

“Mind the Gap” – delivering evidence to inform policy

## *Growing Up in New Zealand*

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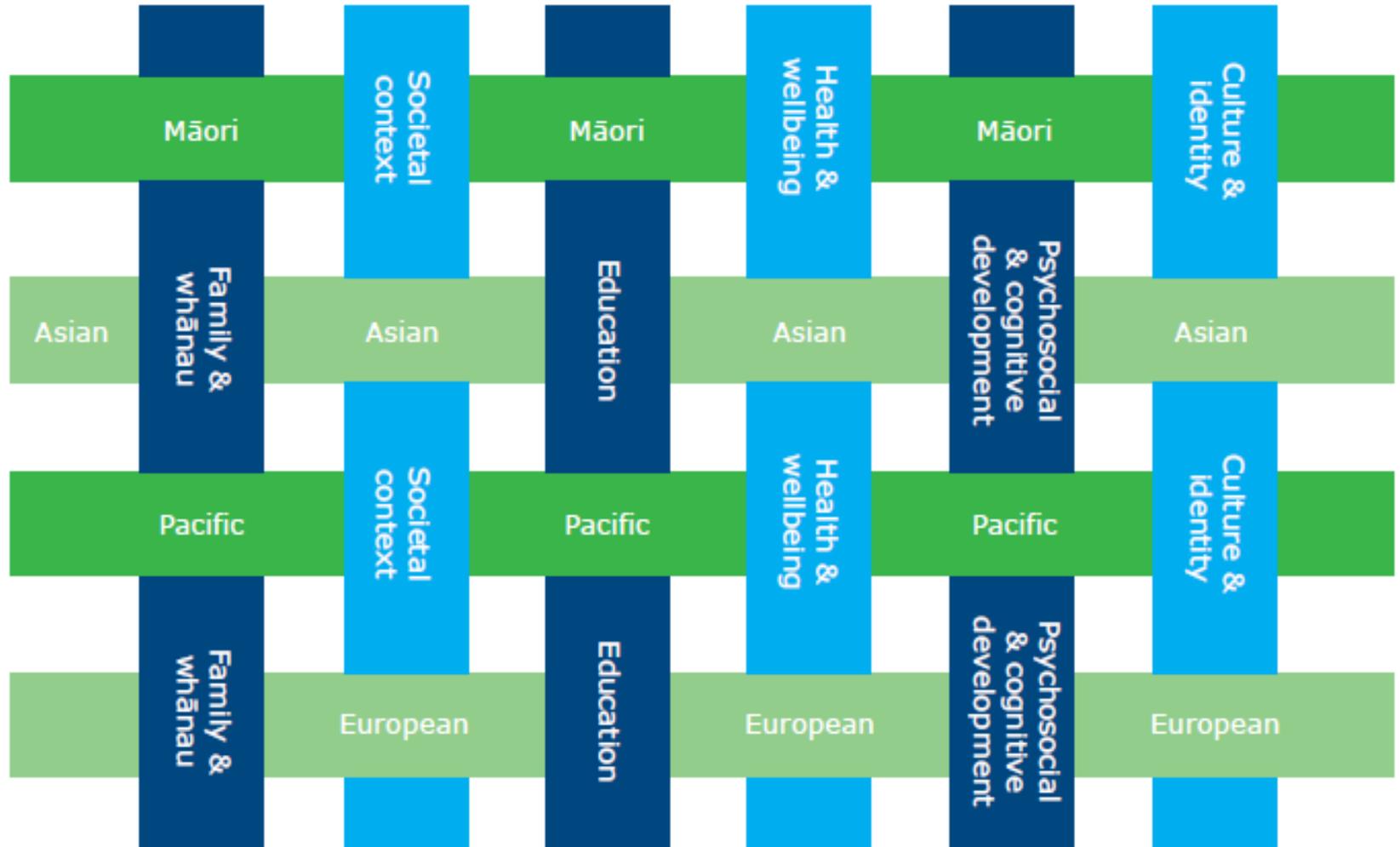
# Overarching Aim of *Growing Up in New Zealand*

To provide contemporary **population relevant evidence** about the determinants of developmental trajectories for 21<sup>st</sup> century New Zealand children in the context of their families.



*“The Ministry of Social Development and the Health Research Council of New Zealand, in association with the Families Commission, the Ministries of Health and Education and the Treasury, wish to establish a new longitudinal study of New Zealand children and families, ....”* to gain a better understanding of the causal pathways that lead to particular child outcomes (across the life course) ..... introduction to RFP in 2004.

# Domains for *Growing Up in New Zealand*



# Study rationale

1980



2013



# Longitudinal Information

Child age	Ante-natal	Peri-natal	6 wk	35 wk	9 mth	12 mth	16 mth	23 mth	2 yr	31 mth	45 mth	54 mth
Mother CAPI*	✓				✓				✓			✓
Father CAPI*	✓				✓				✓			
Mother CATI†			✓	✓			✓	✓		✓	✓	
Child‡		✓							✓			✓
Data linkage**		✓				✓			✓			✓

\* CAPI computer assisted personal interview

† CATI computer assisted telephone interview

‡ Child measurement

\*\* Linkage to health and education records (eg National Minimum Dataset, National Immunisation Register, ECE participation)

# Demographics (first 1000 days)

## ETHNICITY



**62%**  
of children were from  
a planned pregnancy



**42%**  
were the first child  
in the family



**6%**  
of mothers had treatment to  
assist with becoming pregnant



**12%**  
have three or  
more siblings



Average height  
at two years was **87cm**  
Average weight  
at two years was **13.3kg**



**3%**  
multiples  
(twins and triplets)



**48%**  
GIRLS



**52%**  
BOYS

*"Being a boy he is hard  
to manage – not like  
a girl – he doesn't do  
what he's told."*

*"I have given a best  
friend to my older child,  
and now I have two best  
friends in the world."*

# Health and wellbeing (first 1000 days)



**86%**

were in excellent or very good health



**10.5** hours

was the average length of sleep per night



**94%**

received at least some of their 15 month immunisations



**6**

was the average number of GP visits over the last year



Most common favourite first food:

**banana**

Of the children:



**47%**

had an ear infection

**40%**

had a chest infection

**43%**

had gastroenteritis

**14%**

had a skin infection



Told by a doctor they had:

an allergy **10%**

eczema **26%**

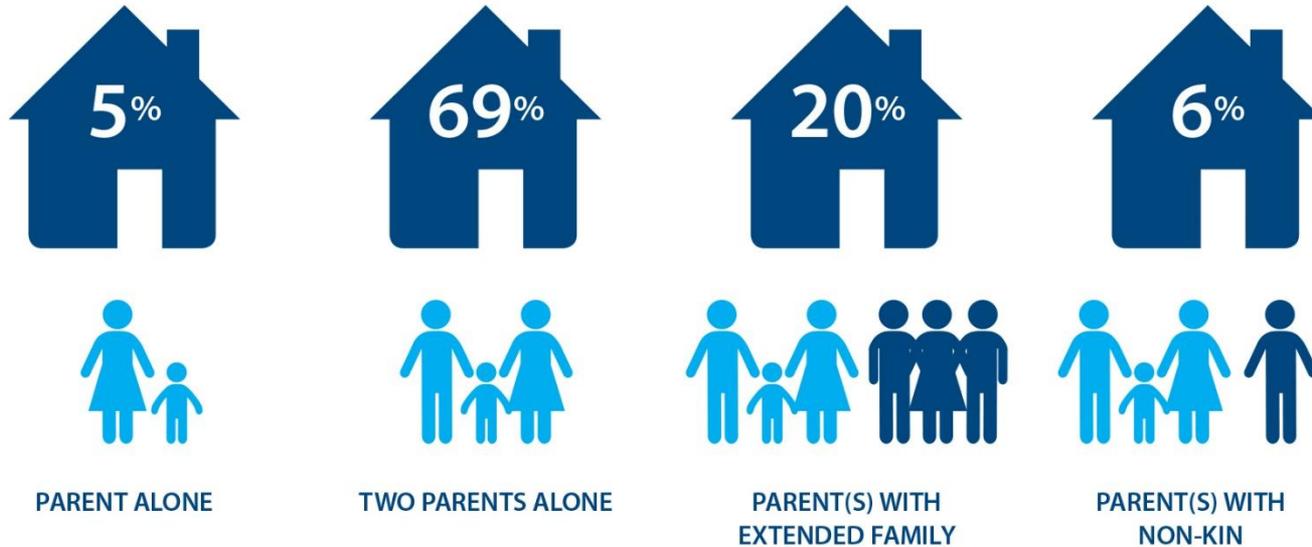
asthma **12%**



**20%**

had one or more hospital stays

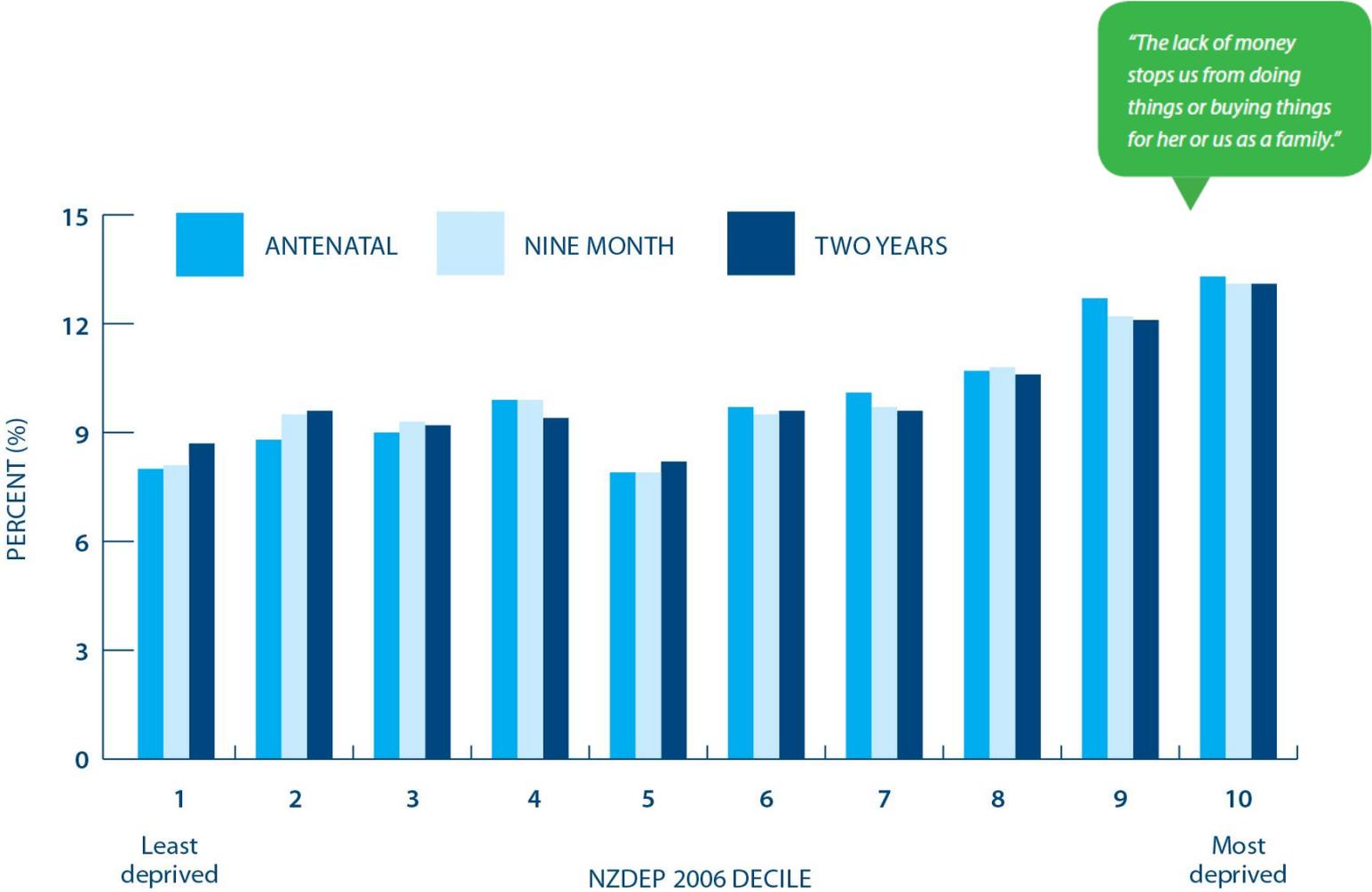
# Family and Household structure



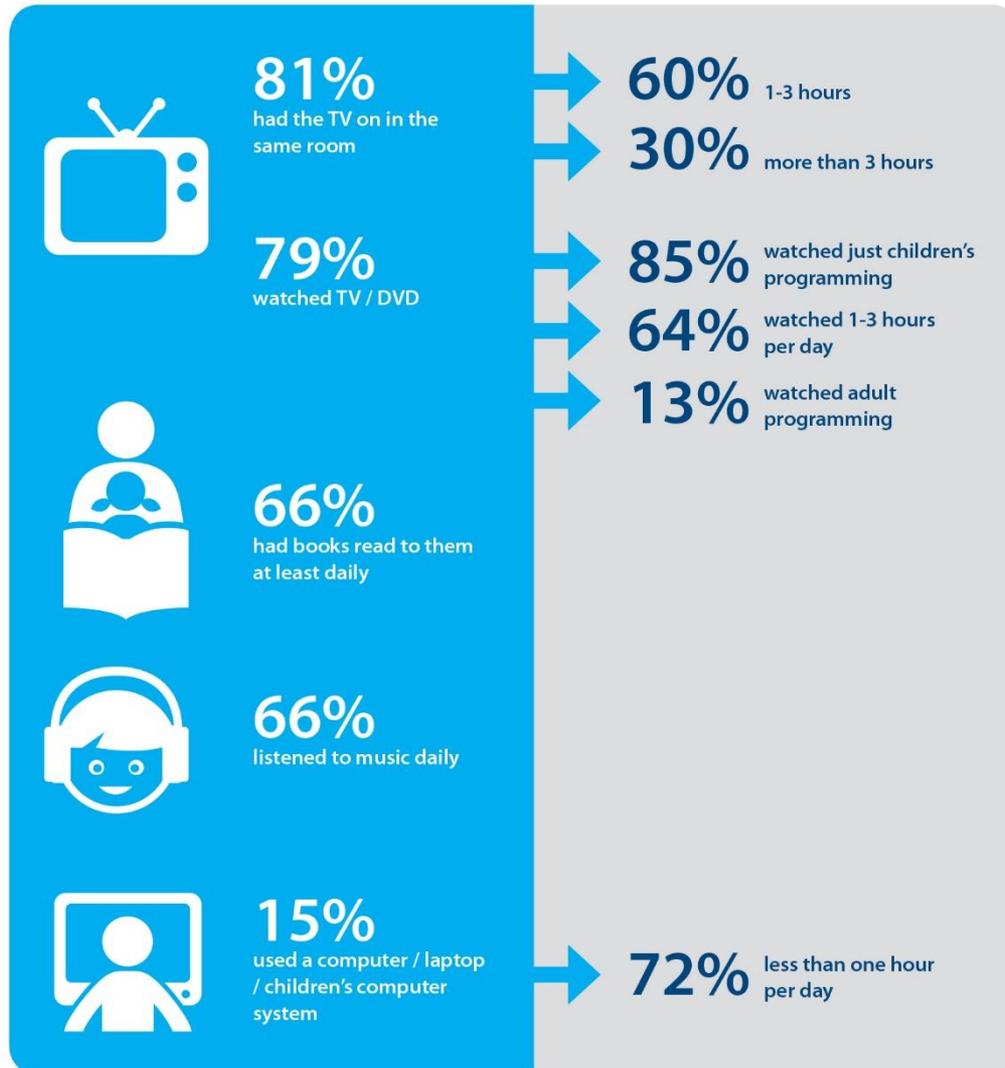
*"It is amazing how much she's learning from being at home with her grandparents."*

*"As a parent I have learned a lot – I have learned I am a responsible person. It has made me stronger too as I have no family support and I can manage on my own."*

# Area Level Deprivation



# Home environment



*"Trying to cut his TV hours down is a real challenge."*

*"He's learning a lot from the TV – while he is watching TV he can answer all the questions."*

# Languages used

"That she can speak  
Māori and that that's  
her first language when  
she speaks."

**Namaste**  
Fakaalofa atu   Sat Sri Akal   Helo  
Bula Vinaka  
Annyeonghaseyo

Néih hōu  
**Kia Orana**  
As-salam alaykom

**Talofa Lava**

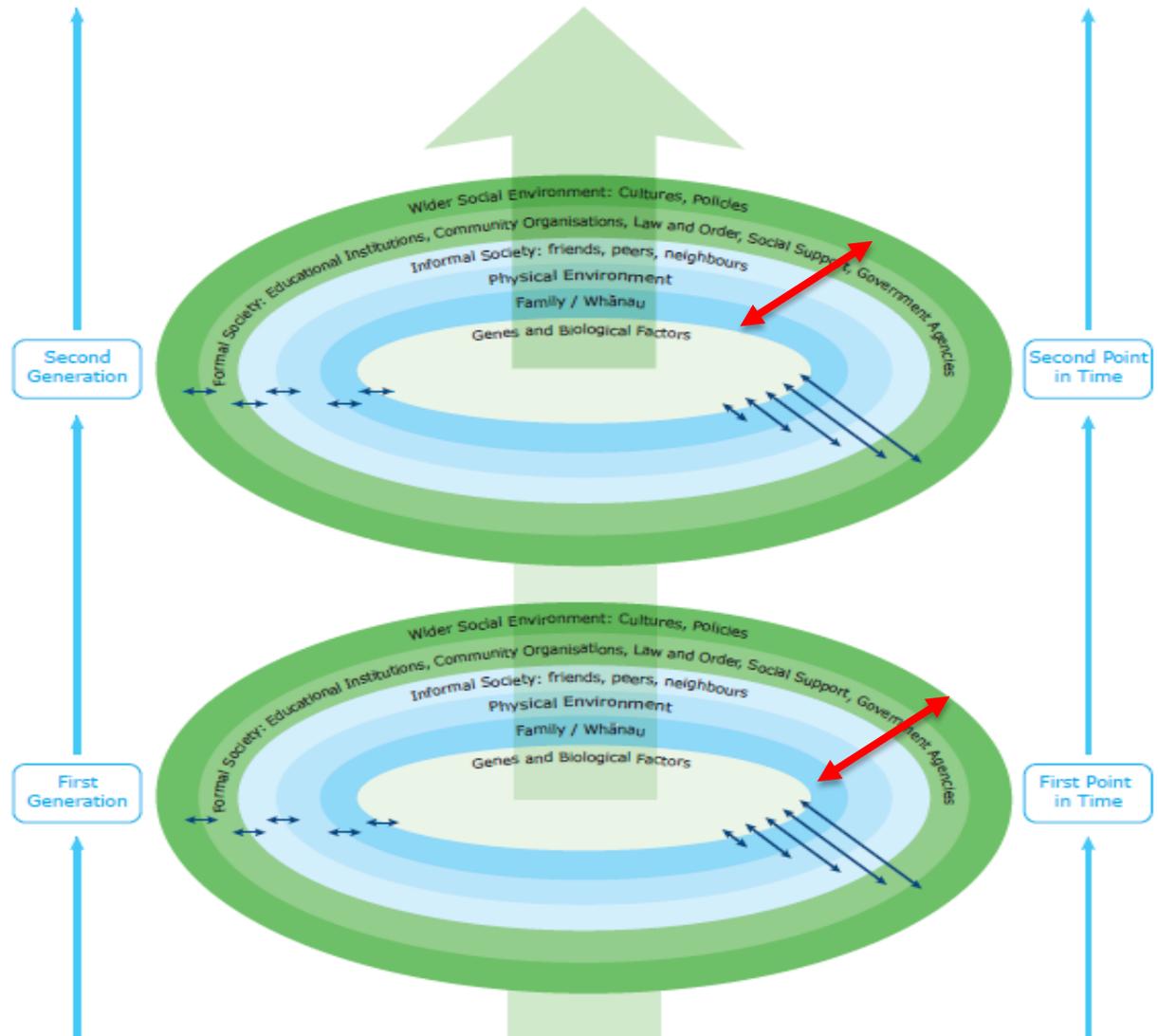
**Kia Ora**   ¡hola

**Malo e lelei**   **Ni hao**  
Kumusta   Konnichiwa

\*English language excluded. Translation of 'Hello' into each relevant language, with font size proportional to frequency understood.

# Seeking answers to why, what, when, where, who?

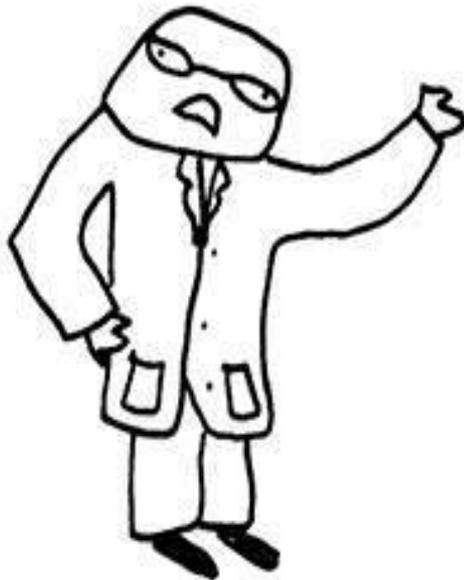
Mind the gap



# Moving beyond “risk factorology”

SCIENCE vs. THE PEOPLE!

correlation is  
not causation!



i dunno what  
those are but  
i disagree  
and i vote!

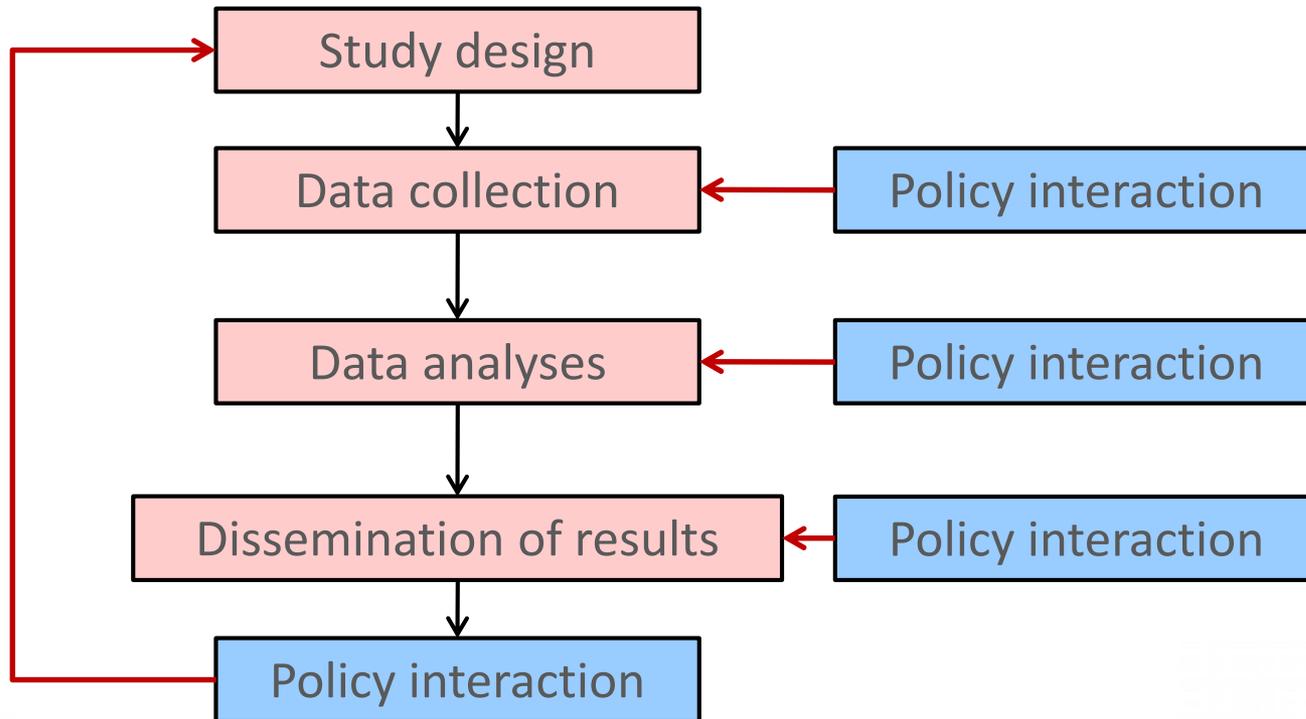


# *Growing Up* - The utility of the cohort

- Providing contemporary and holistic evidence about trajectories of development for children growing up in New Zealand in the 21<sup>st</sup> century
- Following 6853 children born in 2009 and 2010 (and their families) from before birth until early adulthood
- Cohort reflects diversity of contemporary NZ births (ethnicity, SES, rural/urban)
- In particular the study had adequate explanatory power for Maori, Pacific and Asian children (44% multiple ethnicities)
- Adding depth and value to routine data
- Collecting multidisciplinary evidence - explicit intent to translate to inform cross-sectoral policy strategies

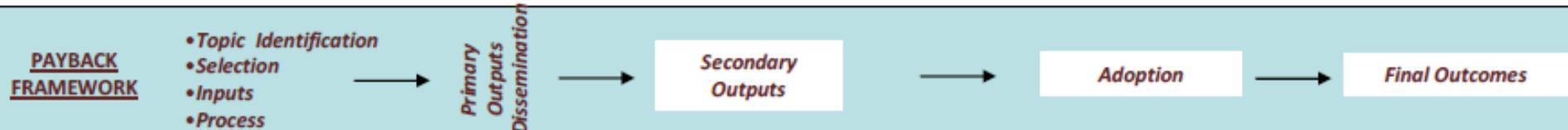
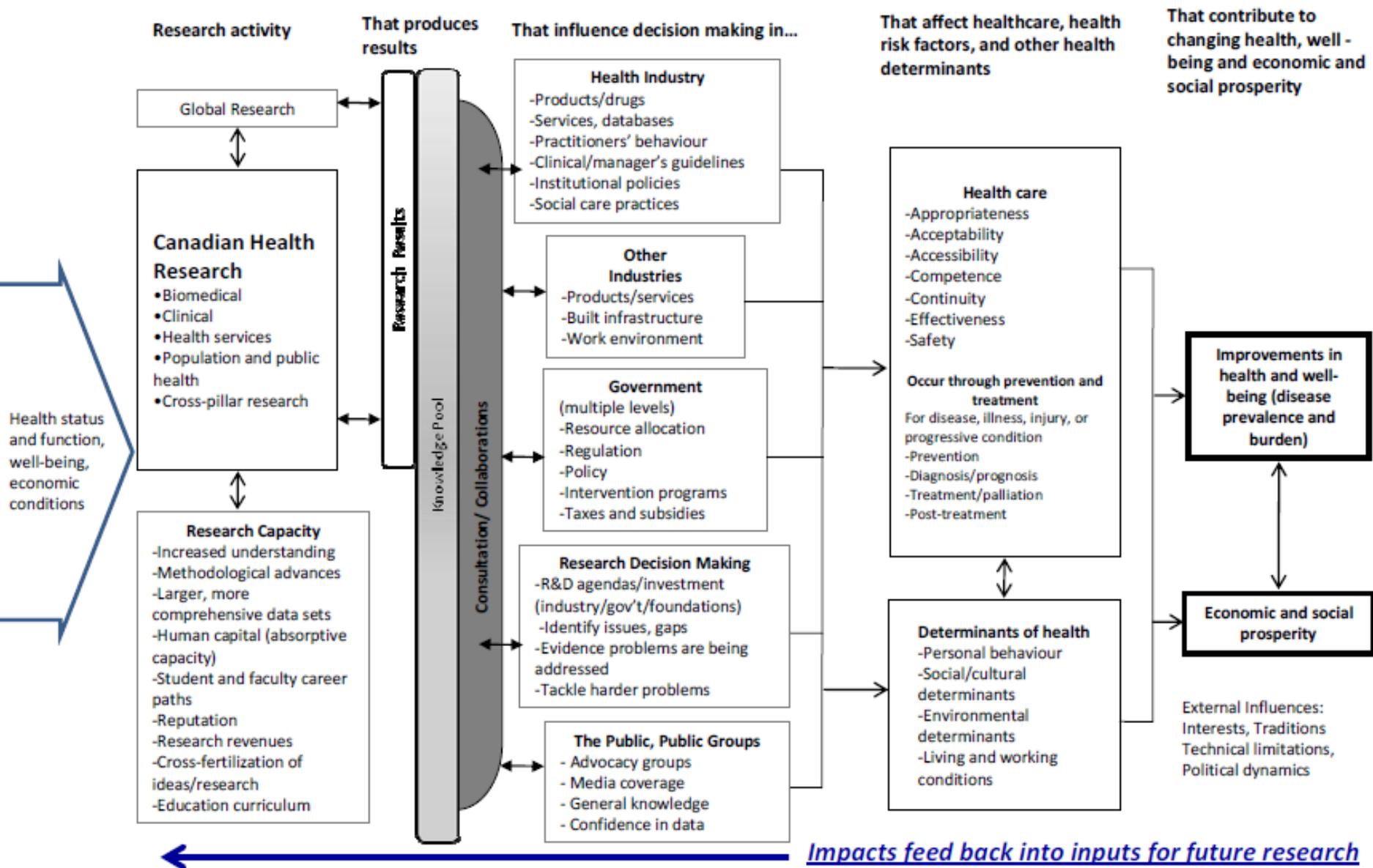


# Partnerships to help facilitate translation



**Bridge the gap?**

# Initiation and Diffusion of Health Research Impacts



# Evidence - Comprehensive reports for policy makers

**Growing Up in New Zealand**  
Before we are born  
2010



**Growing Up in New Zealand**  
Now We Are Born  
2012



**Growing Up in New Zealand**  
Now We Are Two: Describing our first 1000 days  
2014



**Growing Up in New Zealand**  
Vulnerability Report 1: Exploring the Definition of  
Vulnerability for Children in their First 1000 Days  
2014



**Growing Up in New Zealand**  
Residential Mobility Report 1: Moving house  
in the first 1000 days  
2014



# For example - Focus on Vulnerable Children

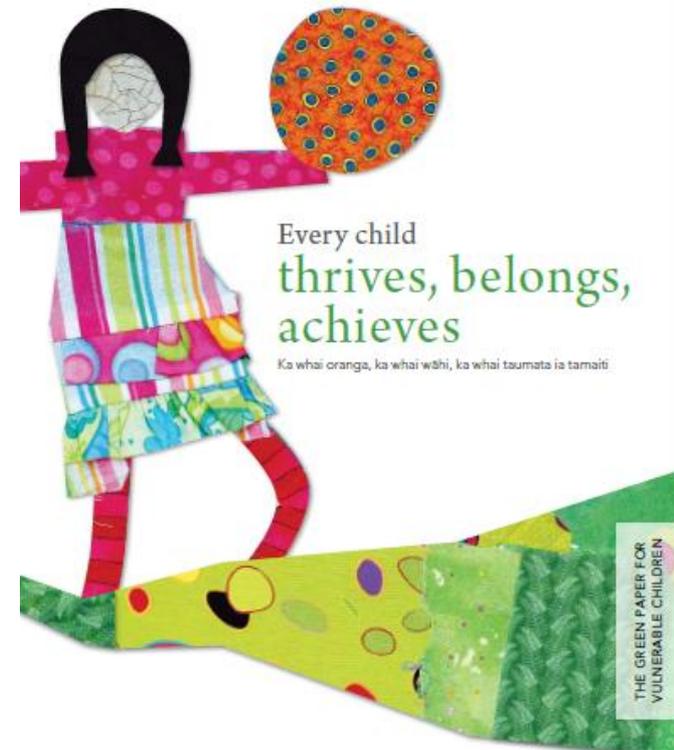
New Zealand overall child health statistics are shameful and the summary figures hide unacceptably large inequities in the statistics e.g.

- Second to lowest immunisation rates in first 2 years of life
- NZ ranked 29<sup>th</sup> out of 30 OECD countries for overall child health and safety
- Highest rates of child deaths from accidents and injuries

In 2011 Green paper on Vulnerable Children was presented for discussion (Minister of Social Development)

In 2012 a White paper was developed and in 2013 a Children's Action Plan has been developed

Aim is to ensure that every child born in NZ “thrives, belongs and achieves” through a series of measures including improving care and protection services; improving access to ECE; and enhancing child health services



# Early Vulnerability – the usual suspects

## Proximal Family Variables

- Maternal depression (antenatal using EPDS $\geq$ 12)
- Maternal physical wellbeing (poor or fair)
- Maternal smoking in pregnancy (after first trimester)
- Maternal alcohol use (after first trimester)
- **Maternal age (teenage pregnancy)**

## Distal Family Variables

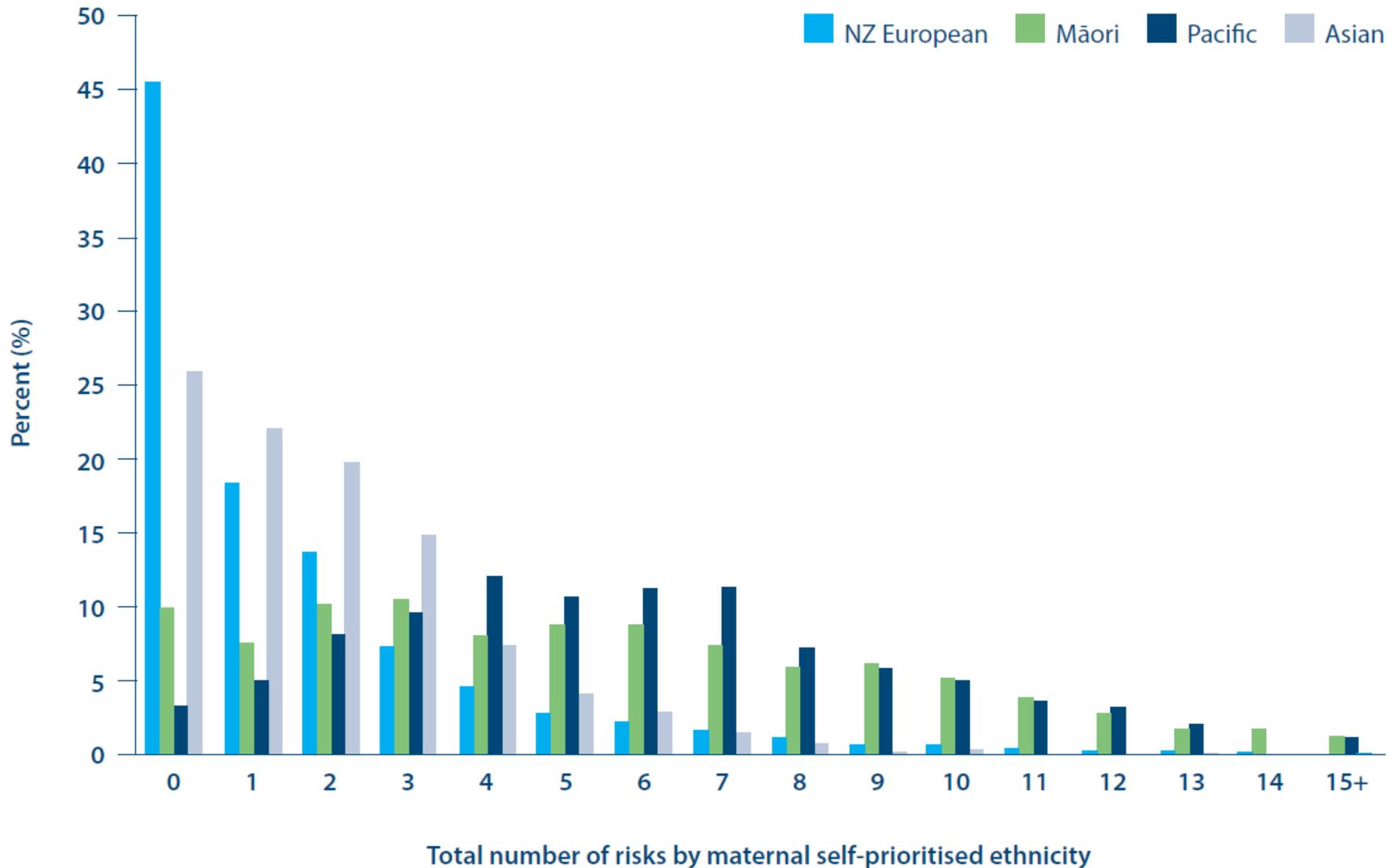
- Relationship status (no partner/single)
- **Maternal education** (no secondary school qualification)
- Financial stress (regular money worries)

## Home environment

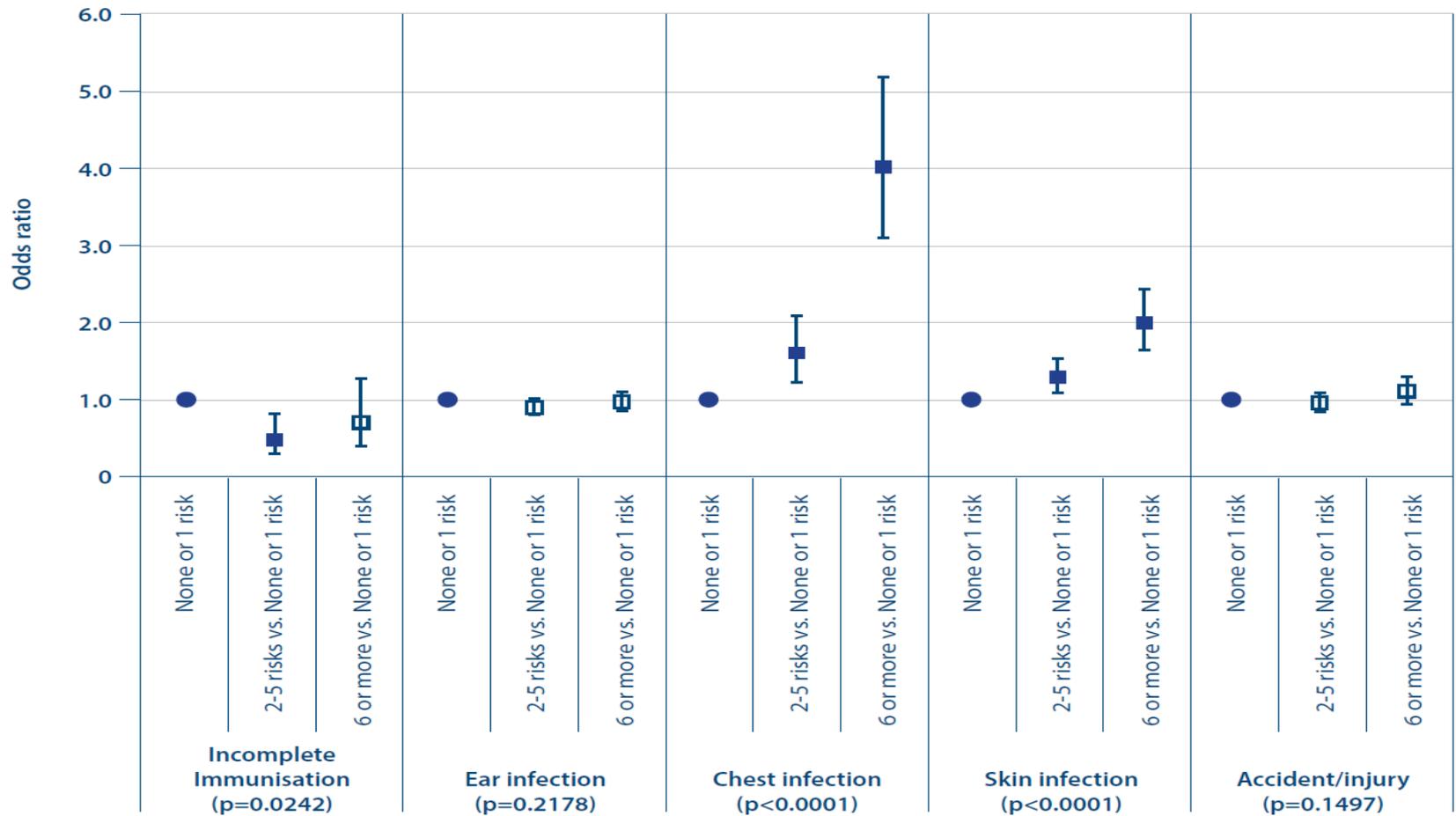
- **Deprivation area (NZDep2006 decile 9 or 10)**
- Unemployment (mother not in work or on parental leave)
- Tenure (public rental)
- **Income tested benefit (yes/no)**
- Overcrowding ( $\geq$ 2 per bedroom)
- Mobility (moved  $>$ 5 times in last 5 years)



# Exposures cluster - but not uniformly

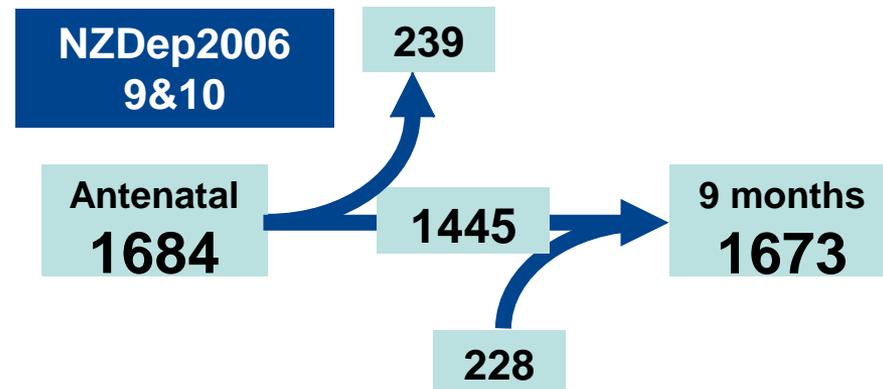
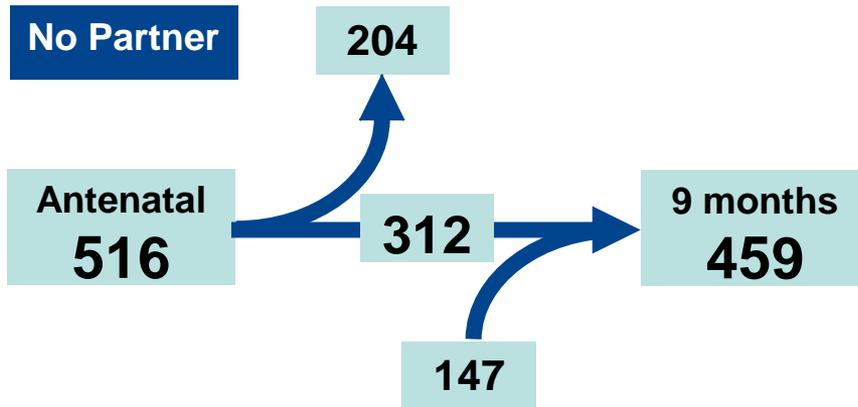


# Cumulative exposure increases health risks

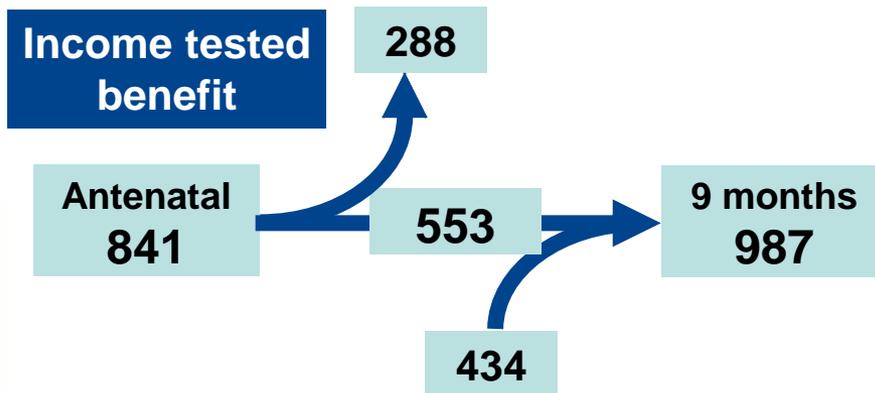
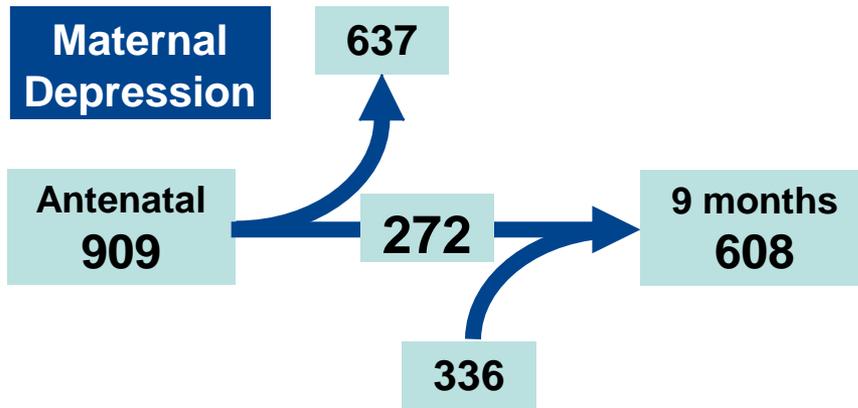


Key: ■ Denotes significantly different from the reference group  
 □ Denotes not significantly different from the reference group  
 ● Reference group

# Exposure changes over time....



# Multiple exposures change over time....



# Residential Mobility – when, where, why?

Five Years  
Before  
Pregnancy

- 15% lived in the same dwelling
- **22% moved once**
- **63% moved twice or more**

*"A real highlight has been moving into a bigger home for the family."*

Between  
pregnancy and  
when baby 9  
months

- **26% moved**
  - 84% of these moved once
  - 12% moved twice
  - 4% moved 3+ times

*"We had to move house because the rental was sold. I'd rather not have to have my children move."*

Between 9m  
and 2 years

- **32% moved**  
(over 2000 whānau)
  - 80% of these moved once
  - 16% moved twice
  - 4% moved 3+ times



# Policy Briefings (2014)



Growing Up in New Zealand Policy Brief 1

## Nutrition and physical activity during pregnancy: evidence from Growing Up in New Zealand



Malnutrition has important impact on health globally.<sup>1</sup> Recent estimates of obesity prevalence among New Zealand women, with 14% of women aged 20-30 years, and 28% of those aged 31-50 years obese.<sup>2</sup>

In pregnancy, good nutrition is particularly necessary, to maintain maternal Recommendations about what to eat and what to avoid eating and drinking become increasingly extensive in recent decades. Food and Nutrition Guide physical activity, for pregnant women in New Zealand were published by the They contain recommendations focused on the daily intake of the four major fruit, bread and cereals; milk and milk products; and lean meat, meat all

Little is known about the dietary intake of pregnant women in New Zealand information about diet and nutrition. This policy brief describes a selection of women of the *Growing Up in New Zealand* study with respect to their nutrition during pregnancy.<sup>3</sup>

Research conducted by Growing Up in New Zealand  
 Measured  Not  Done



Growing Up in New Zealand Policy Brief 2

## Keeping our children injury-free: household safety evidence from Growing Up in New Zealand



Child injury is a leading cause of death for New Zealand children, and an important public health problem. In 2007, New Zealand was ranked worst out of 24 OECD nations for rates of death for those under 20 years of age. In addition, a great many more non-fatal injuries or hospitalisations or other forms of medical attention, and which cause an innumerable (long-lasting) burden on children and their families. This burden is also known amongst the most deprived, and therefore injuries contribute to the inequitable outcomes for some children.<sup>1</sup>

Research has suggested that the proper implementation of evidence-based safety measures could prevent a majority of injuries where young children are particularly susceptible to, such as poisoning, burns/scalds, and choking/strangulation. Home is the most common location for children under five years of age occur.<sup>2</sup> Currently in New Zealand there is relatively little programme attention on improving the compliance of all housing towards minimum safety standards.<sup>3</sup> Standards proposed include: working smoke alarms, driveway/roadway fencing, safe power outlets, water heating set to safe temperature, secure storage for tools, and pool fencing.<sup>4</sup> All of these measures have the potential to reduce home injuries to children. However, little is known regarding the current and potential impact of housing on the injury risk of young children in New Zealand, nor of the most immediate and important safety improvements for this particularly injury-vulnerable population group.

Research conducted by Growing Up in New Zealand  
 Measured  Not  Done



Growing Up in New Zealand Policy Brief 4

## Employment and parental leave around the time of birth: evidence from Growing Up in New Zealand



Parental leave, particularly if paid, is associated with improved maternal and child health outcomes,<sup>1,2</sup> and a priority for overcoming health inequalities. Parents with no or limited leave, or with unpaid leave perceive an imperative to return to work sooner.<sup>3</sup> Early returns to work are associated with reduced levels and duration of breastfeeding and with poorer immunisation coverage.<sup>4</sup> Parental leave is also associated with income security, labour market attachment, career development, and gender equity in the labour force.

New Zealand was one of the last countries in the OECD to adopt paid parental leave, has been one of the least generous in the level and duration of payment, with among the most restrictive eligibility criteria.<sup>5</sup> Current legislation in New Zealand entitles eligible parents to 14 weeks of paid parental leave (at an average of 52% salary replacement), their partners to two weeks of unpaid parental leave,<sup>6</sup> and a further 38 weeks of unpaid leave that can be shared between parents. In recognition of the importance of parental leave in giving children a healthy start to life, recent political debate has resulted in changes to the length, level of payment, and eligibility for parental leave in New Zealand. These amendments will increase paid parental leave to 18 weeks over a two year period starting in 2015, and extend eligibility to include people who have recently changed jobs, seasonal and casual workers, and workers with more than one employer.<sup>7</sup>

Little is known about parents' experiences of recent parental leave in New Zealand, including their antenatal preferences and postnatal realities. This policy brief describes such parental leave experience of the parents in *Growing Up in New Zealand*, particularly focusing on leave anticipated and taken around the time their cohort babies were born (2009-2010).

Future analyses using data collected when children were two years old will explore the realities of returning to work in the New Zealand environment as well as the effects of parental leave on specific child outcomes including: breastfeeding; health service utilisation (including immunisation); involvement in early childhood education and care; household economic circumstances; and infectious disease.

Research conducted by Growing Up in New Zealand  
 Measured  Not  Done



Growing Up in New Zealand Policy Brief 3

## Measuring the Economic Environment: What resources are available to children in their first 1000 days?



Strong and consistent associations between the experience of poverty in early life and poor outcomes across the life course have been well documented in recent decades, for many populations living in a range of different socio-economic and political contexts. Because of this much resource and political energy has been invested in attempts to reduce the impact of poverty, especially in early life. In New Zealand there has been a recent focus on finding new solutions to reduce the high rates of poverty that particularly affect children, as well as to address the inequities that are seen in both rates of exposure to poverty and the multiple poor outcomes previously demonstrated as being associated with early exposure to poverty.<sup>1</sup>

There are many ways to define child poverty and there is no one standard way to do so, although it is common to use a measure based on household income (absolute or relative). Measures which capture the experience of hardship at a family level are also often used alongside these income measures.<sup>2,3</sup> Because it is now well recognised that early exposure to poverty limits multiple life course opportunities and imposes costs at the individual, family and societal level the drive to reduce child poverty in particular has also taken a rights-based approach, based on the premise that it is every child's right to 'achieve their full potential and participate as equal members in society'.<sup>4</sup>

There is no simple solution to address either the causes or the consequences of child poverty, and while the mechanisms through which poverty affects life course outcomes are yet to be fully elucidated. It is also recognised that multi-faceted, cross-agency solutions will be required to address this entrenched issue within our society. In the 2012 report on *Solutions to Child Poverty*, the expert advisory group noted that in order to find innovative solutions: firstly the scale and the seriousness of child poverty needed to be better understood; and secondly a better understanding of the causes and consequences of poverty for contemporary New Zealand children was required.

Research conducted by Growing Up in New Zealand  
 Measured  Not  Done

# Household Safety

NB: 30% of all children had at least 1 injury requiring medical attention within their first 1000 days



**72%**  
had medicines locked away



**43%**  
had their hot water adjusted



**82%**  
kept matches out of reach



**76%**  
had a fully fenced outside play area



**32%**  
installed secure gates at stairs



**38%**  
did not have a fully fenced driveway



**98%**  
used a car seat



**46%**  
had most or all electrical outlets covered



**79%**  
had working smoke alarms



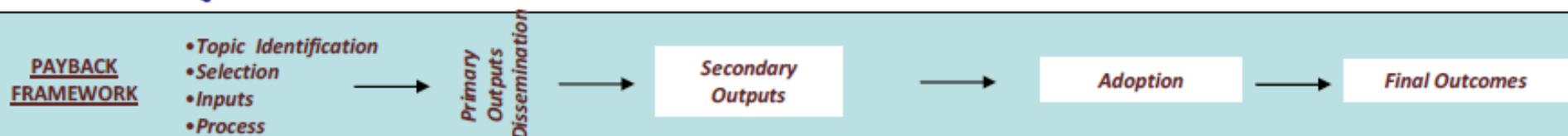
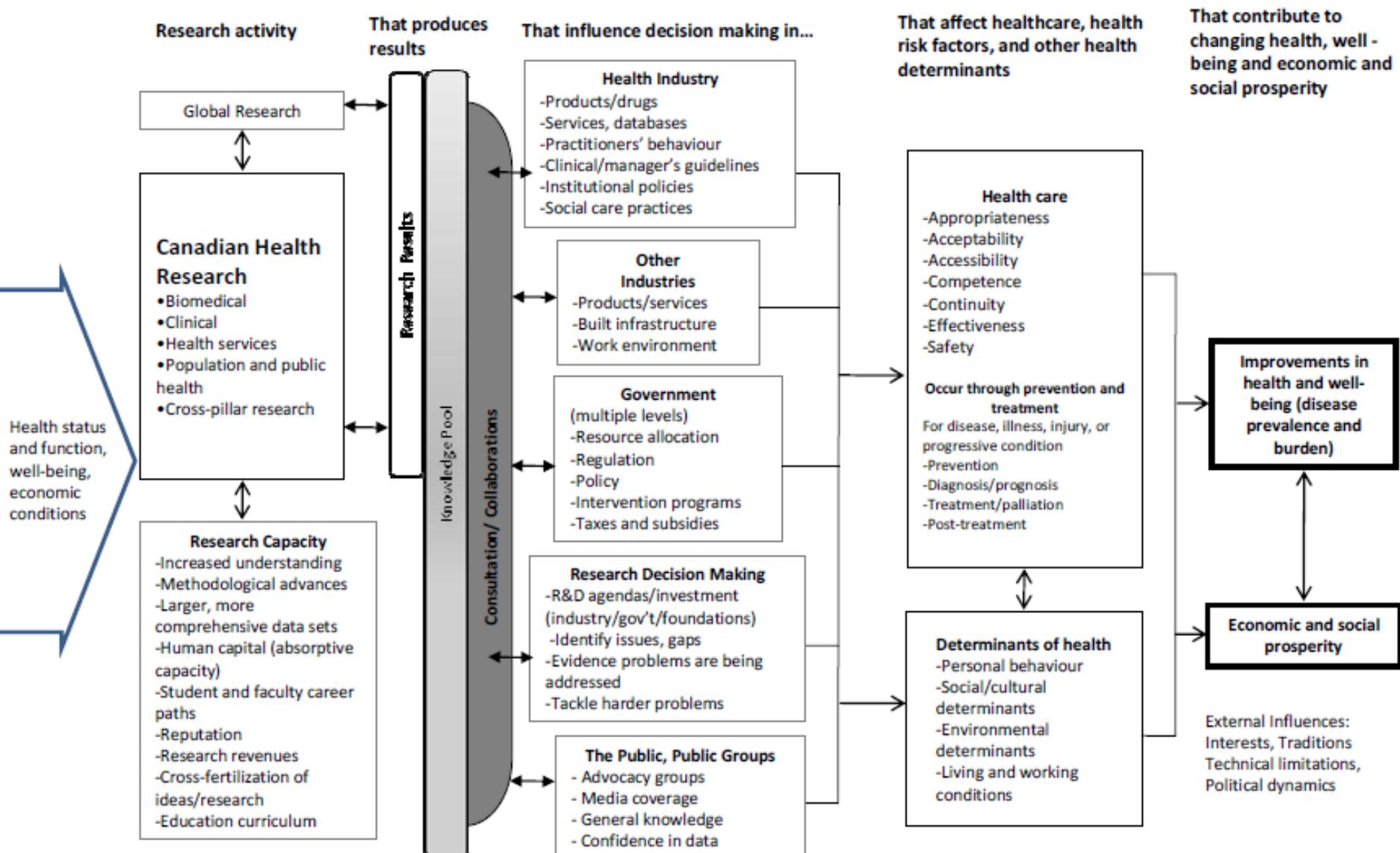
**28%**  
had an accident needing medical attention

# How do we know if it is working?

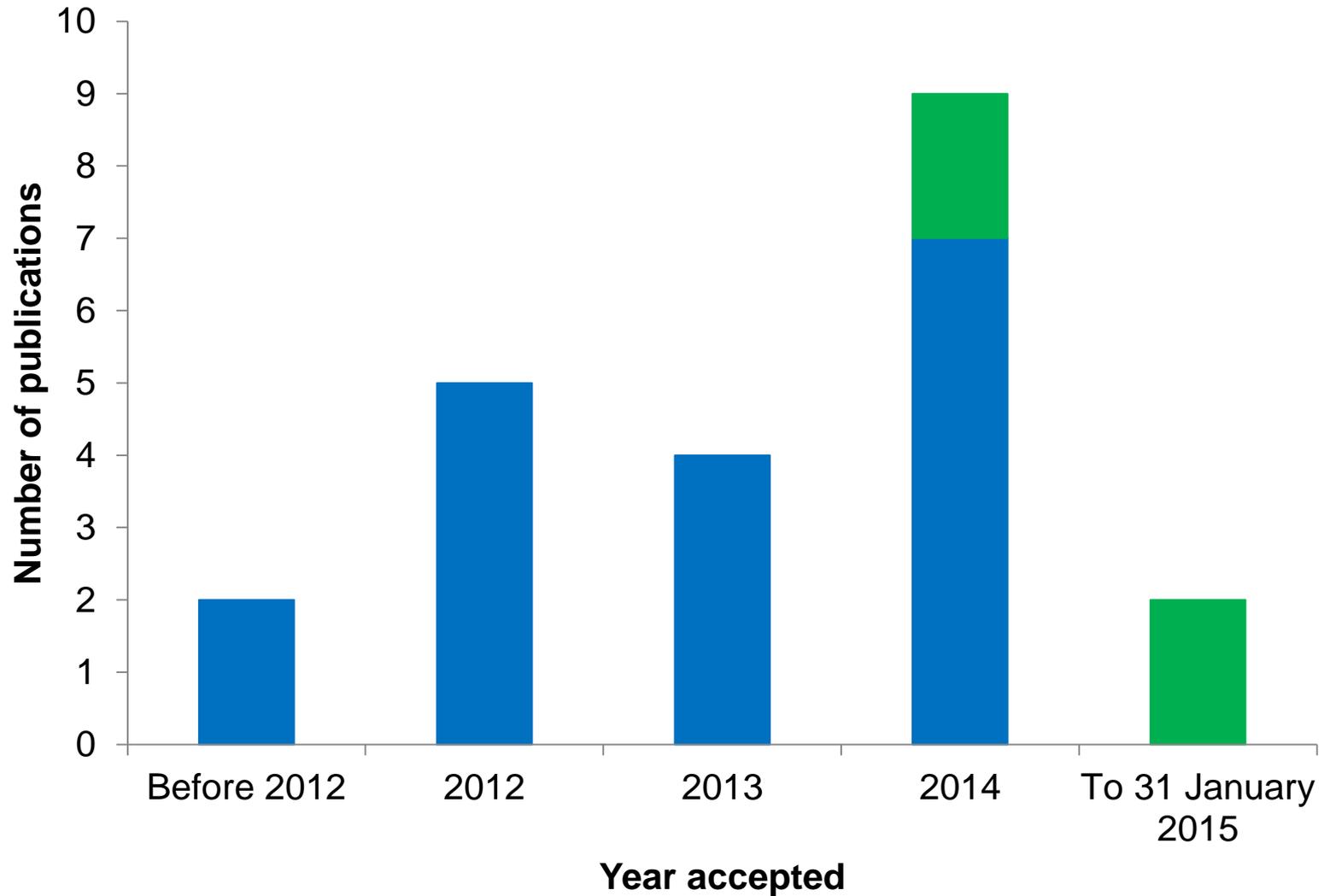


*"My question is: Are we making an impact?"*

# Initiation and Diffusion of Health Research Impacts

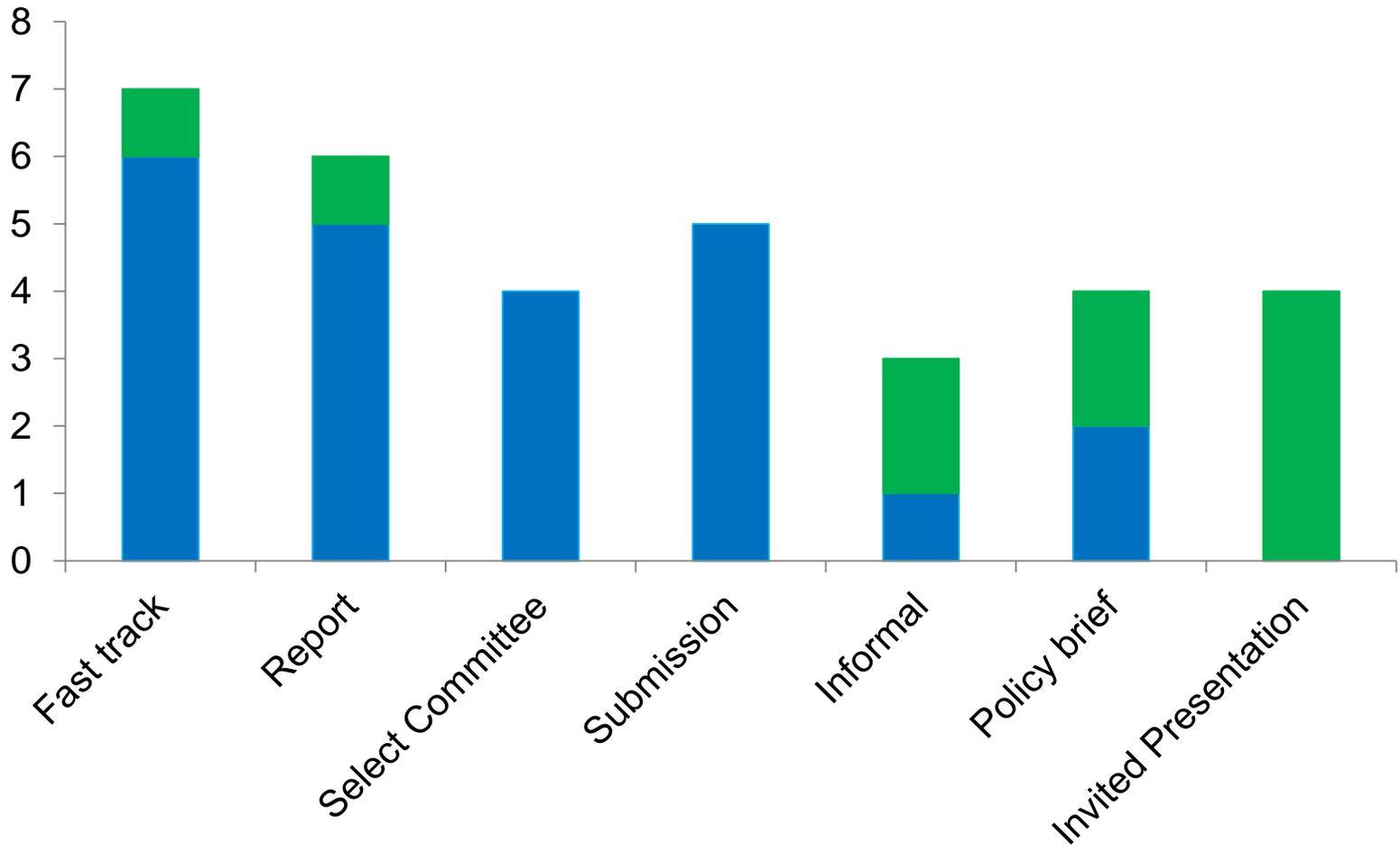


# “Impact metrics” - Manuscripts published

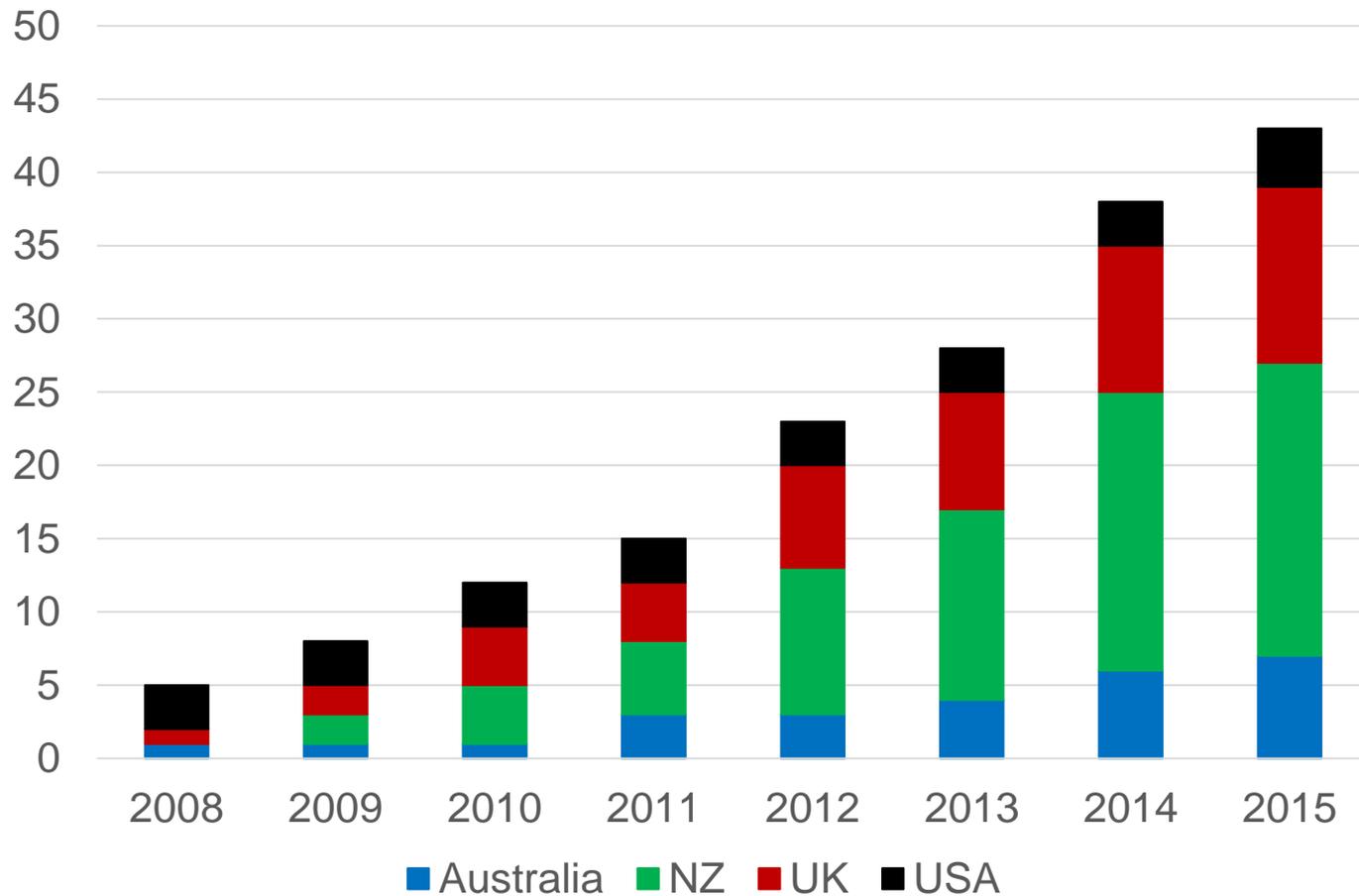




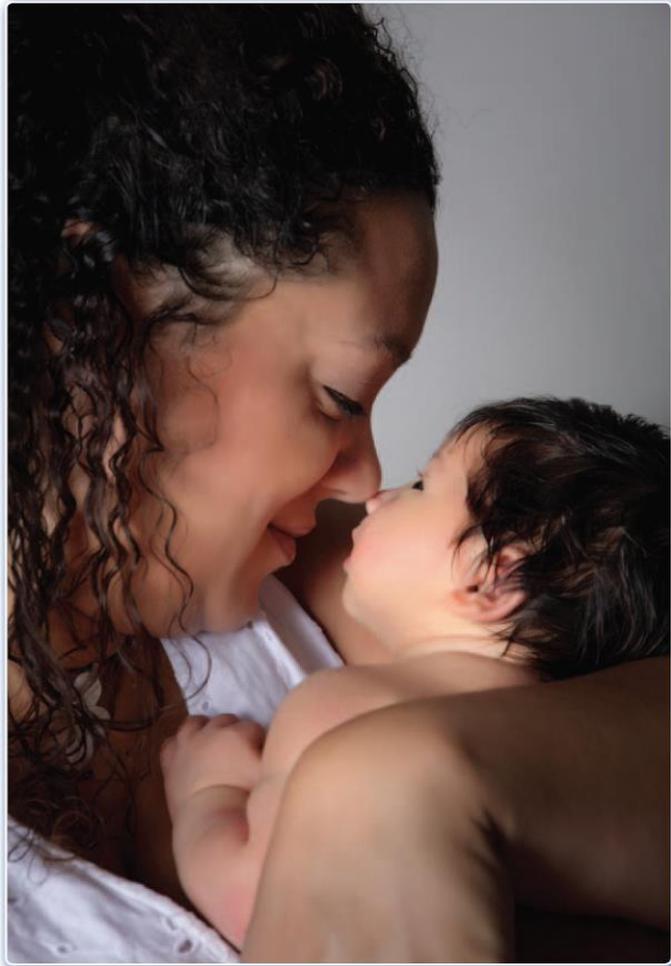
# “Impact metrics” - Policy Outputs



# “Impact metrics” - Formal Research Collaborations



# Translation – collecting evidence to inform policy



“It is one thing to understand the health effects of (*poverty*) – but taking action to relieve it’s effects entails a far richer understanding of the health effects of social and economic policies ....”

*Sir Michael Marmot*

*(Fair Society, Healthy Lives, 2010)*



# Acknowledgements



- **Children and families in study**
- *Growing Up* team
- UniServices and University of Auckland
- SuPERU
- Ministry of Social Development
- Ministry of Health, Ministry of Education, Ministry of Justice, Dept of Labour, Ministry of Pacific Island Affairs, Te Puni Kokiri, Office of Ethnic Affairs, Statistics NZ, Children's Commission
- DHBs, PHOs, LMCs
- Advisory and Stakeholder groups