Victorian Infant Hearing Screening Program

The Royal Children's Hospital Melbourne

Centre for Community Child Health

Rescreening infants in Victoria

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The Children's

Excellence in clinical care, research and education

The Royal Children's Hospital Melbourne

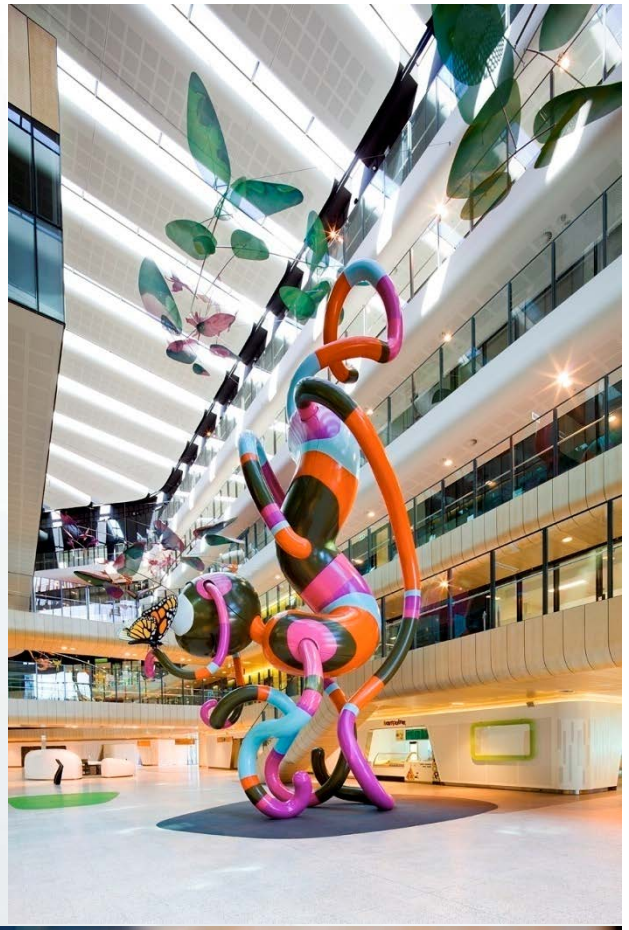
Murdoch Childrens Research Institute

The University of Melbourne

VIHSP

- Statewide screening in Victoria
- Commenced in 2005, rolled out 2008 - 2012
- ~ 75,000 babies annually
- 98.8% screened
- KPI >97% by 1 month corrected
- 0.9% refer rate
- detection rate ~1.1 per 1000
- Administered centrally through RCH


The Royal Children's Hospital




Emergency

Assumptions

- Screening programs are regularly monitored and reviewed to ensure reportable data is of a high quality
- patients are not being unnecessarily referred for further testing
- staff involved are working to acceptable/high standards
- participants are well informed and receiving the best possible service

Background

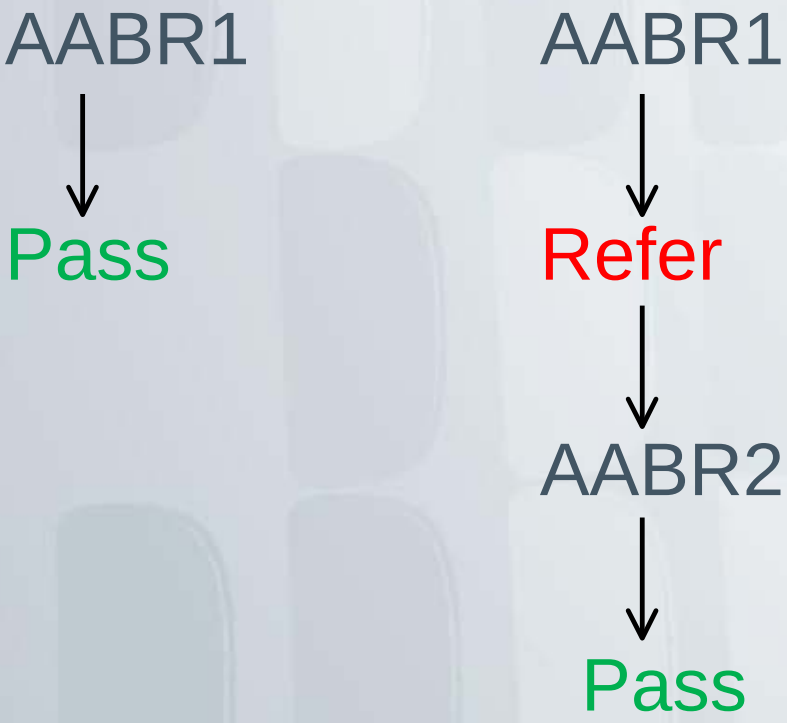
- Questions regarding the rate of rescreening
  - Rates of re-screening important consideration in the quality of screening provided, minimising false negative results, consumer confidence, and resourcing of screening services.
- Couldn't easily tell from our IT system
- Undertook a discreet project - review of data from the financial year 1 July 2011 – 30 June 2012
- VIHSP 2-stage AABR Protocol

2-stage AABR protocol

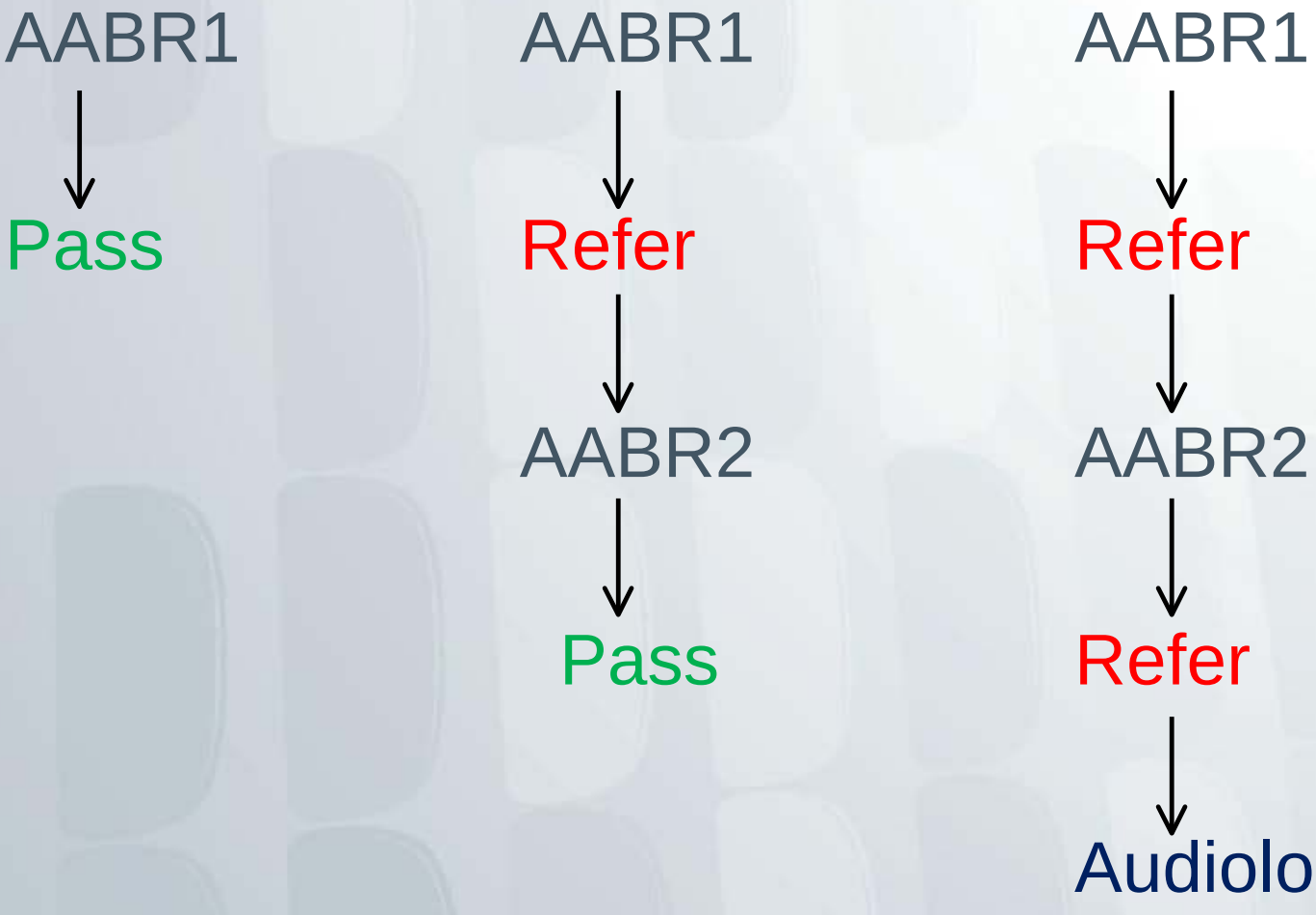
AABR1

Pass

2-stage AABR protocol



2-stage AABR protocol



2-stage AABR protocol

AABR1 → Pass

AABR1 → Refer → AABR2 → Pass

AABR1 → Refer → AABR2 → Refer → Audiology

One failed attempt or technical fail (TF) attempt permitted at each stage

Maximum 2 attempts at each stage

Project aim

- To calculate rescreen rate for the 12 month period July 1 2001 – June 30 2012
- Investigate records for quality purposes, looking at case notes and any trends or anomalies
- To use information for further quality initiatives and retraining if required

Method

- Data extracted for each of three clusters from the Oz eSP program and imported into an Excel spreadsheet
- Records with one AABR pass result (bilateral) filtered leaving records with more than one AABR result
- A rescreen is determined to be either an AABR1 attempt 2 or an AABR2 (attempt 1 or 2).
- Rescreen rate explored by cluster and state
- Further information regarding time between screens also extracted

Results - rescreen rate

Cluster and STATE	Eligible births	rescreen	% rescreen	Referred to audiology	Refer rate of rescreened
Central & Western	32036	3129	9.8		
Northern & Eastern	23347	2493	10.7		
Southern	19795	1883	9.5		
STATE	**75178**	**7505**	**10.0**	**683**	**9.1**

refer rate 0.9%

- Note this is not AABR1 refer rate - includes TF
- Other programs 4% – 17%
- Benchmark < 10% AABR1 refer rate

- What else do we want to know?

Results - time between screens

	Median rescreen time	Avg days between first and last screen
STATE	1 day 16hrs, 5min	5.1

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What about short periods?

Rescreen	Rescreen within 12hours (first - last screen)			
	first & last within 12hrs	% first & last within 12hrs	referred to Audiology	refer rate of 12hr rescreen
7505	824	11.0	8	1.0

Results - time between screens

What do other programs do?

- Qld: 24 hours where possible; opportunistic if this isn't possible.
- NSW: formal protocol is 24 hr gap, but in some cases can't wait that long and will screen sooner.
- NT: same as UK protocol – wait at least 6 hrs, but recommend leave it at least a day.
- WA: 24 hours where possible, if the baby is very young at second screen and gets a bilateral refer then a third screen is done as an OP.

Results - time between screens

- in-depth review of rescreens indicated to have been undertaken within twenty minutes of the previous screen.

Rescreen	Rescreen within 20 minutes			
	first & last within 20mins	% first & last within 20mins	referred to Audiology	refer rate of 20min rescreen
7505	308	4.1	4	1.3

- Oz eSP record/case notes review
- Of the 308
  - 249 were true repeated screens
  - 59 were pass/pass results

Pass/pass pass/pass

- Of the 59 with pass/pass results
  - 27 wrong twin screened
  - 12 no case note
  - 8 wrong ID screened/corrected
  - 8 download error
  - 2 equipment error at screen
  - 2 split ear result

Repeat screens

- **Of the 249 true repeated screens in 20min**
  - 82 received a TF on AABR1 (attempt 1)
  - 166 received a refer on AABR1
  - 1 received a TF on AABR1 (attempt 1) then a refer on AABR1 then a pass on AABR2 – three screens in 20 minutes

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- 4 referred to audiology – 1.6%
- 221 were done while inpatients

Discussion

- Rescreen rate is acceptable at 10%, no real variation between clusters
- Surprising group of immediate rescreens
- Data entry errors often related to the screening of multiple birth infants
- Contributing factors - perceived pressures from managers to screen quickly, access to outpatient services, Public Hospital length of stays, culture of staff and inappropriate selection of babies to screen.

Questions

- Is there a greater than first thought series of pressures at particular sites to complete screening for inpatients?
    - Staffing issues?
    - Time pressures?
    - KPI pressures?
    - Poor Outpatient clinic attendance?
    - Preference for less OP clinics?
    - Other factors?
- Are the team leaders aware that rescreening is occurring so quickly?
- What encourages the culture of quick rescreens at some sites?
- Are quick rescreens even a problem? Why?

Questions

- What are staff saying to families at the point of the first AABR result?
- How is the rescreen negotiated?
- Which screens are the staff choosing to rescreen quickly and why?
- What is the risk if the refer rate is much lower than the state overall refer rate? Does it matter?
- Screening twins appears to be a high risk for the program. What makes the process of screening twins so likely to result in errors?
- Would it be more helpful for screeners to use the pause button for screens that are not progressing and the infant becomes temporarily unsettled?

Next steps

- Share information with senior team v
- Change data access v
- Education surrounding case note completion v
- Continue to examine these data v
- Create and implement a guideline for rescreening infants
- Education program for all staff delivering screening across Victoria to raise awareness of these issues
- Investigate increasing use of the pause button
- Encourage adherence to procedures and attending to detail – reduce data entry errors – especially with multiple births
- Support staff so they feel less uncomfortable bringing infants back for outpatient screens