

Overview

- | Statewide Infant Screening-Hearing (SWISH) background
- | 2012 SWISH Quality Review
- | Lessons learned

SWISH BACKGROUND

NSW Background

- | Population: 7,314,100 (2012)
- | Births: 97,245 births (2011)
- | Indigenous population: 172,625 (2011; 2.5% of NSW Population; 31.5% of total national Indigenous population)
- | 25.7% population born overseas (2011)
- | 85% of NSW Population live within 50km of the coastline

SWISH Background (est. 2002)

- | Objective: to identify all babies born in NSW with significant permanent bilateral hearing loss by 3 months of age, and for those children to be able to access appropriate intervention by 6 months of age.
- | 2 stage Automated Auditory Brainstem Response model
- | All births (public and private) have access to SWISH
- | 15 Coordinators, 4 Diagnostic Centres, 102 sites + outpatient locations, approx. 400 screeners

| **2011**

- New equipment implemented (AABR)
- Higher than expected referrals from screening
- Compulsory upgrade implemented Nov 2011-Jan 2012

| **Feb 2012**

- Lower than expected referral from screening
- Changes in diagnosis rate at some centres also
- Only 59% of expected diagnoses were reported

Problem definition:

- | Reduced referral rates
- | Reduced diagnostic rates at some centres

Implications:

- | Possible false negatives
- | Possible program failure
- | Possible recall and retest of recent screening population

2012 SWISH QUALITY REVIEW

Defining the scope of the review

- I Statistical analysis of recent data (before, during and after the upgrade)
 - any association between reduced refer rates and equipment types?
 - any impact of reduced refer rates on identification rate?
- I Statistical analysis of historical data to establish
 - Have such fluctuations occurred previously?

Finding 1: Statistically significant decline in referrals from fixed machines

Machine Type	Period relative to upgrade	Babies first screen	Babies referred	Rates of Referral per 1,000 babies screened
Fixed	Before (July - Sept 11)	20,446	164	8.02
	During (Oct 11 – Jan 12)	7,629	45	5.90
	After (Feb -Apr 12)	16,826	76	4.52
Portable (July 11-Apr 12)		27,949	209	7.48
Total		72,850	494	6.79

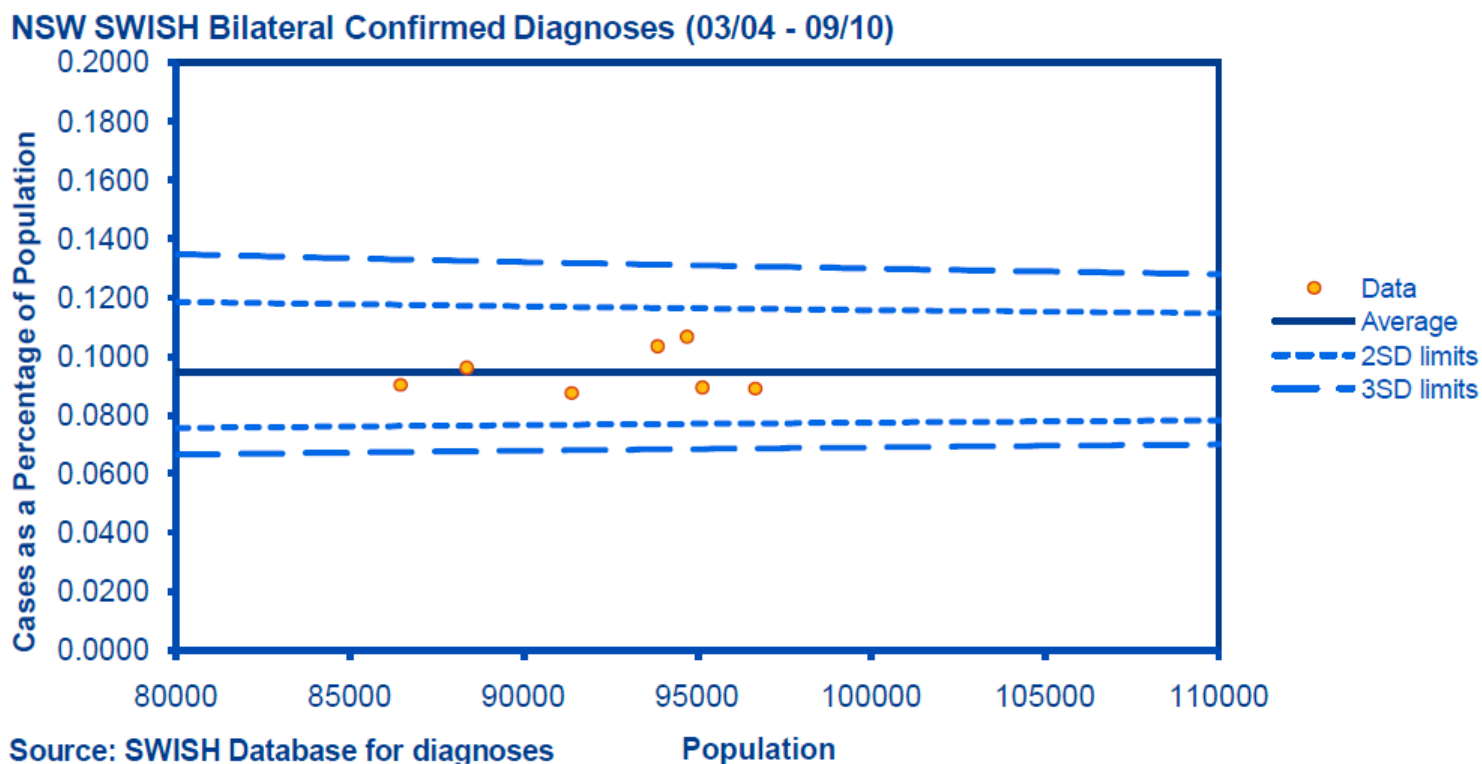
Finding 1a: Change in use of fixed equipment

Month	% Screened on portable equipment	% Screened on fixed equipment
July 2011	26%	74%
October 2011	38%	62%
February 2012	44%	56%
Total	38%	62%

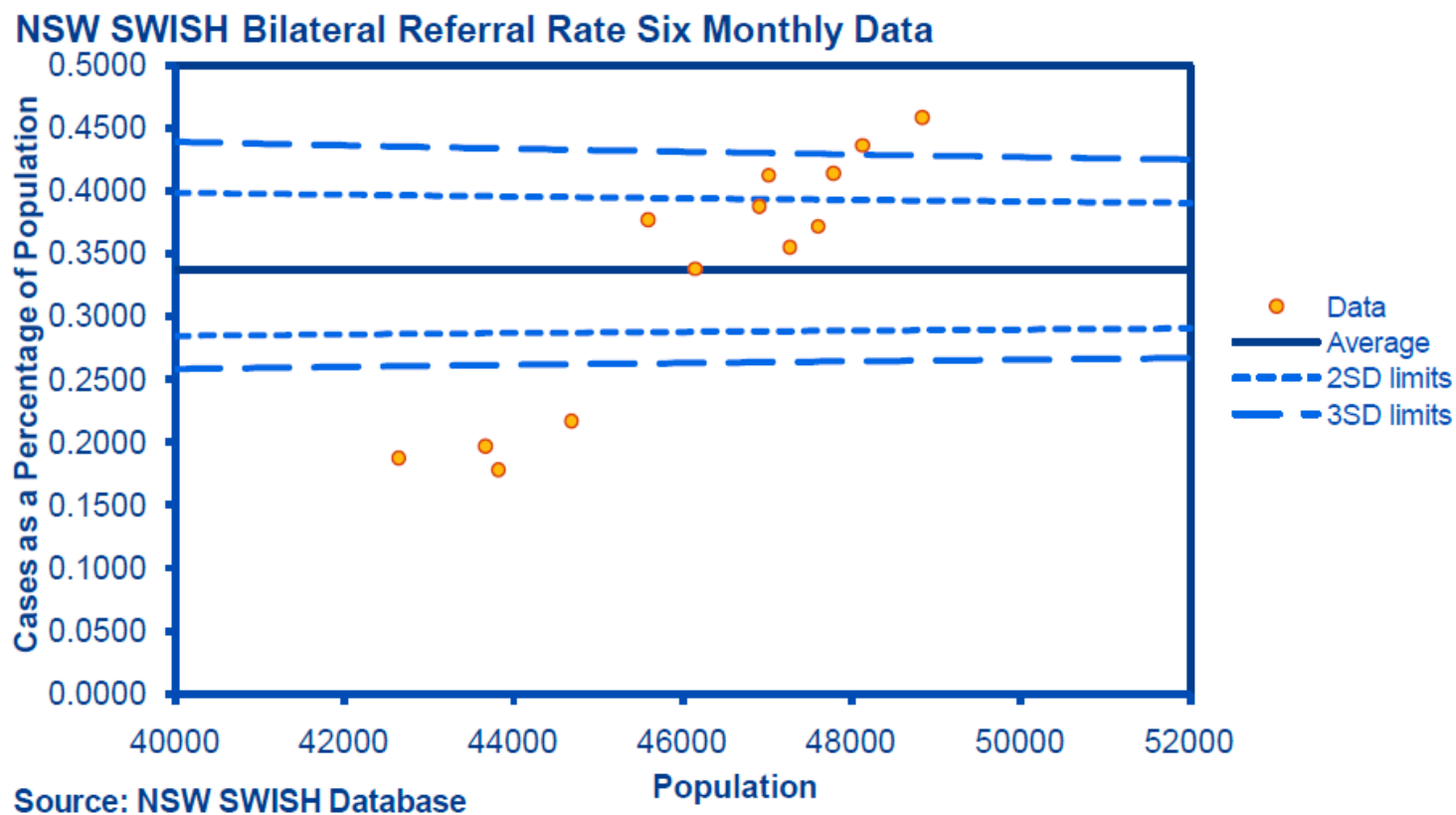
Finding 2: No statistical evidence of a difference in the rates of diagnosis

Period relative to upgrade	No. Diagnosed Cases			Live births	Identification rate per 1,000 Livebirths		
	Bi	Uni	Total		Bi	Uni	Total
Before (Jul – Sep 11)	19	10	29	23,470	0.81	0.43	1.24
During (Oct 11 – Jan 12)	23	7	30	30,706	0.75	0.23	0.98
After (Feb - Apr 12)	12	8	20	23,389	0.51	0.34	0.86

Finding 3: No significant variation in diagnosis from 2003/4-2009-10 (diagnoses/live births)



Finding 4: Significant variation in statewide rates of referral from Jul 03 – Dec 09 (referrals/live births)



Outcome of the 2012 SWISH Quality Review

I SWISH Quality Assurance Committee



LESSONS LEARNED

Moving forward

- I Further development of SWISH Quality Assurance
- I SWISH Screening Services Audit
- I SWISH Guidelines revision

Lessons Learned

- | Referral rate is not a good indicator of identification rate
- | Better to monitor identification rate than referral rate
- | In our experience, a longer period of review is needed due to fluctuations in birth rate and rare target condition

The SWISH Program is designed to effectively capture all moderate to severe cases of hearing loss. The converse of this is that, over time, a substantial proportion of babies are referred for diagnostic testing and are found to have normal hearing. Thus there is an in-built 'buffer' in the programme such that referral rates may vary over short periods of time without having a statistically significant effect on the rate of diagnosis of hearing loss statewide

Thank you

Why does my baby need a hearing screen?

The baby will be screened for hearing loss before they start school. The hearing screen will be done in a quiet room. The hearing screen is a simple test that checks if your baby can hear sounds. It is a quick and painless test that takes about 10 minutes to complete. Your baby will be screened for hearing loss before they start school.

Why does my baby need a hearing screen?

Screening is an early way of finding out if your baby has hearing loss. It is a simple test that checks if your baby can hear sounds. It is a quick and painless test that takes about 10 minutes to complete. Your baby will be screened for hearing loss before they start school.

What is involved in screening my baby?

The hearing screen is a simple test that checks if your baby can hear sounds. It is a quick and painless test that takes about 10 minutes to complete. Your baby will be screened for hearing loss before they start school.

Results

If your baby passes the hearing screen, it means they can hear sounds. If your baby does not pass the hearing screen, it means they may have hearing loss. Your baby will be referred to a hearing specialist for further testing.

For further information contact your local hearing centre

Telephone: 1800 000 000

Website: www.hearingnsw.com.au

Local hearing / support services details

NSW Health

Hearing loss and your baby: the next step

An information resource for families in NSW

NSW HEALTH