The opinions, comments and analysis expressed in this presentation are those of the author and do not necessarily represent the views of the Minister for Social Services and cannot be taken in any way as expressions of Government policy.
We acknowledge the traditional owners on whose land we meet today.

We pay our respects to their elders past, present and future.
Presentation outline

What is it? Who is involved? Where?

Methodology

Selected findings

How you can apply for and use the data and get more information
LSIC: Overview

What: Australian Government longitudinal cohort study with ongoing funding.

Why: To explore how early childhood affects later life outcomes for Aboriginal and Torres Strait Islander children.


Who’s involved:

- Guided by a **Steering Committee** chaired by Professor Mick Dodson AM since 2003, - majority Indigenous members

- Managed by **LSIC Team** in the National Centre for Longitudinal Data in the Department of Social Services

- **Research Administration Officers (RAOs)** or interviewers are mainly DSS employed, full time Indigenous staff.
Key research questions

1. What do Aboriginal and Torres Strait Islander children need to have the best start in life to grow up strong?

2. What helps Aboriginal and Torres Strait Islander children to stay on track or get them to become healthier, more positive and strong?

3. How are Aboriginal and Torres Strait Islander children raised?

4. What is the importance of family, extended family and community in the early years of life and when growing up?

And:

5. How can services and other types of support make a difference to the lives of Aboriginal and Torres Strait Islander children?
LSIC methodology

Community engagement in each site
Positive focus
Commitment to feedback
Publicly available data

Annual quantitative data collection includes:

- Parent/carer own and their child’s physical health, social and emotional wellbeing, learning and education, home environment and work.
- Study children are also interviewed and complete age appropriate vocabulary, reasoning, reading and maths assessments and are weighed and measured.
- Dad/Parent 2 interviews & online or hard copy teacher questionnaires.
Sample and retention

- Small widely spread population with **no definitive list** - 24% remote

LSIC solution:
- Site based sample – not representative
- Both Medicare and Centrelink lists & word of mouth to supplement
- More than **1670** parents or carers (usually Mum) of babies and four year olds in **2008**

Excellent retention:
- More than 1230 interviews each year
- Still have 29.6% remote or very remote (ASGC) at wave 8 (2015)
Sample characteristics 2008, 2009

Parent 1:

- **75% Aboriginal**, 4% Aboriginal & Torres Strait Islander, 7% Torres Strait Islander, 15% not Indigenous
- 41% in lowest decile for relative socio-economic disadvantage
- 27% of parent/carers **speak an Indigenous language**
- 15% had **post natal depression** (n=237), another 2% “probably”
- 93% of Parent 1 (main carer) mothers

**LSIC children**

- Children belong to more than 80 tribal / language groups or clans
- Over 300 children speak more than one language – many 2 or more
- 9.5% were born large for gestational age & 17% were born small for gestational age
Selected findings
## Life events in LSAC and LSIC

<table>
<thead>
<tr>
<th>LSAC – In the last year</th>
<th>LSIC – In the last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pregnancy or birth of a baby to P1 or P2</td>
<td>Pregnancy or birth of a baby to P1 or P2</td>
</tr>
<tr>
<td>Injury, illness or assault to P1 or P2</td>
<td>P1 or P2 have been badly hurt or sick</td>
</tr>
<tr>
<td>Injury, illness or assault to other close relative</td>
<td>Other close family member has been badly hurt or sick</td>
</tr>
<tr>
<td>Parent, partner or child died</td>
<td>Death of close family member or friend in the household</td>
</tr>
<tr>
<td>Close family friend or another relative died</td>
<td>Death of close family member or friend not in the household</td>
</tr>
<tr>
<td>P1 or P2 lost their job</td>
<td>P1 or P2 lost their job</td>
</tr>
<tr>
<td>Had a major financial crisis</td>
<td>Family had serious money worries</td>
</tr>
<tr>
<td>Moved house <strong>in the last two years</strong></td>
<td>Moved house</td>
</tr>
<tr>
<td>Someone in the household had a drug or alcohol problem</td>
<td>Someone in the household had a drug or alcohol problem</td>
</tr>
<tr>
<td>Something valuable was lost or stolen</td>
<td>Someone in the household has been mugged, robbed or assaulted</td>
</tr>
<tr>
<td>P1 or P2 had problems with the police and a court appearance</td>
<td>P1 or P2 has been arrested, in jail or had problems with the police</td>
</tr>
<tr>
<td>Separated from a spouse or partner</td>
<td>Any of the child’s carers left because of a family split</td>
</tr>
</tbody>
</table>
Life events experienced at age 6 & 7 in LSAC and LSIC

Type of life event experienced by family

- baby
- sick in h/h
- sick out h/h
- death in h/h
- death out h/h
- lost job
- financial worry
- moved
- drug/alcohol
- crime victim
- legal/police
- relationship split

Percentage

- LSAC
- LSIC
Percentage of LSAC and LSIC children experiencing three or more life events over four waves

More than 60% of LSIC children experience 3 or more stressful life events in the previous year in at least one wave.

Number of times 3+ life events experienced by family over 4 waves
Children's social, emotional & behavioural difficulties scores (SDQ), by number of life events

Average SDQ score

<table>
<thead>
<tr>
<th>Number of life events</th>
<th>LSAC</th>
<th>LSIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>7.3</td>
<td>10.1</td>
</tr>
<tr>
<td>1</td>
<td>8.0</td>
<td>11.3</td>
</tr>
<tr>
<td>2</td>
<td>8.5</td>
<td>12.2</td>
</tr>
<tr>
<td>3</td>
<td>9.3</td>
<td>13.4</td>
</tr>
<tr>
<td>4</td>
<td>9.9</td>
<td>14.9</td>
</tr>
<tr>
<td>5+</td>
<td>11.2</td>
<td>16.1</td>
</tr>
</tbody>
</table>

Risk of developing clinically significant problems:
- Low=0-13
- Moderate=14-16
- High=17-40

Zubrick et al 2005

Number of life events experienced at age 6 & 7 in LSAC and LSIC
Multivariate regression model of the relationship between disadvantage and children’s social and emotional difficulties

<table>
<thead>
<tr>
<th>Measure of Disadvantage</th>
<th>LSAC</th>
<th>LSIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEIFA advantage &amp; disadvantage (bottom 5 deciles)</td>
<td>0.80***</td>
<td>1.17</td>
</tr>
<tr>
<td>Jobless household</td>
<td>1.34***</td>
<td>0.26</td>
</tr>
<tr>
<td>Financial stress</td>
<td>1.52***</td>
<td>1.74***</td>
</tr>
<tr>
<td>Single parent primary carer</td>
<td>1.26***</td>
<td>-0.26</td>
</tr>
<tr>
<td>Low educational attainment primary carer</td>
<td>0.94***</td>
<td>0.43</td>
</tr>
<tr>
<td>Poor health of primary carer</td>
<td>1.68***</td>
<td>2.55***</td>
</tr>
<tr>
<td>Low income (&lt;$600 pw)</td>
<td>-0.17</td>
<td>0.48</td>
</tr>
<tr>
<td>Number</td>
<td>3799</td>
<td>437</td>
</tr>
</tbody>
</table>

* p<0.05 **p<0.01

Children aged 6 and 7
What reduces LSIC children's social, emotional and behavioural difficulties?

- Parent 1 has strong relationships**
- P1 good social and emotional wellbeing ***
- Major life events: continuous ***
- Parent education, Year 11+ **
- Study child's age in years ***
- Study child is a girl ***
- Study child in very good/excellent...
- Adv Indigenous socio-economic areas ***

Adjusted $R^2 = 0.15 \quad n=1201$  
P<0.1* \quad P<0.05** \quad P<0.01***  
Wave 3 data
Relationship between mother’s experience of discrimination and child’s difficulties scores at 6-7 years of age

- **Close to average**
- **Slightly raised difficulties**
- **High/v. high difficulties**

**Mother experienced discrimination**

- Not really n=320
  - Close to average: 58
  - Slightly raised difficulties: 20
  - High/v. high difficulties: 23

- Little bit/fair bit/lots n=114
  - Close to average: 43
  - Slightly raised difficulties: 25
  - High/v. high difficulties: 32

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Footprints in Time
The Longitudinal Study of Indigenous Children
Katie Thurber, ANU

- **Cohort Profile**: Footprints in Time, the Australian Longitudinal Study of Indigenous Children; Thurber, K. Banks, E. & Banwell, C. on behalf of the LSIC Team. International Journal of Epidemiology, 2014


  - “...higher birthweight indicates an increased risk of obesity in childhood and therefore an increased risk of adult onset chronic disease...“
  - “Further, this study identifies smoking during pregnancy as an independent risk factor for increased BMI in this sample.”

- Available from: [https://www.researchgate.net/Katherine_Thurber](https://www.researchgate.net/Katherine_Thurber)
Body Mass Index trajectories of Indigenous Australian children, and relation to screen-time, diet, and demographic factors; Thurber, K., Dobbins, T., Neeman, T., Banwell, C. & Banks, E., Obesity, 2017

- More than 10% of children in the study were overweight/obese at age 3.
- Rapid onset of obesity between 3 and 9 years - of the children with normal baseline BMI at wave 3 - 31.9% had overweight/obesity 3 years later.
- Barriers to a healthy diet include: cost, availability, poor quality of fresh produce & easy availability of unhealthy options (including soft drink).

To promote healthy weight, Thurber et al suggest:

a) improve the social determinants of health, such as financial security, housing, and community wellbeing;

b) improve the food environment so that families can make healthy choices.

Relationship between home visits and later outcome measures

*Coloured in bars are significant effects*
What is it about <Aboriginal or Torres Strait Islander> culture that you would like to pass on to <study child> at this age?
What does study child do after school? 

Sydney compared to other LSIC sites

- Goes straight home (only): 14% (Sydney), 29% (Other sites)
- Stays for activities at school: 20% (Sydney), 18% (Other sites)
- Goes to activities away from school: 31% (Sydney), 28% (Other sites)
- Goes to relative’s or friend’s house: 28% (Sydney), 33% (Other sites)
- Goes to river, park, playground: 21% (Sydney), 19% (Other sites)
- Goes to shops: 28% (Sydney), 53% (Other sites)
LSIC Challenges

**Engagement:** culturally and linguistically diverse, many Indigenous people felt over-researched & sceptical of any research benefits.

**Solutions:**
- Listen & respect the advice from: elders, community consultations, Steering Committee, interviewers
- Build relationships in the community
- Employ Indigenous interviewers where they will be interviewing
- Stress the interview is voluntary
- Provide *Don’t know* and *refused* options for each question or *not appropriate to answer to skip section*

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**Why do you stay in the study? (wave 6, 2013)**

"...give policy makers a better idea of what’s going on with Aboriginal families."

"...(show) diversity within Aboriginal culture."

"The questions allow me to reflect on what we do at home and how (child) develops."
Find out more about LSIC

Look at the website: www.dss.gov.au/lsic

Sign up to The Source: thesource.dss.gov.au/ for news about LSIC and other longitudinal studies

Look for the book: Indigenous Children Growing Up Strong: A Longitudinal Study of Aboriginal and Torres Strait Islander Families
Editors: Maggie Walter, Karen L. Martin, Gawaian Bodkin-Andrews.

Access the data
Application forms and licences can be found via www.dss.gov.au/NCLD
Questions about accessing the data email longitudinalsurveys@dss.gov.au
Questions about using the data email LSICdata@dss.gov.au
Questions?