Australian Type 1 Diabetes National Screening Pilot

5th Childhood Diabetes Prevention Symposium:
General Population Screening for T1D
11th November 2022

Dr Kirstine Bell
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University of Sydney
Pilot Objectives & Aims

Overarching Objective:
What is the optimal model for routine screening for type 1 diabetes in Australia?

Aim 1
Pilot Study Comparing Feasibility & Acceptability of 3 Screening Models

Aim 2
Health Technology Assessment & Economic Modelling

Aim 3
Stakeholder Mapping and Engagement
Aim 1: Implementation Pilot of 3 Screening Models

- **Cohort 1**: Newborn Heelprick
- **Cohort 2**: Infants Saliva Swab
- **Cohort 3**: 2, 6 & 10 year olds Dried Bloodspot

**Polygenic Risk Score**
- **Low Risk** (90% population)
- **Increased Risk** (10% population)

**Islet Autoantibody Testing**
- **Negative** (Regular Re-screening)
- **Positive** (Type 1 Diabetes)

**Islet Autoantibody Testing**
- **Negative** (No Further Follow-up)
- **Positive** (Type 1 Diabetes)
Each screening model (cohort) offered in two geographically distinct catchments areas

Cohort 1
- RHW
- RPA
- St George

Cohort 2
- Brisbane North
- Western Sydney

Cohort 3
- South-East Perth
- North-West Melbourne

Cohort 1 Women’s & Children’s Hospital
The Campaign

Type 1 Diabetes
National Screening Pilot
Simple Test
Big Outcomes
Test for Type 1 Diabetes
Cohort 1 (Newborns)

Parents of newborns are offered screening through a heel prick dried bloodspot alongside existing Newborn Screening Program.

Cards for hospital bassinets
Parents of children in cohort 2 (6-12mo) and cohort 3 (2, 6 & 10 years) are mailed invitation letters and brochures by Services Australia. Prompted to visit website for self-directed registration.
Website


- Website for community & health professionals directs user to cohort-specific information about T1D and screening
- Cohorts 2 & 3 -> Links to self-directed eligibility check and self-registration (Cohort 1 newborns recruited through hospitals)
Portal/Database

Screening portal guides families through registration, online consent, ordering screening kit, receiving screening results and completing surveys.
Dedicated Screening Helpline

1800 505 909

Monday – Friday, 9am to 4pm AEST

Staffed by: Paediatric CDE, Genetic Counsellor & Research Staff

Alternatively:
Request a call back via website OR
Email: info@KidsDiabetesScreen.com.au
Media & Social Media

Communication Strategy

• National launch for Australia’s National Diabetes Week (July 11-15th 2022)
• Local print, radio & TV media for launch of each catchment area (staggered starts)
• Paid social media marketing through Mum’s groups etc

St George & Sutherland Shire Leader Newspaper, 5th October 2022 (Fun fact: My baby was the first newborn screened for T1D in Australia)
Cohort 2 Saliva Kits

Our specially-designed kits contain the child’s saliva swab and instructions, then function as reply-paid return mailers.
Cohort 3 Bloodspot Kits

Our pilot-branded finger prick dried bloodspot kits are mailed out to families with custom 2-spot screening cards and reply-paid branded envelopes.
# Uptake to Date

Screening uptake for each cohort is the primary outcome, as a summary indicator of feasibility and acceptability. Therefore, targets represent maximums rather than required minimums for power. Study is an implementation study and is not powered for clinical outcomes.

<table>
<thead>
<tr>
<th>Cohort</th>
<th>Launch Date</th>
<th>Uptake as of 8th Nov 2022</th>
<th>Target Uptake</th>
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</thead>
<tbody>
<tr>
<td>Cohort 1 (Newborns)</td>
<td>4th &amp; 18th October (2 of 4 hospitals to date)</td>
<td>129</td>
<td>n = 3,000</td>
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<tr>
<td>Cohort 2 (6-12mo)</td>
<td>11th July 2022</td>
<td>697</td>
<td>n = 3,000</td>
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<tr>
<td>Cohort 3 (2, 6 &amp; 10yo)</td>
<td>8th August 2022</td>
<td>386</td>
<td>n = 3,000</td>
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National Multidisciplinary Scientific Team

(plus many more invaluable team members)

Dr Kirstine Bell (PI)
Prof Maria Craig
Prof Jenny Couper
Prof Peter Colman
A/Prof John Wentworth
Prof Elizabeth Davis
Dr Christel Hendrieckx
Dr Gary Deed
Prof Natasha Nassar
A/Prof Amanda Henry
Dr Antonia Shand
Prof Adrienne Gordon
Prof Bill Hagopian
Prof Richard Oram
We are also part of the larger T1D screening & prevention research network in Australia
Pilot Ongoing Until Mid-2024

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