per the diagram below.



In other words, based on the assumption that children graduated from First Voice members' early childhood intervention programs when they were at least 5 years old, they are clients who:

- were born between 1988 and 1997 inclusive, AND
- completed an early childhood intervention program at a First Voice member centre between 1993 and 2002.

The questions posed to survey respondents covered demographics, education, employment and life experiences, and can be found in **Appendix 2 - Survey Questions**.

Purpose

The aim of this project was to gather information on First Voice members' early intervention graduates' social, education and employment outcomes. While it was not undertaken as a formal research project, it is important for (1) the improvement of understanding of the life prospects for children who are deaf or hearing impaired in Australia and New Zealand, (2) input to services planning and provision, in order to further improve outcomes, and (3) supporting funding submissions to the NDIA and other relevant government funders (e.g. State Government Health, Education and Disability Services Departments) during the rollout of the NDIS across Australia, to ensure the future sustainability and effectiveness of services to this group.

It was anticipated that this survey would show similar positive outcomes to the published results of outcomes surveys by Goldberg & Flexer (1993 and 2001) ^(2,3) of auditory-verbal therapy graduates in North America, and the Cora Barclay Centre School Leavers' Outcomes Report 2015 ⁽⁴⁾ in South Australia, as well as considerable anecdotal evidence and feedback from former families and students at each of the First Voice member centres.

Such results would strengthen First Voice submissions to government for strong, well-funded service pathways for families choosing listening and spoken language programs for their hearing-impaired children by documenting the success rates of First Voice members' early childhood education programs in relation to completion of their clients' secondary schooling in mainstream schools, tertiary education and regular employment.

Limitations

Given the significant time lapse since the survey cohort graduated from their respective First Voice member centre early intervention program, there were obvious challenges in locating and contacting relevant individuals, including:

- contact details for many clients were out of date, as there had been no contact with them or their families for many years. Responses have, therefore, only been obtained from those who were contactable and willing to share their experiences;
- contact details generally pertained to parents rather than the early intervention clients themselves. Wherever possible, responses were sought from the early intervention clients (now young adults) themselves. However, to capture a greater number of responses, parents were also given the opportunity to answer the survey on behalf of their child.

It is acknowledged that results may not be representative of all First Voice members' early intervention graduates, given the varying response rate from different centres. However, they are notably consistent with those obtained in the more comprehensive studies in North America by Goldberg and Flexer ^(2,3).

Method

In order to comply with privacy laws, each centre was required to contact its own former clients and manage their data. Only de-identified information was provided to the First Voice project team.

To obtain the data each member centre:

- Compiled a list of individuals graduating from their early intervention program between 1993 and 2002, including parent contact details;
- Established an online survey using an agreed, standardised questionnaire;
- Contacted early intervention graduates and their parents via email or mail (depending on available contact information) using agreed, standardised correspondence;
- Monitored online survey responses and collated mailed responses; and
- Forwarded de-identified responses to First Voice for analysis once the survey period had ended.

As encouragement to participate in the survey, respondents could opt to enter a prize draw with their member centre to win a \$100 gift voucher. Prize draws were completed in September 2016.

RESULTS

Demographics

A total of **154** complete responses across all First Voice centres were received from the 839 early intervention graduates who were contacted. This equated to a response rate of 18 percent.

The number of children completing early intervention during the relevant period and responding to the survey varied widely across the six First Voice member centres. The table below shows the number with whom contact was attempted, and the respective response rates, for each centre.

	Number contacted	Completed responses	Response rate
Cora Barclay Centre	98	42	43%
Hear & Say	70	26	37%
Taralye	298	25	8%
Telethon Speech & Hearing	34	8	24%
The Hearing House	21	13	62%
The Shepherd Centre	318	40	13%
Total	839	154	18%

The spread of female and male respondents was relatively even with 54% of respondents being female and 46% male.

Response rates varied significantly between centres with the highest being from The Hearing House in New Zealand (62%), followed by the Cora Barclay Centre (43%) and Hear & Say (37%).

Sixty four percent (64%) of responses were from early intervention graduates themselves, and 36% were from parents on behalf of their children.

Education

MAINSTREAM HIGH SCHOOL ATTENDANCE AND HIGHEST COMPLETED LEVEL OF SECONDARY SCHOOLING

From the 154 individuals/families that responded to this survey:

- **95%** of respondents attended a mainstream high school
- **86%** of respondents completed Year 12. This figure compares with a nation-wide figure of **80%** of school leavers in 2015 completing Year 12. (Australian Bureau of Statistics 6227.0 Education and Work, Australia, May 2016) ⁽⁵⁾.

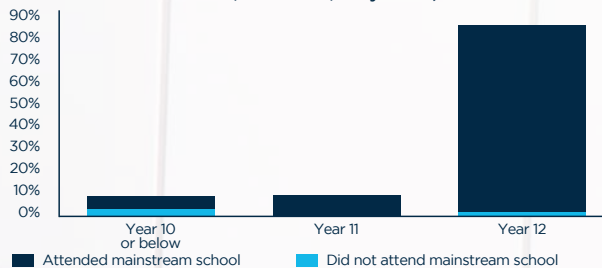


Figure 1 - Secondary education of former ECI clients.

This high level of successful completion of secondary education in mainstream schools is consistent with other relevant data and supports the effectiveness of First Voice member centres' multi-disciplinary, family-centred early childhood intervention in preparing children with hearing loss for mainstream schooling.

ACCEPTANCE INTO TERTIARY OR VOCATIONAL STUDY

Key results:

- **82%** of respondents had been accepted into a tertiary (higher education or vocational/technical) course of study.

The nearest point of comparison from national statistics is that in May 2016 **59%** of persons living in Australia aged 15-74 years had completed a non-school qualification (ABS) ⁽⁵⁾.

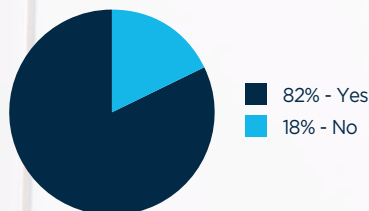


Figure 2 - Percentage of former ECI clients that have been accepted into a tertiary course of study.

This result is consistent with other relevant data from the Goldberg and Flexer graduate surveys ^(2,3) and the Cora Barclay Centre School Leavers' Outcomes Report 2015 ⁽⁴⁾.

HIGHEST LEVEL OF TERTIARY STUDY COMPLETED

Key results:

- **62%** of respondents have a tertiary level qualification (university or vocational/technical). This compares with **43.3%** of the general population in 2016 ABS ⁽⁵⁾.
- **38%** of respondents have a university level qualification. This compares with **25.3%** of the general population in 2016 ⁽⁵⁾.

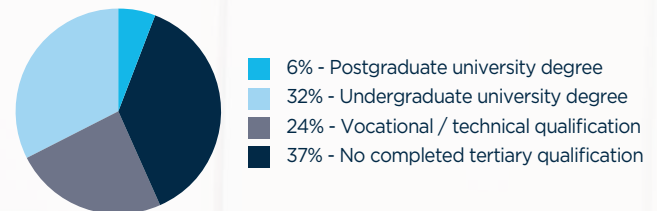


Figure 3 - Percentage of former ECI program students that have completed a tertiary course.

The difference between the percentage of individuals accepted into tertiary education and the number with a completed qualification can generally be accounted for in terms of those who are still completing their courses of study and those who have temporarily or permanently decided to discontinue their studies.

The range of courses that respondents have completed is wide and varied. Examples include:

- Film/media
- Arts/Law
- Languages
- Psychology
- Audiology
- MBA
- Fashion
- Journalism
- Apprenticeships (e.g. plumbing, electrical)

Employment

Key results:

- **77%** of respondents have at some point been in regular paid employment for a period of six months or more.
- The **23%** of respondents who have not been in such employment comprises:
 - 12% who are currently studying
 - 3% who are unemployed but seeking work
 - 2% who are stay-at-home parents or volunteers
 - 1% who are unable to work
 - The remaining 5% provided a variety of responses including recent employment, self-employment, apprenticeship or a combination of the available responses.

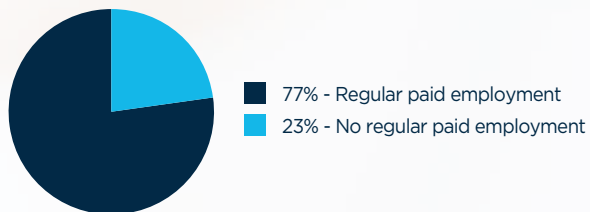


Figure 4 - Percentage of former ECI clients who have ever been in regular paid employment for a period of greater than 6 months.

These figures show that a significant majority of the 154 survey respondents have matured into income-generating, tax-paying members of society, reducing potential dependence on welfare systems.

Of the 154 respondents, the following table reports the activity which best describes their **current** situation:

Current Situation	
Paid employment	45%
Studying	36%
Other	8%
Unemployed but seeking work	6%
Stay at home parent	2%
Unable to work	1%
Volunteer employment	1%
Total	100%

Social Participation

Key Results:

- **84%** of respondents have been involved at some stage in community activities or organisations.

This result shows that a high percentage of respondents have chosen to participate in a range of social activities. Examples include:

- Volunteer work
- Youth groups, including Scouts
- Peer support activities
- Drama and music groups
- Sporting teams in both playing or coaching capacities
- Overseas travel

Major achievements

Key Results:

- Survey respondents were asked whether they would like to share any major achievements, awards or life events - **65%** responded to this question.

This high response rate reflects the positive attitude the majority of respondents have about their life experiences and further shows their ability to contribute and actively participate in society, notwithstanding their hearing loss. Examples of achievements provided included:

- Winners/finalists in Youth Awards and Fellowships
- Internship with the UN
- Academic prizes and scholarships
- High level ATAR results (e.g. 99.65)
- High level sporting awards, and competing at international level
- School and sporting team captain
- Overseas study tours and general travel
- Music awards
- Full time employment
- Running their own business
- Studying for PhD
- Purchase of a house

SUMMARY & CONCLUSION

The results from this study show how 154 survey respondents, who graduated from a First Voice member early childhood intervention program between 1993 and 2002, have developed into productive members of society, with high levels of education, social participation and full time employment, in spite of their hearing loss.

Key results are:

- **95%** of respondents attended a mainstream high school
- **86%** of respondents completed Year 12
- **82%** of respondents had been accepted into a tertiary (higher education or vocational/technical) study course
- **62%** of respondents have a tertiary level qualification
- **77%** of respondents have at some point been in regular paid employment for a period of six months or more
- **84%** of respondents have been involved at some stage in community activities or organisations
- **65%** of respondents were willing to share their major achievements, awards or life events

It is acknowledged that there are many factors that contribute to successful outcomes for children who are deaf and hearing-impaired, including their own hard work and persistence, family commitment, dedicated and attentive schools and school teachers and the understanding, support and friendship of extended family, friends, the local community, employers and community groups.

However, there can be little doubt that targeted investment in their speech, language and social development during their early childhood years is a significant contributor to positive life outcomes.

While comprehensive outcomes data are routinely reported for children attending First Voice member centres' early childhood intervention programs, little was known about their subsequent education, employment and social participation outcomes. This survey aimed to fill this information gap.

The results show that survey respondents have academic and employment rates equivalent to, or better than, those reported for the general Australian population ⁽⁵⁾.

In the context of the challenges facing Australian children who are deaf or hearing impaired under the National Disability Insurance Scheme (NDIS), First Voice believes that these survey results add weight to our submissions – firstly, on the need to maintain rigorous, evidence-based clinical pathways and protocols to optimise the outcomes of hearing-impaired children and, secondly, for adequate funding to be allocated to families of these children to cover the costs of First Voice members' listening and spoken language programs now and in the future.



APPENDIX 1 – ADDITIONAL COMMENTS

Participants were asked to add any additional comments regarding their experience at their respective First Voice member centre. Below is a sample of the comments received:

- “Amazing experience. I wouldn’t have achieved all that I’ve achieved without this crucial experience. The Shepherd Centre staff are all so lovely and willing to help out in every way - nothing is ever a problem. They are like extended family.”
- “As a mother of a deaf child I found the support was absolutely amazing and encouraging for both myself and my son and helped him to become the person he is today.”
- “Early intervention is very important for children to get the best start in life. (Please keep it going :)”
- “Hear & Say is place that makes you feel safe, happy and peaceful. All staff are very welcoming and understanding.”
- “Hear & Say has been a very big part of my life, they have enabled me to hear and speak with confidence. I have enjoyed being able to give speeches and help fundraise. I hold many memories to this day with Hear & Say from the ‘mouse house’ to now. “
- “I am grateful every day for the intervention of the Cora Barclay Centre - they led me on a pathway to a truly fulfilling and satisfying life.”
- “I am often praised for my enunciation and speaking skills, and I owe that in large part to early intervention speech therapy at Taralye.”
- “I had my cochlear implant when I was 3 and my little brother had his done at 8 months so I have seen how being implanted at an early age makes a big difference.”
- “I would have liked the opportunity to be bilingual and learn Auslan, I studied for the VCE in high school. I really enjoyed embracing my culture and feeling proud to be deaf.”
- “It was an amazing help to my mother “
- “It was really very useful and helped me attend mainstream schooling”
- “Mum and I were so well looked after it was a place we felt comfortable in and accepted. Lovely, understanding people.”
- “I had a great time going to The Hearing House. My dad was very happy and loved being part of it as he always accompanied with me to the appointments. It was a good experience.”
- “Early Intervention with The Shepherd Centre was the best investment of time and commitment we ever made for her future. The benefits we see in her life now are immeasurably valuable. Thank you!!”

APPENDIX 2 - SURVEY QUESTIONS

The following standard questions were used to gather data for this project:

** indicates required questions. Please select only one response per question.*

Demographics	
Gender*	<input type="checkbox"/> Male <input type="checkbox"/> Female
What year were you born?*	
Do you have any other diagnosed disabilities, aside from hearing impairment?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are you completing this survey on behalf of yourself (as the graduate) or as a parent of a child that received early intervention services from <your Centre>? <i>Please complete the survey from the perspective of the graduate.</i>	<input type="checkbox"/> Graduate <input type="checkbox"/> Parent
Education	
Did you attend a mainstream high school at any time?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
What is the highest level of secondary schooling you completed?*	<input type="checkbox"/> Year 10 or below <input type="checkbox"/> Year 11 <input type="checkbox"/> Year 12
Have you ever been accepted into a tertiary or vocational course of study?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
What is the highest level of tertiary study you have completed?* (please select one)	<input type="checkbox"/> Undergraduate university degree <input type="checkbox"/> Postgraduate university degree <input type="checkbox"/> Vocational/technical qualification <input type="checkbox"/> Not applicable
<i>If applicable, please describe your primary area(s) of tertiary or vocational study.</i>	

Employment	
Have you ever been in regular paid employment for a period of greater than 6 months?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Which of the following best describes your current situation?* (please select one)	<input type="checkbox"/> Studying <input type="checkbox"/> Paid employment <input type="checkbox"/> Volunteer employment <input type="checkbox"/> Unemployed but seeking work <input type="checkbox"/> Unable to work <input type="checkbox"/> Stay at home parent <input type="checkbox"/> Other (please describe) <hr/>
Have you ever been married or in a long term de facto relationship?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Do you have children?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are you, or have you ever been, involved in community activities or organizations? Examples may include, but are not limited to: participating in a sports team, religious groups, community theatre, Scouts, volunteering, choir, etc.?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
If so, please describe:	
Have you had any major achievements/awards/life events that you would like to share?	
Conclusion	
Would you like to be entered into our competition to win a \$100 Harvey Norman voucher?*	<input type="checkbox"/> Yes <input type="checkbox"/> No
Should you be lucky enough to win our competition, please provide the best email or postal address to contact you on.	
Do you have any comments or final thoughts on your experience with Early Intervention Therapy or <your Centre>?	
If you are happy to be contacted with future updates from <your Centre>, please provide your preferred email or postal address, or phone number.	
<input type="checkbox"/> Please check this box if you would you prefer not be contacted with future updates from <your Centre>?*	

APPENDIX 3 – CONTRIBUTIONS

Special thanks to the following people for their contributions to the project:

- Dr Wendy Arnott, Hear & Say
- Michael Forwood, Cora Barclay Centre
- Dr Yuriko Kishida, Telethon Speech & Hearing
- Lisa Ockenden, Taralye
- Joanne Rogers, The Shepherd Centre
- Gurdeep Singh, The Hearing House
- Nolene Wilson, Cora Barclay Centre

APPENDIX 4 – REFERENCES

- ¹ First Voice, Sound Outcomes 2014
- ² Goldberg DM & Flexer C, 1993, 'Outcome Survey of Auditory-Verbal Graduates: Study of Clinical Efficacy' Journal of the American Academy of Audiology, Volume 4, Number 3, pp 189-200
- ³ Goldberg DM & Flexer C, 2001, 'Auditory-Verbal Graduates: Outcome Survey of Clinical Efficacy' Journal of the American Academy of Audiology, Volume 12, Number 8, pp 406-414
- ⁴ Cora Barclay Centre School Leavers' Outcomes Report 2015
- ⁵ Australian Bureau of Statistics 6227.0 Education and Work, Australia, May 2016

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