

The science of early childhood development and intervention: Implications for policymakers and professionals

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'Invest in Our Young for a Brighter Tomorrow'
Hong Kong October 7/8, 2016*

Outline of presentation



- Brain development research - *the science tells us that the early years are critical in shaping a child's future health, learning and wellbeing*
- Life course research - *what happens in the early years has consequences right through the life course into adult life*
- What is at stake - *implications of the research*
- Challenges for policymakers and professionals – *translating the science to make a difference to children's outcomes*
- Some examples of efforts by the Centre for Community Child Health to translate the science

What the research tells us

- The early years of a child's life are critical in impacting on a range of outcomes through the life course
- The environment experienced by a young child literally sculpts the brain and establishes the trajectory for long term cognitive and social-emotional outcomes
- If we want to improve outcomes in adult life we have to focus on the early years - this has profound implications for public policy
- Investing in early childhood is a sound economic investment ('the best investment society can make')

Children's development

- Development is the result of complex, ongoing, dynamic transactions between nature and nurture - a dance between biology and experience
- We cannot do much to change biology - but we can change the environment in which young children grow and develop

The neuroscience of brain development

- Brain architecture and skills are built in a hierarchical 'bottom-up' sequence
- Foundations important - higher level circuits are built on lower level circuits
- Skills beget skills - the development of higher order skills is much more difficult if the lower level circuits are not wired properly
- Plasticity of the brain decreases over time and brain circuits stabilise, so it is much harder to alter later
- It is biologically and economically more efficient to get things right the first time

The importance of relationships

- Nurturing and responsive relationships build healthy brain architecture that provides a strong foundation for learning, behaviour and health
- The relationships a young child has with their caregiver(s) has major influence on the development of neural circuits
- When relationships are dysfunctional, levels of stress hormones increase – this disrupts brain architecture and interferes with formation of healthy neural circuits

Persistent or 'toxic' stress

- In situations of extreme poverty, physical/emotional/sexual abuse, chronic neglect, maternal depression, substance abuse, family violence, dysfunctional parenting
- Results in strong and prolonged activation of body's stress response - in absence of buffering protection of adult support
- Disrupts developing brain architecture and leads to lower threshold of activation of stress management systems
- Can lead to life long problems in physical and mental health – right throughout the life course, from early childhood through to adulthood

Clinicians seeing increased prevalence of problems in childhood

- Child abuse and neglect
- Poor literacy and school achievement
- School readiness - many children vulnerable at school entry
- Aggressive and anti-social behaviour
- Conduct disorders and ADHD
- Mental health problems – anxiety, depression
- Obesity

‘Wicked’ problems

- Change in nature and severity of children’s problems
- Multiple aetiological factors and pathways
- Single, simple interventions unlikely to work
- Complex, difficult to solve
- Need interdepartmental, interagency and integrated approaches
- This has major implications for the way we deliver services to young children and their families

Long term effects of stressful environments in early childhood



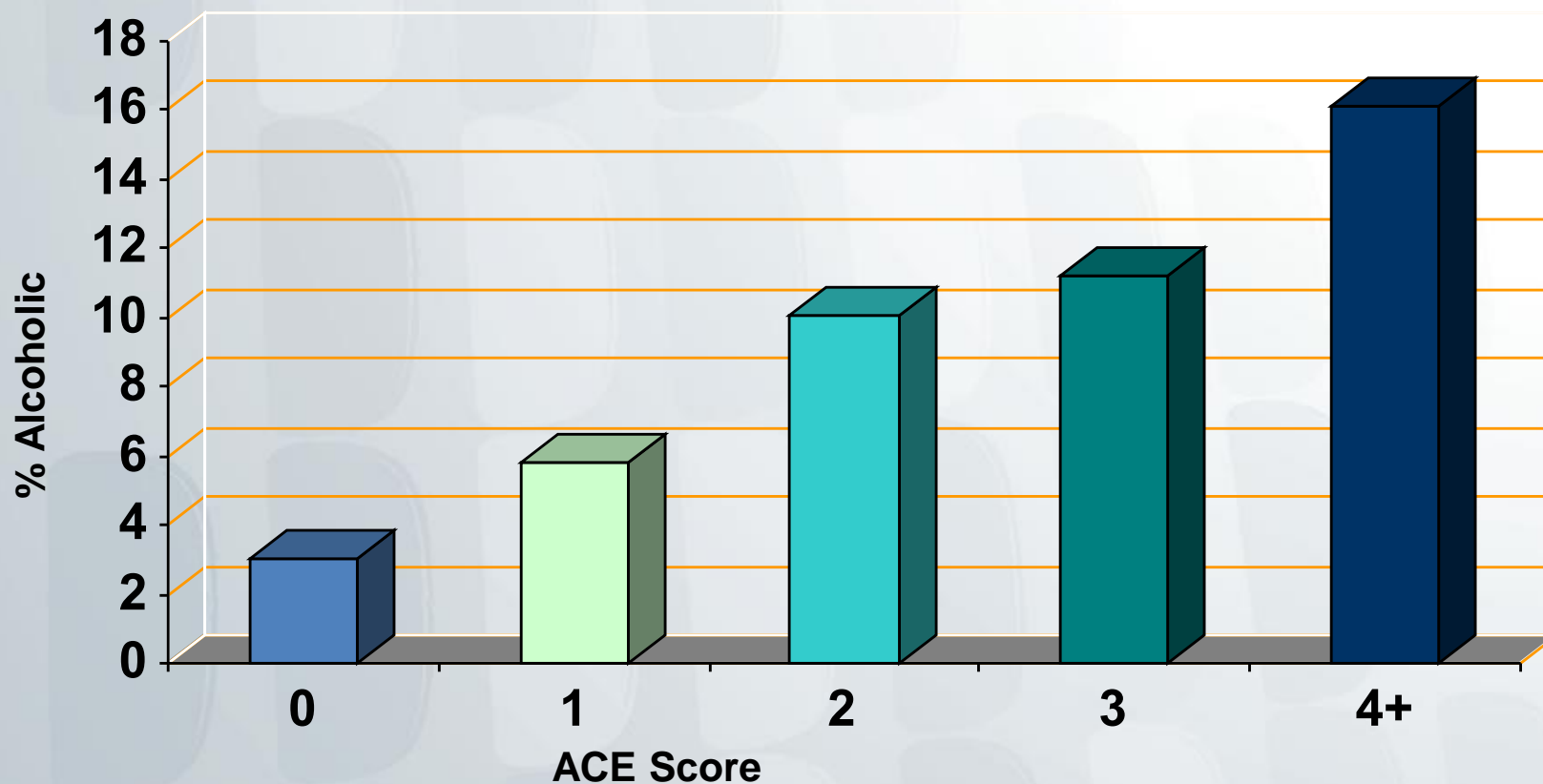
- 'Wicked' problems persist
- Increasingly robust body of research suggesting that many problems in adult life have their origins in pathways that begin in early childhood
- Studies both retrospective and prospective - longitudinal studies with study subjects enrolled at birth or shortly afterwards

The Adverse Childhood Events (ACE) Study

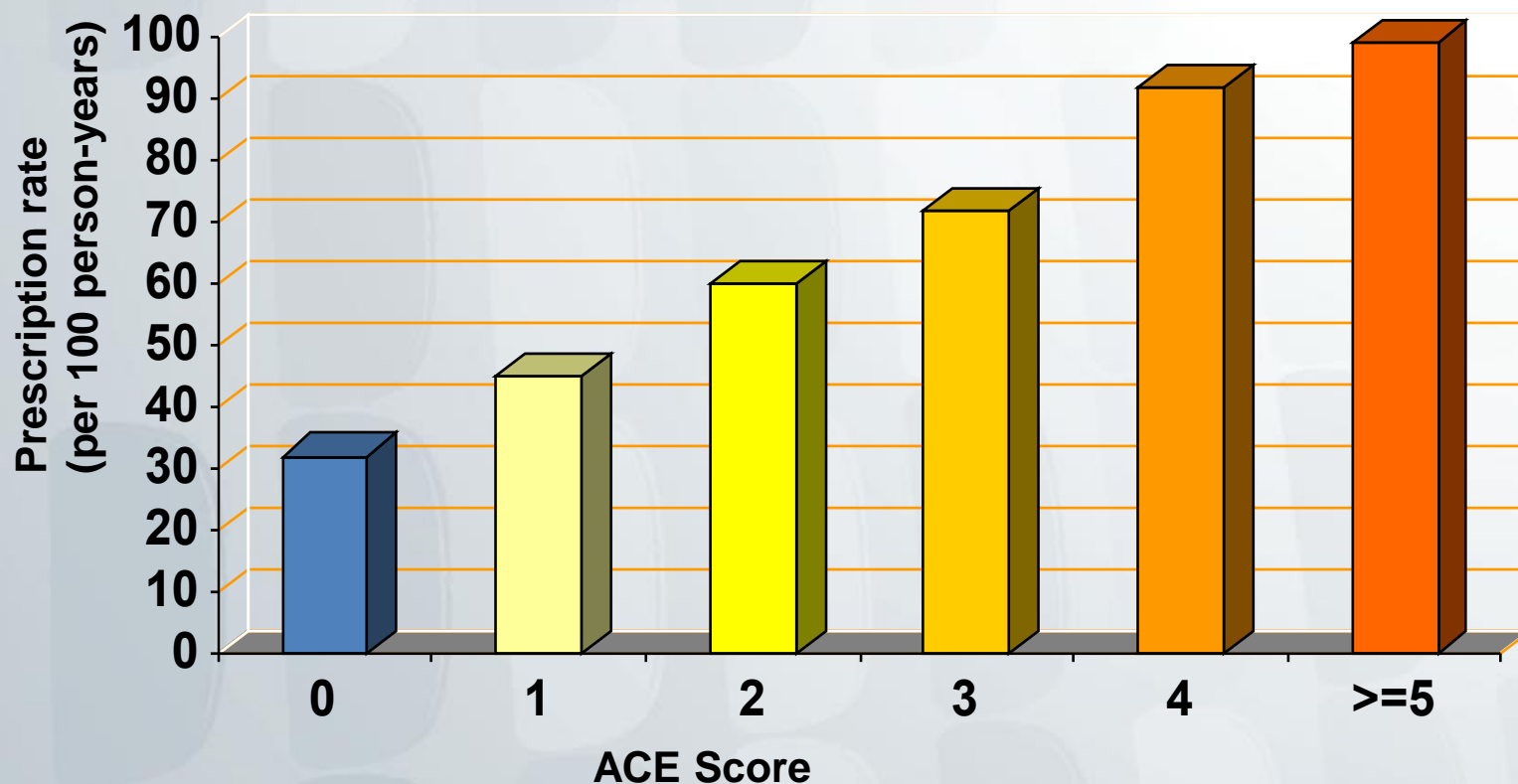


- 1995 - San Diego Kaiser – retrospective study of 17,000 adult patients
- Looked at the relationship between morbidity in adults and adverse events in childhood:
 - Parental separation/divorce
 - Parental mental health
 - Parental alcohol or drug abuse
 - Physical/sexual abuse/neglect
 - Parent incarcerated

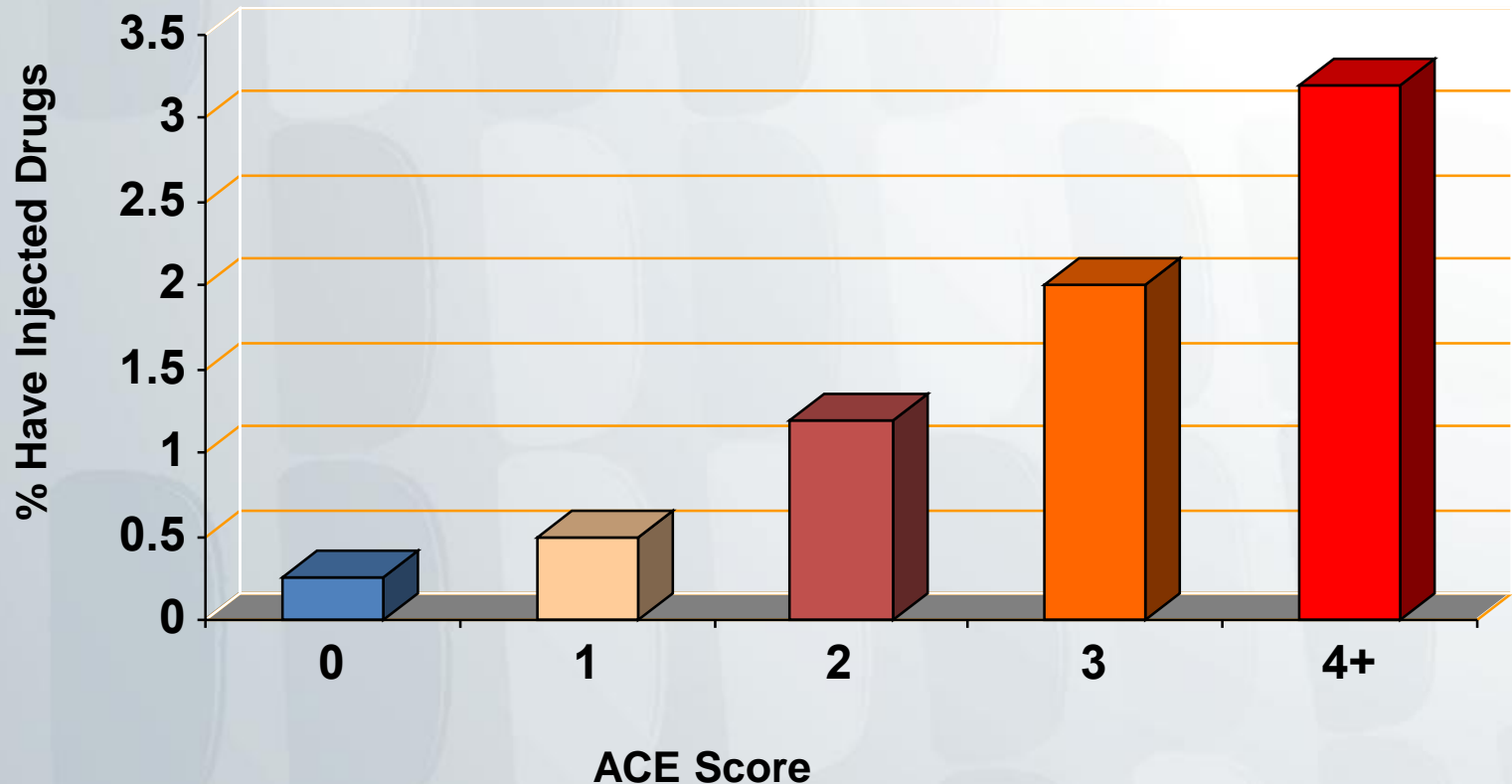
Adverse childhood events (ACE) and adult alcoholism



ACE score and rates of antidepressant prescriptions



ACE score and intravenous drug use



Adult problems with roots in early childhood

- Mental health problems
- Family violence and anti-social behaviour
- Poor literacy
- Chronic unemployment and welfare dependency
- Substance abuse and addiction
- Crime
- Obesity
- Cardiovascular disease
- Diabetes

Adversity

- Any sort of adversity operating on the child's environment - parents or caregivers - can have a negative impact on brain development
- Adversity acts as a major risk factor for the health and development of the child

Vulnerability and resilience

- Risk is not destiny
- Children differentially susceptible to environmental experiences
- '*Dandelion*' children - do well in most environments (most children)
- '*Orchid*' children - flourish in positive environments but react badly to negative environments

Early adversity

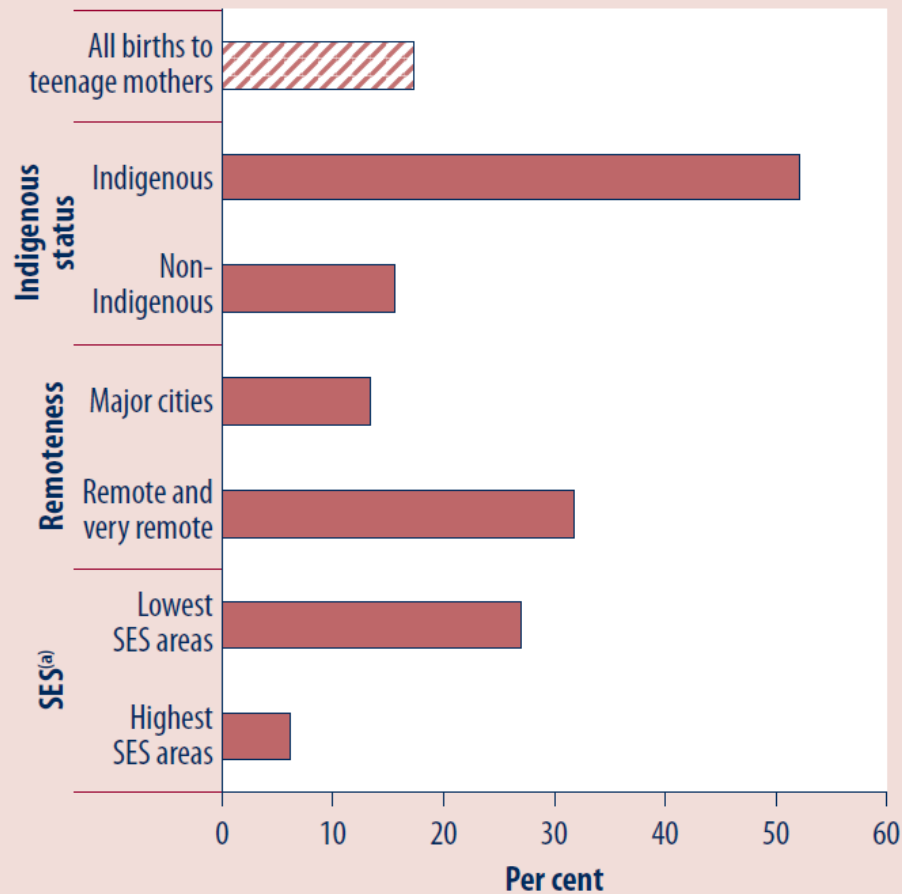
- ‘Biological embedding of environmental events’ (*Hertzmann*) - leads to changes in DNA (methylation)
- Impacts on biological systems
 - Immune
 - Cardiovascular
 - Metabolic regulatory
- What appears to be a social situation is likely to be a neurochemical situation
- Helps explain the intergenerational nature of disadvantage and social exclusion

The impact of social inequality

- Psychosocial factors impact on health because of association with frequent/recurrent stress
- Major impact in early years - affects developing brain and establishment of neural circuits
- Chronic stress affects the body's physiological systems increasing vulnerability to wide range of diseases and health conditions
- '*Double jeopardy*' - have the least access to supports such as consistent health care, family supports quality childcare and preschool, good schools

Health and developmental inequalities

Antenatal

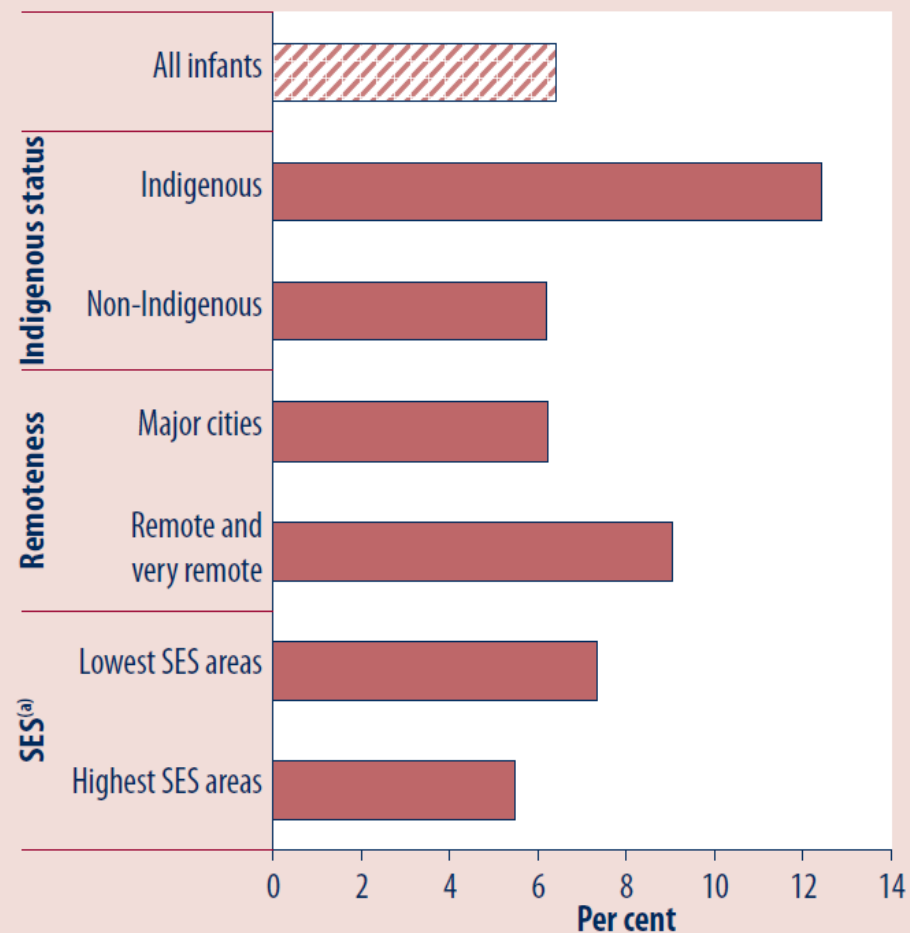


(a) See Appendix 1 Methods for explanation of socioeconomic status (SES).

Note: Remoteness and socioeconomic status based on mother's usual place of residence.

Sources: Laws & Hilder 2008; AIHW National Perinatal Data Collection, unpublished data.

Figure 19.2: Women who smoked during pregnancy, by population group, 2006



(a) See Appendix 1 Methods for explanation of socioeconomic status (SES).

Source: AIHW National Perinatal Data Collection.

Figure 21.3: Low birthweight infants, by population group of mother, 2006

Preschool

Poverty and health (early years)



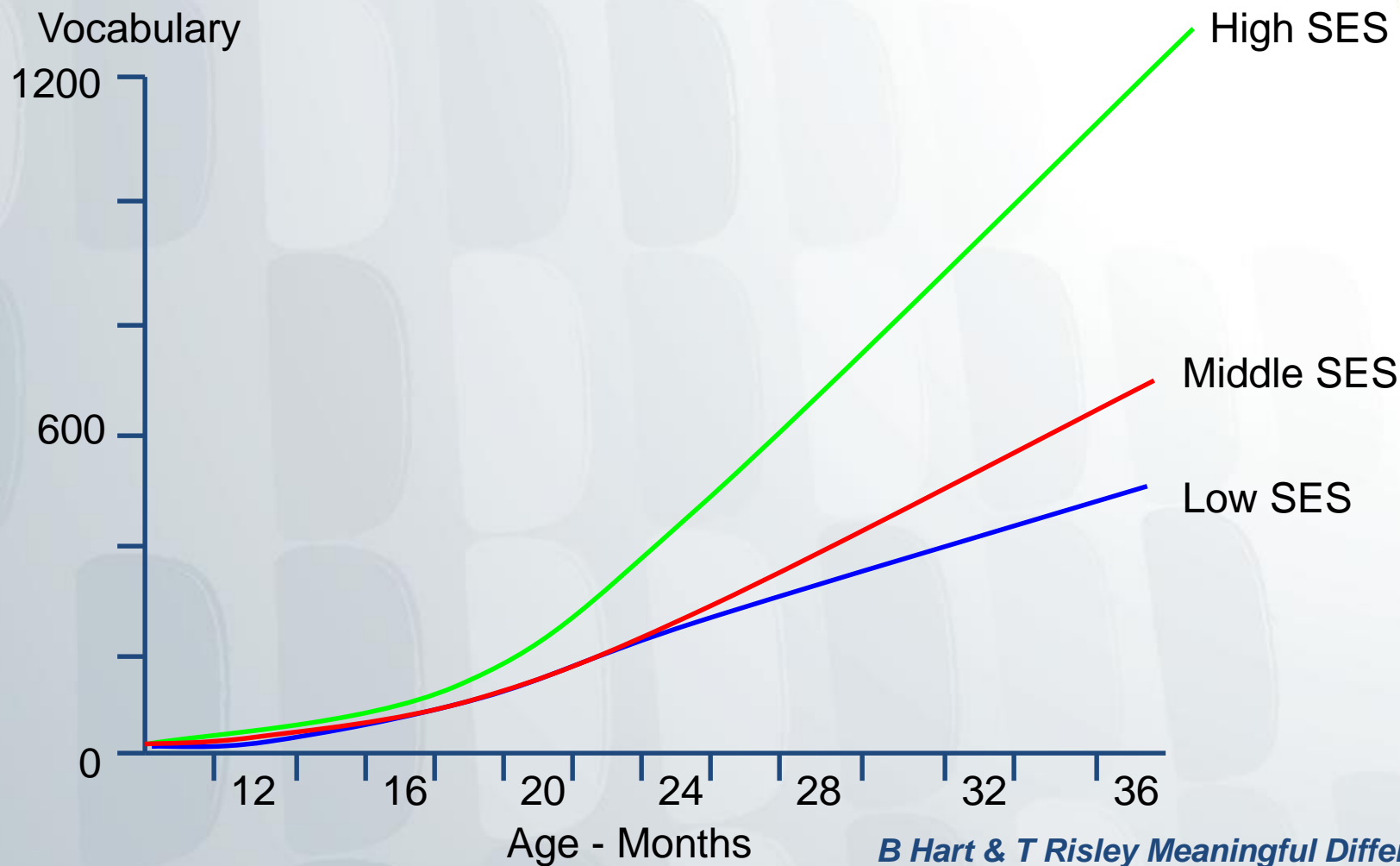
Less likely to:

- Be breast fed
- Be fully immunised
- Receive well child care
- Have regular and consistent access to health services

More likely to have:

- Low birth weight
- Developmental delay
- Higher injury rate
- Suboptimal growth
- More frequent hospitalisations
- Behavioural disorders

Vocabulary growth - first 3 years



*B Hart & T Risley Meaningful Differences in
Everyday Experiences of Young American Children
1995*

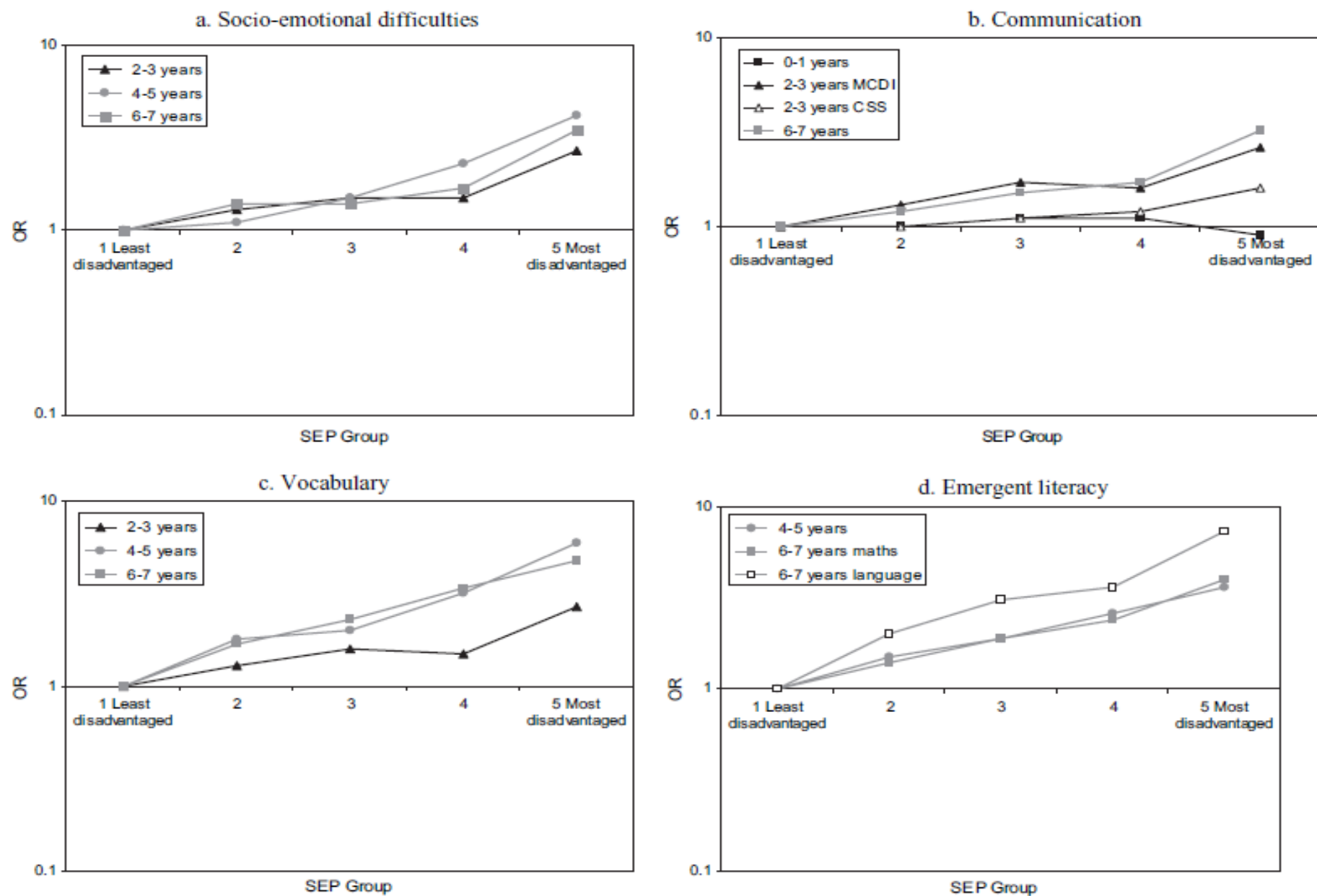
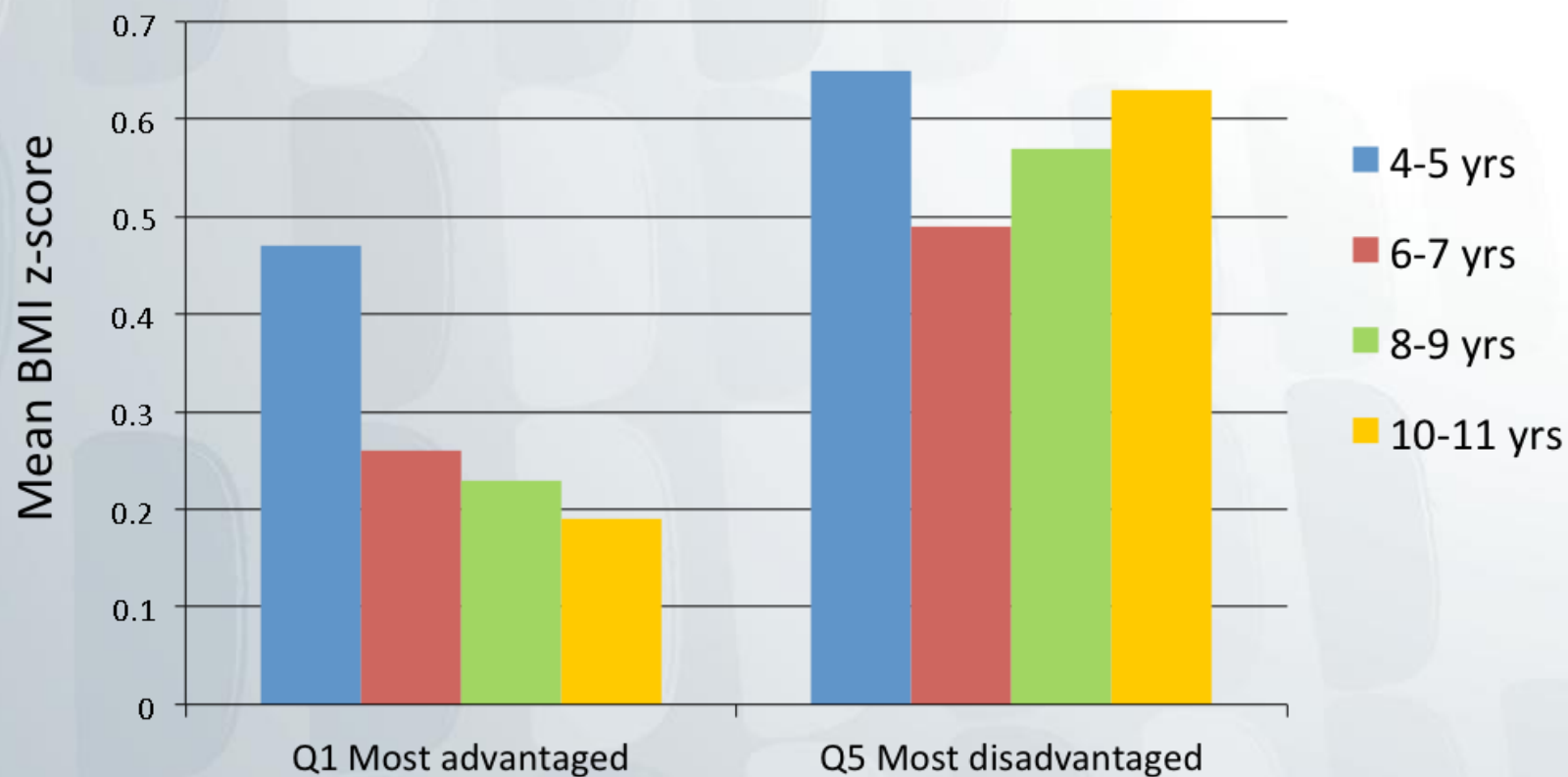


Figure 1 ORs (presented on a log scale) by socioeconomic position quintile for socio-emotional difficulties, and poor communication, vocabulary and emergent literacy skills.

Family SES and BMI z score



School entry

Australian Early Development Index (AEDI)

- A population based measure which provides information about children's health and wellbeing
- 100+ questions covering 5 development domains considered important for success at school
- Teachers complete the AEDI online for each child in their first year of full-time schooling
- Results are provided at the postcode, suburb or school level and not interpreted for individual analysis

Five AEDI ‘subscales’

- The AEDI measures a child’s development in 5 areas:
 - physical health and well-being
 - social competence
 - emotional maturity
 - language and cognitive development
 - communication skills and general knowledge

AEDI National Rollout 2015

•Number of schools	7,147
•% of schools completed	95.6%
•Number of teachers	16,425
•Number of students	289,973
•% of students completed	96.5%

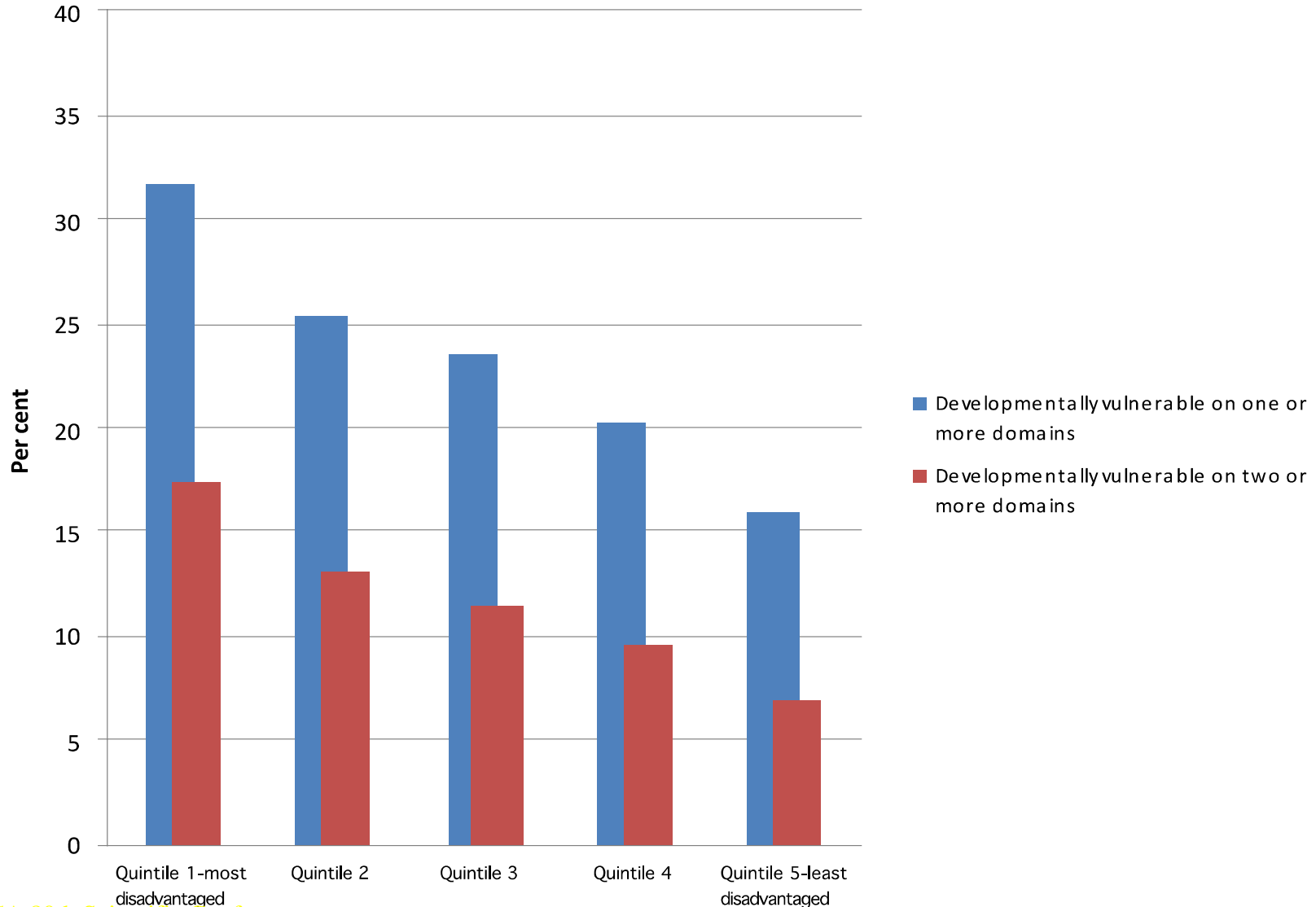
Key findings



Percentage of children developmentally vulnerable (DV)
across Australia by jurisdiction

	DV \geq 1 domains (%)	DV \geq 2 domains (%)
Australia	23.3	11.7
New South Wales	21.2	10.2
Victoria	20.1	9.9
Queensland	29.2	15.6
Western Australia	24.3	12.0
South Australia	22.5	11.4
Tasmania	21.7	10.8
Northern Territory	36.3	22.1
Australian Capital Territory	21.9	10.8

Results: Socio-economic status

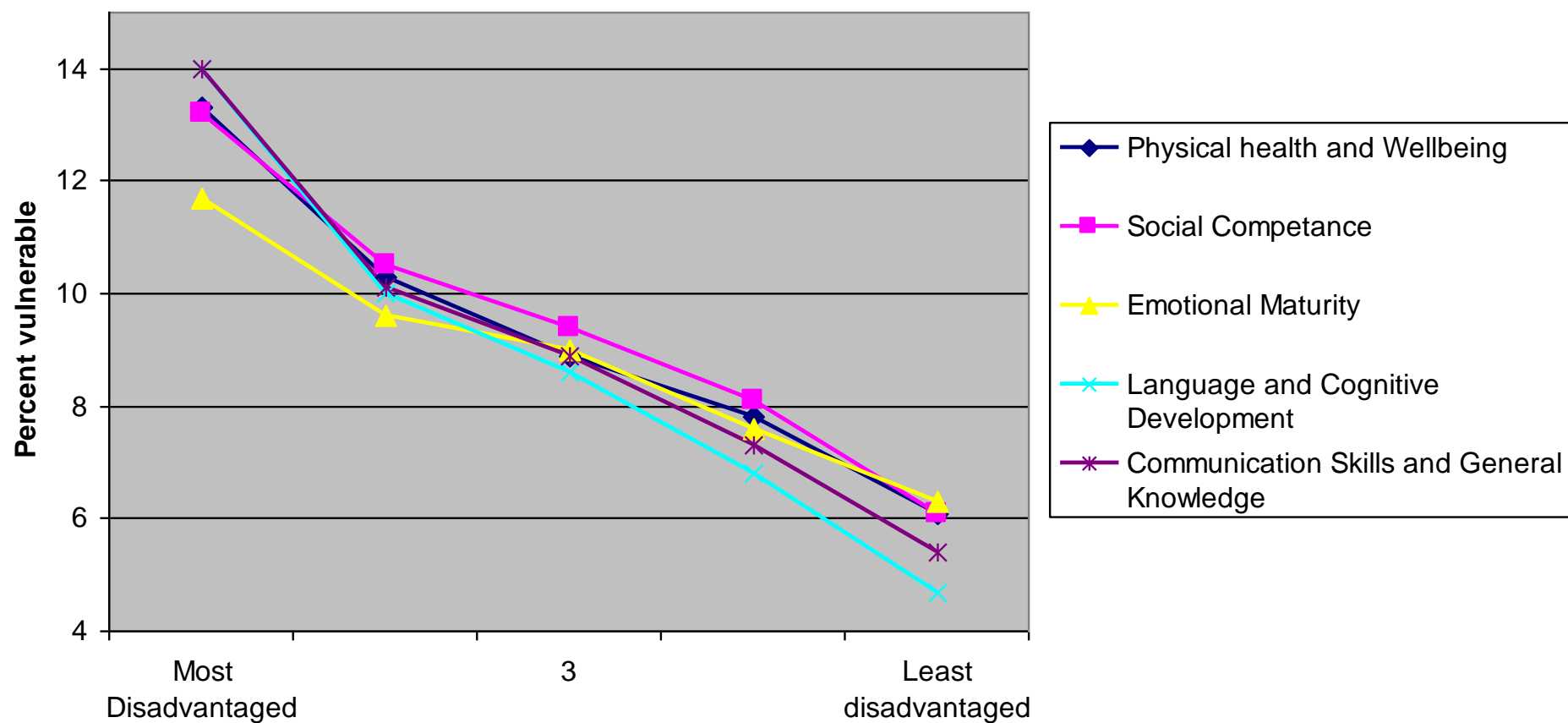


AEDI Domain comparison – vulnerability by SEIFA

N=261,000

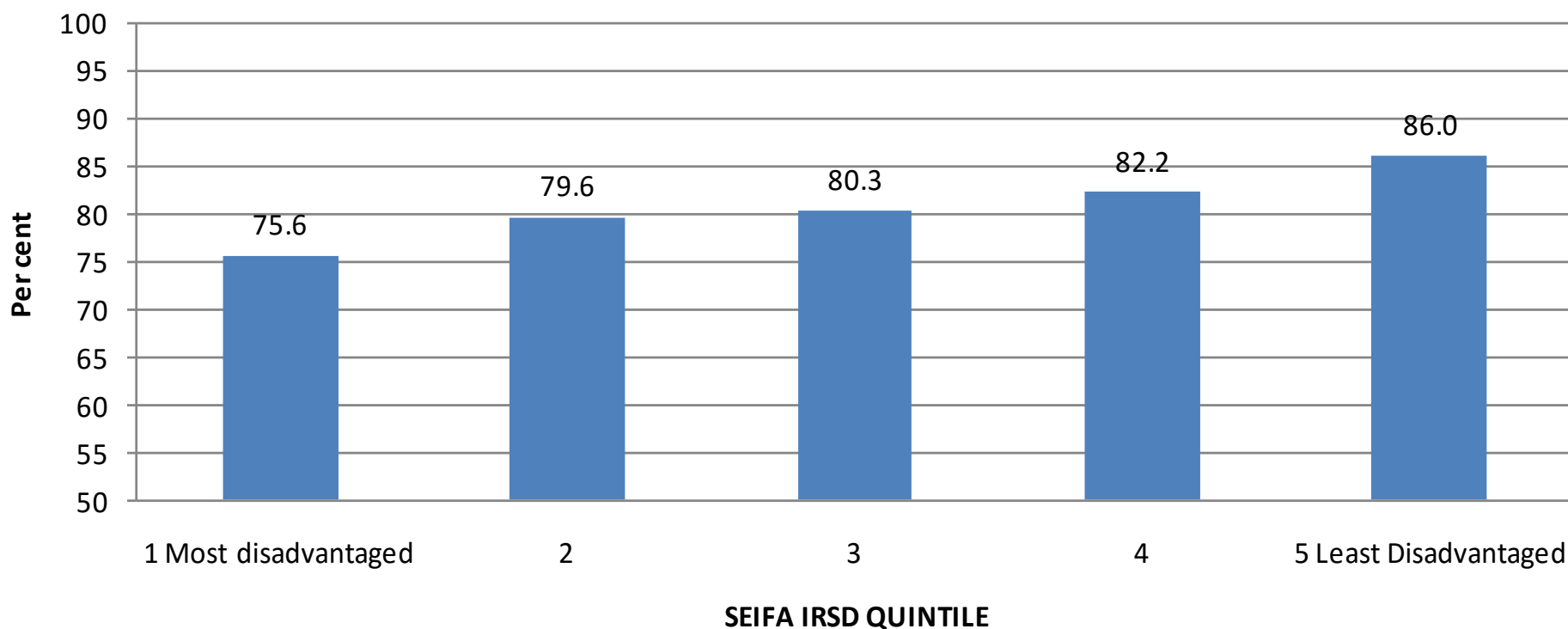


Domain Vulnerability by SEIFA



Disadvantage and preschool participation

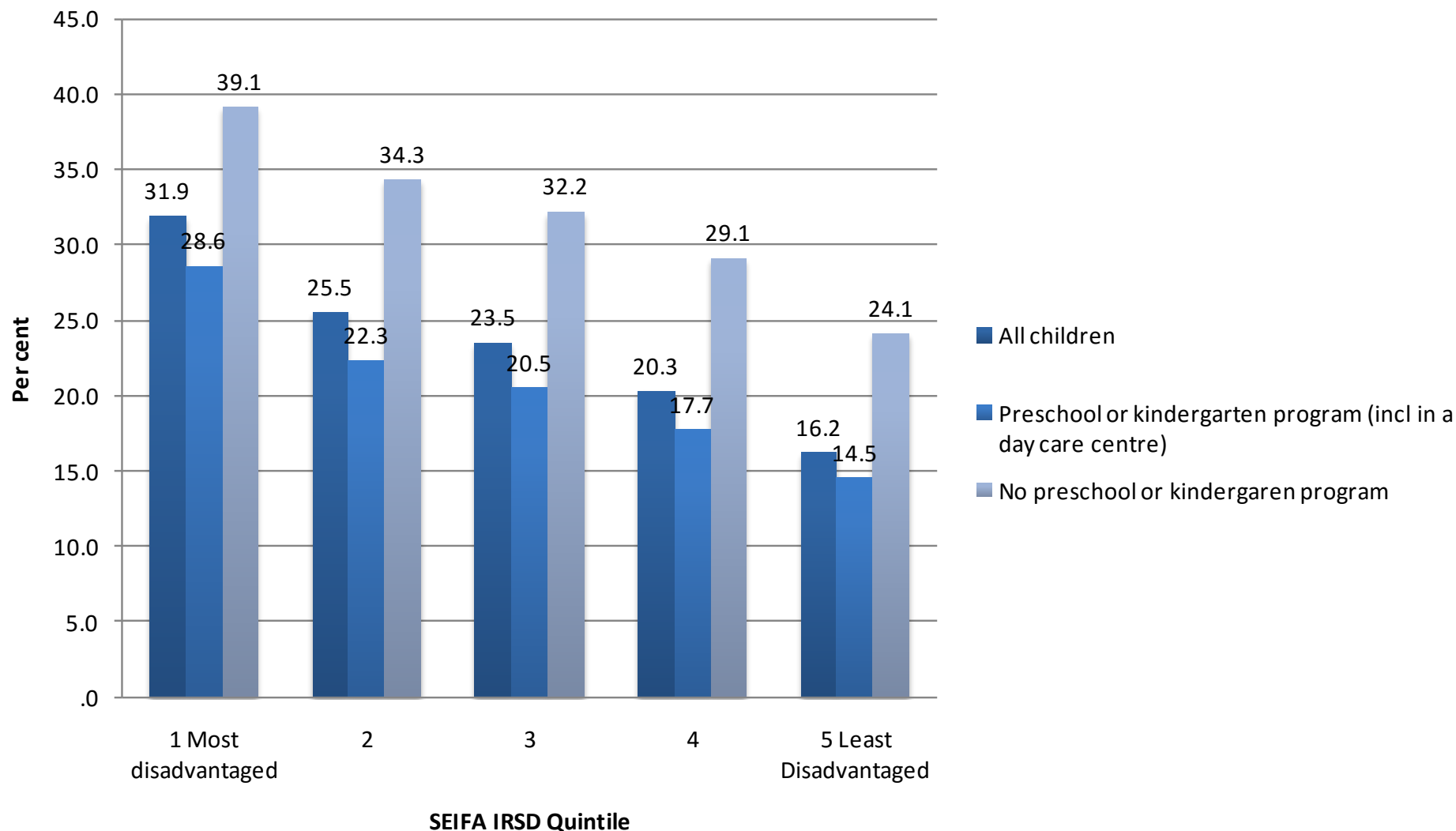
Preschool or kindergarten program (including in a day care centre)



AEDI Results and preschool participation



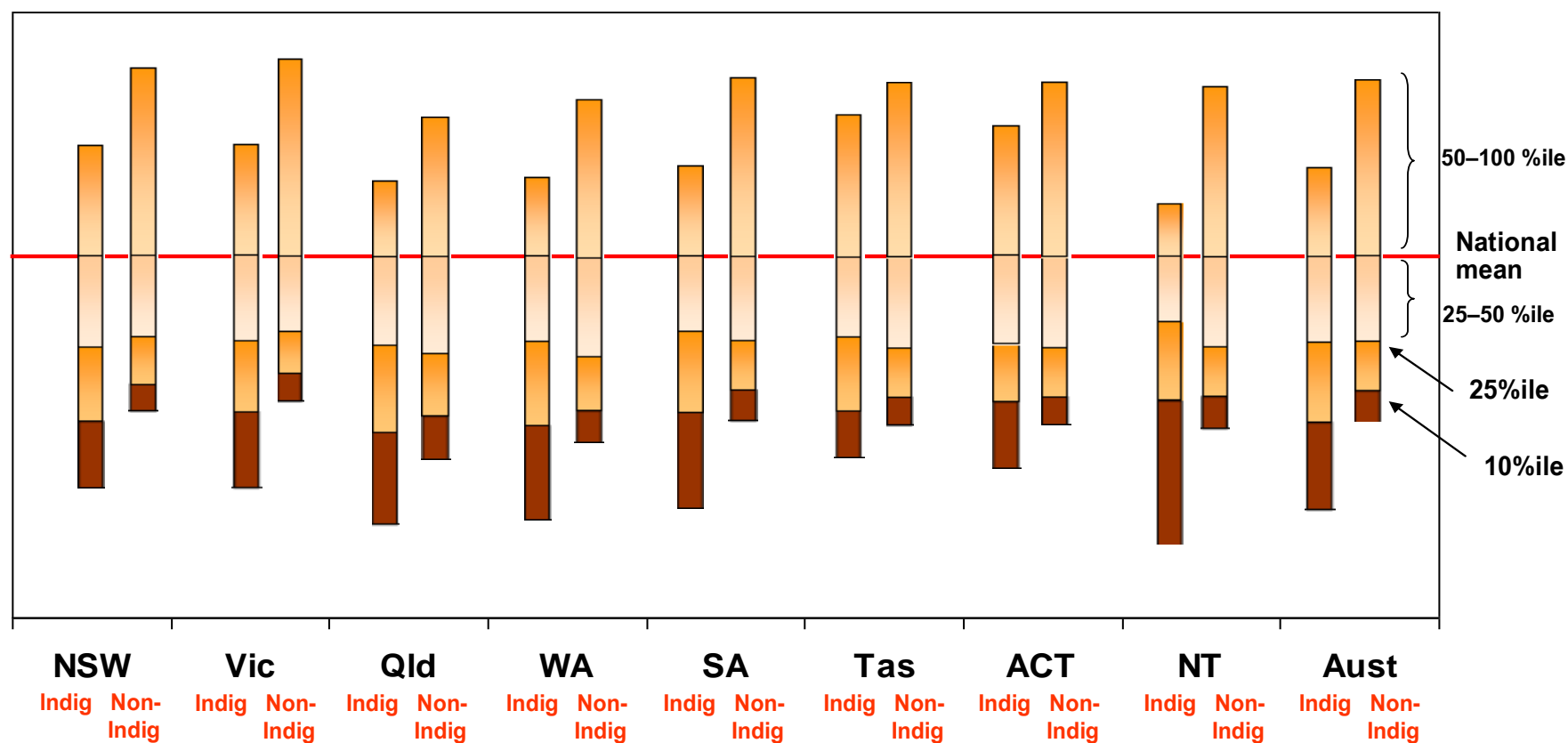
Developmentally vulnerable on one or more AEDI domain



School age

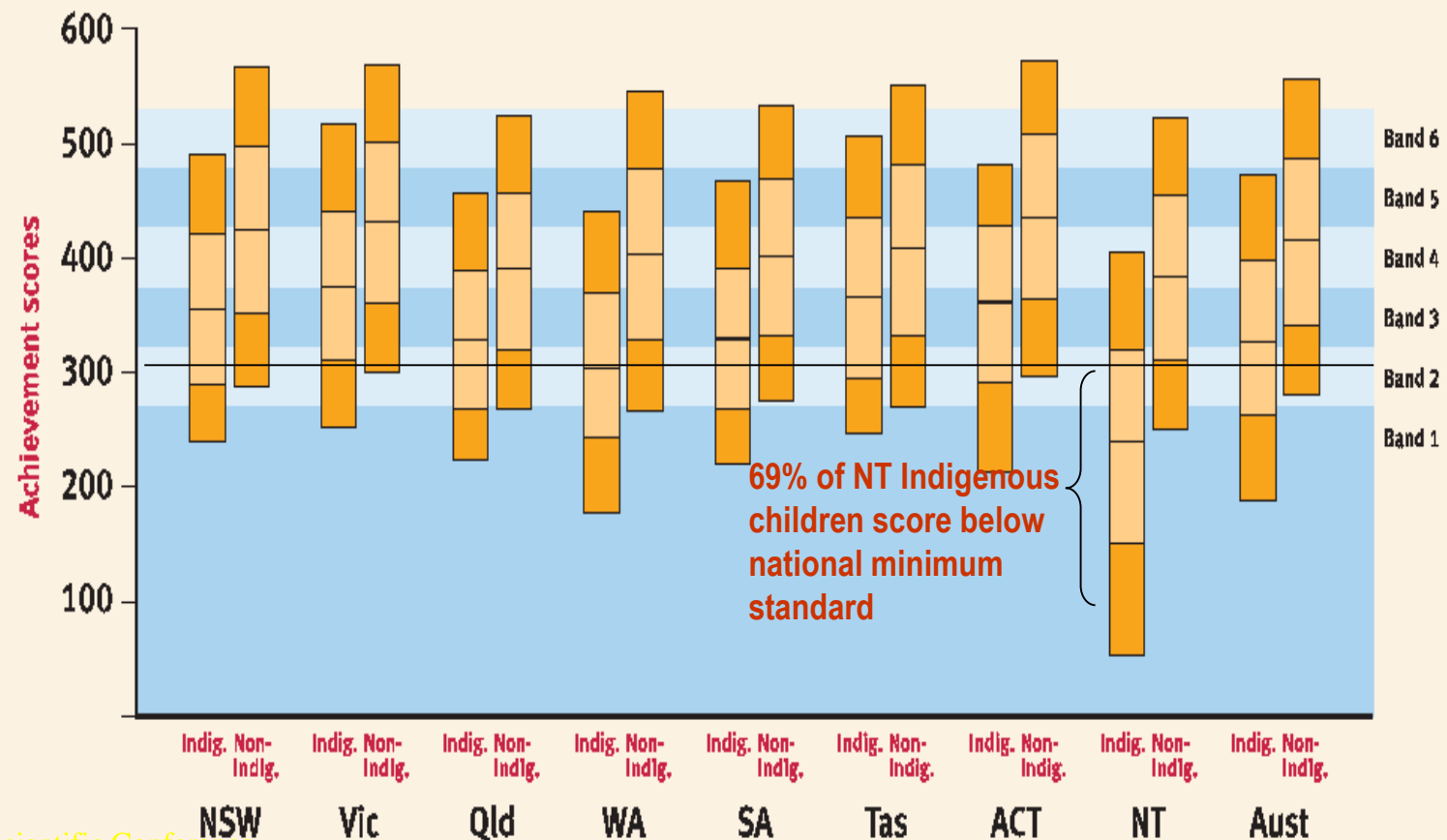
Disadvantage begins early in life

AEDI developmental scores of 5 year olds: Australia, 2009

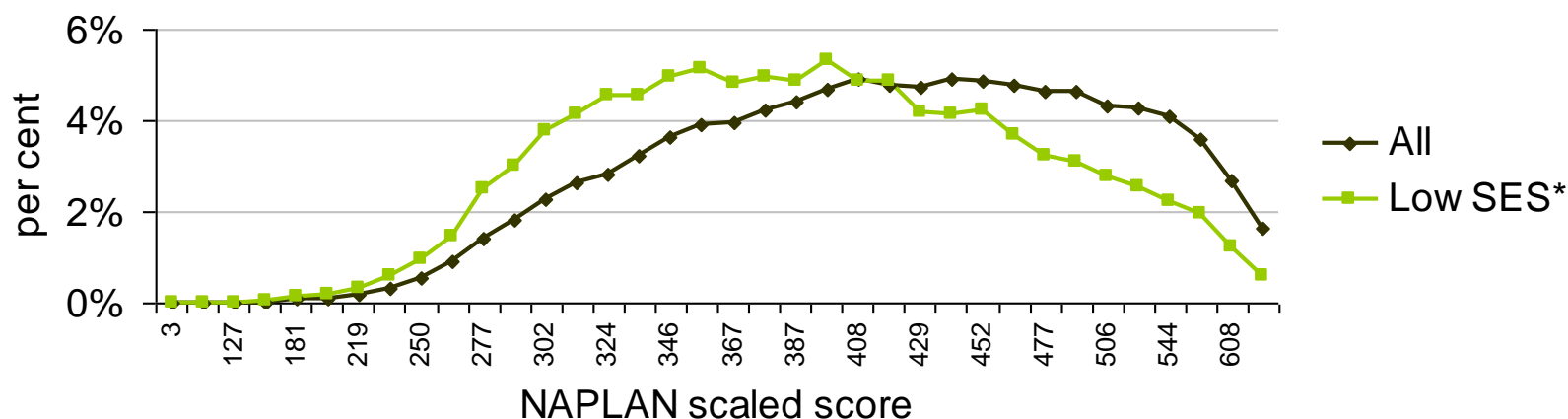


NAPLAN Year 3 Reading

Figure 3.R3: Achievement of Year 3 Students in Reading, by Indigenous Status, by State and Territory, 2009.



A comparison of NAPLAN scores for low SES and all students



* "low SES" defined as occupation of parent is ... machine operator, hospitality staff, assistant, labourer or related worker, or not in paid work in last 12 months

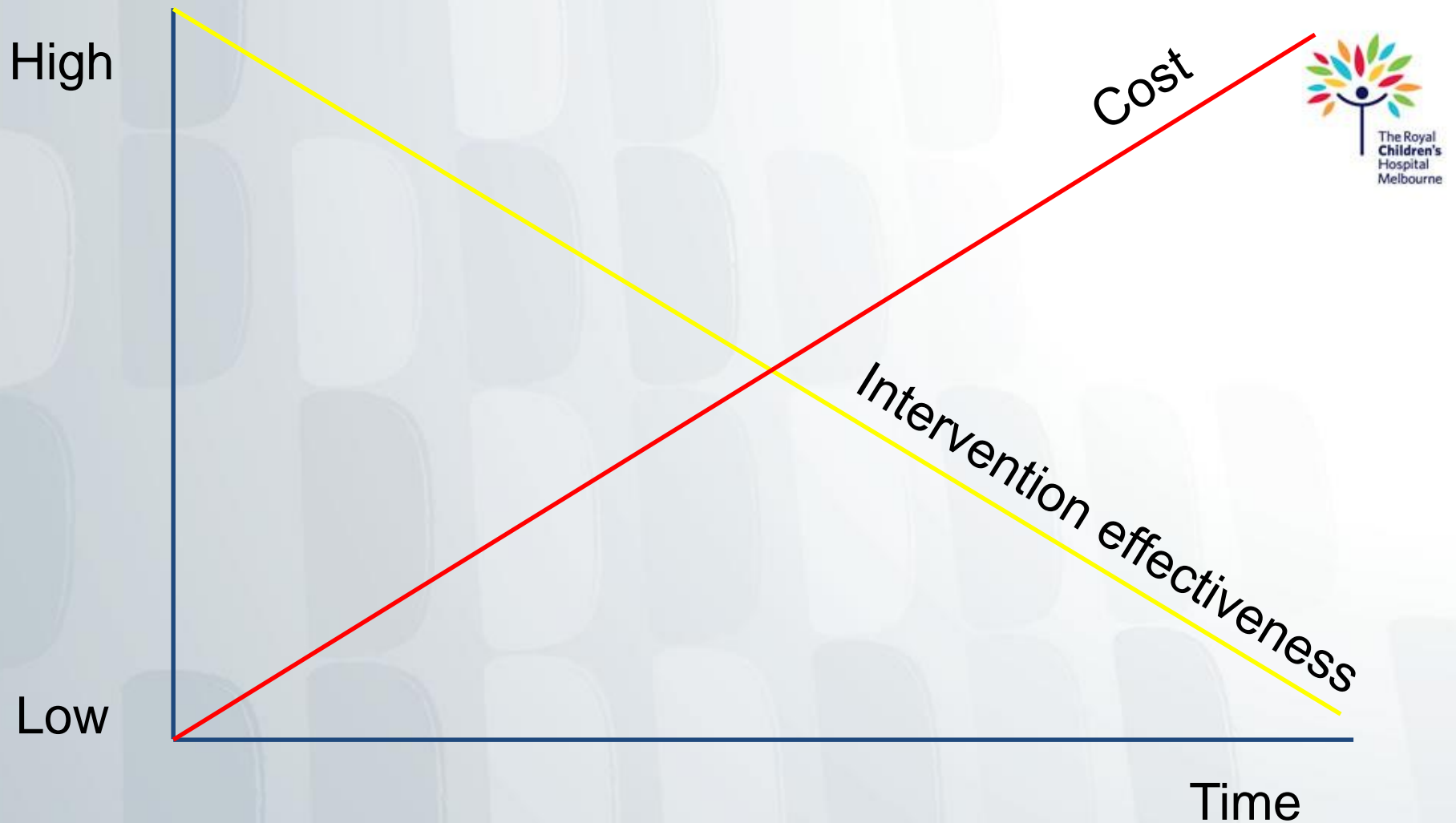
2012 year 3 NAPLAN Victoria

So what are the answers?

- Need major shift in public policy, focusing not just on treatment but also on prevention and early intervention (fence on top of cliff rather than more ambulances at the bottom)
- There is evidence that early intervention works - ie the research tells us how to build the fences

Making a difference

- Address risk factors and emerging difficulties *before* they become entrenched problems
- Goal is to diminish or remove risk factors and strengthen protective factors, so improving chances of good outcome
- The earlier the better - more leverage in younger years



Intervention effects and costs of social-emotional mental health problems over time (Bricker)

The challenge of translating the science into practical strategies

- The advocacy agenda - how do we translate this research so it informs public policy?
- How can we work towards safe, nurturing, stimulating environments for all children?
- How can we support parents in their child rearing role?
- What are the implications of this research for service delivery and for professional practice?

Centre for Community Child Health



‘For every complex problem there is an answer that is clear, simple, and wrong’ .

- H.L Mencken

‘Complex social issues cannot be dealt with merely by interventions with children or by strengthening families or by building community capacity. Policy needs an integrated focus on all 3 elements: children, families and communities.’

- A. Hayes, M Gray, AIFS, 2008

Implications of the science of early childhood for all of society

- Parents and families
- Education and the school system
- Communities and the built environment
- Child care – not child minding but early learning
- Child protection system – children at cognitive risk
- Service delivery – health, education and welfare
- Business – the economics of increased investment in ECD
- Media – need a more sophisticated coverage of issues
- An expanded view of building infrastructure – social infrastructure may be more important than physical infrastructure

Practical application of the research - some examples from CCCH



- Spreading the word – increasing awareness of the importance of the early years and ECD
- Supporting parents
- Ensuring access to services – addressing equity issues
- Creating a responsive and coordinated service system
- Early identification of problems and risks
- The importance of data and service mapping
- Place based approaches – building capacity in communities

Knowledge translation

**Research &
expertise**

synthesis



dissemination

exchange

**Policy,
programs &
practice**

CCCH translation

Aimed at

- Governments and policy makers
- Service managers - local government, NGOs
- Professionals - GPs, paediatricians, MCHNs, child care workers, teachers
- Parents
- Media

‘Closing the gap between what we know and what we do’

Advocacy with government

Policy Brief

Translating early childhood research evidence to inform policy and practice



Centre for Community Child Health

No. 25 July 2013

Assessing the quality of early childhood education and care

In December 2009 the Council of Australian Governments (COAG) agreed to a unified National Quality Framework (NQF) for Early Childhood Education and Care (ECEC). The quality reforms—which include clear standards, streamlined regulatory approaches, an assessment and rating system and a national learning framework—are being implemented over the period 2012 to 2020 as an initiative of the National Early Childhood Development Strategy. The vision of the strategy is that “by 2020 all children have the best start in life to create a better future for themselves, and for the nation” (COAG, 2009).

The purpose of this Policy Brief is to consider the implications of current research and the role of quality assessment in delivering the National Early Childhood Development Strategy vision. Specifically, the Brief discusses the ECEC policy environment in Australia and outlines international evidence regarding the impact of ECEC quality components related to adult-child interactions and relationships.

Why is this Issue Important?

The care of young children is increasingly a shared responsibility of families, communities, governments and private enterprise. In 2008, UNICEF reported that in industrialised countries, approximately 80% of three-to-six year-olds and 25% of children under the age of three participate in formal early childhood education and care (ECEC). What happens in this care matters: neuroscience research is providing evidence about the vital importance of early environments on children's learning and development trajectories (National Scientific Council on the Developing Child, 2010). Participation in ECEC impacts directly upon children's educational and social development, and this impact has a lasting effect (Vandell et al, 2010; Ramey, Sparling and Landesman, 2012). It is participation in high quality programs, however, that delivers the greatest benefit for children (Taylor, Cleveland, Ishimine, Clancy & Thorpe, 2013).

On the basis of international research, the UNICEF report (2008) emphasised that “improving the quality of early childhood education and care remains the most potent of all available opportunities for reducing the entrenchment of disadvantage.” The report concluded by stressing the importance of measuring progress toward the goal of

improved quality in ECEC and the need for monitoring to inform evidence-based policy, effective advocacy and public accountability.

Australian governments have increased investment in ECEC significantly over the last decade (DIISWR, 2010). Most children in Australia participate in one or more ECEC programs (long day care, family day care, limited hours or occasional care, kindergarten/preschool) before they start school (Centre for Community Child Health and Fetalton Institute for Child Health Research, 2009). However, increasing access is not sufficient to deliver the intended gains for children. A commitment to program quality improvement is essential to tackling the disparities in outcomes associated with disadvantage (Britto, Yoshikawa and Ikeda, 2010).

Empirical evidence about the essential components of quality within ECEC services for young children in an Australian context is scarce. In order to develop a clear picture of the role of ECEC quality in delivering the desired outcomes, we need measures to understand the components of quality and research to understand how they contribute to the advancement of human capabilities and social inclusion objectives, and the costs associated with achieving positive effects (Harrison et al, 2010).

Professional development

Community Paediatric Review

A national publication for child and family health nurses and other professionals



Centre for Community Child Health

Vol.21 No.2 May 2013

Promoting child and family social and emotional wellbeing

The foundations of good social and emotional development are formed in early infant-parent and caregiver relationships (Centre for Community Child Health, 2009). In developing these relationships, families and caregivers ensure that their child develops on a healthy trajectory. With strong foundations, each child can go on to develop the capacity to manage life's struggles and celebrate the joy that life brings.

The child and family health nurse also has a role in helping families and caregivers to develop and maintain the relationships that enhance children's development. Good social and emotional development, which stems from these early relationships and plays a role in children's lifetime mental health, is fundamental.

For some children, issues with social and emotional development in early childhood can be an indicator of mental health problems. Around half of all childhood mental health problems continue into adulthood (Gallagher, 2008) and are associated with subsequent social, educational and financial costs for the individual and the community. As the costs, both financial and other, can be so significant, helping children and families to encourage healthy social and emotional development is essential.

Children all deserve the opportunity for healthy social and emotional development, the foundation of good mental health. One of the ways child and family health nurses support children's healthy development is by working with children and their families to develop and maintain good social and emotional development and ultimately, mental health.

Risk and protective factors

In the course of their growth and development, all children will experience things that can either pose a risk or have a protective effect in terms of mental health and social and emotional development.

Risk factors include:

- a birth injury or very low birthweight
- a disability—their own, a sibling's or a parent's
- early childhood illness
- a challenging temperament (as perceived by the parent or carer)
- poor living conditions (e.g. poverty, overcrowded housing)
- natural disasters (e.g. floods, drought)
- traumatic events (e.g. catastrophes or accidents)
- being new to the country, city, town
- living in a new culture; communicating in a new language
- family break-up
- early separation from the main caregiver
- the birth of a new sibling (especially when under two years old)
- frequent changes in life (e.g. home address, caregivers)
- illness or death of a parent, sibling or other close relative or friend
- violence or tension in the home
- abuse (physical, sexual, emotional) or neglect.

(Kilpatrick Early Childhood, 2011)

Grow & Thrive

Learning, health and development in the early years (0 - 8 years old)

Centre for Community Child Health



Vol 2 No. 2 | May 2013



Supporting oral health—early childhood educators

Maintaining dental health goes beyond twice daily toothbrushing and early childhood educators have an important part to play. You can help children and families at your service to make good oral health part of their routines by supporting them to learn more about the important role of dental health.

[Read more »](#)



Supporting oral health—early primary teachers

At the start of each day, and just before bed at night, many children that you work with brush their teeth to help maintain a healthy smile. In your role as an early primary teacher you can take oral health even further by introducing some simple routines in your school, and helping children and their families to learn about the importance of oral health.

[Read more »](#)

Share us:   

About Grow & Thrive

[Grow & Thrive](#) is a free online publication from The Royal Children's Hospital Centre for Community Child Health. Grow & Thrive supports early childhood educators and school teachers working with young children – from infants to primary school-aged kids.



Parent information

Your child's gummy—or toothy—grin can brighten the day of everyone who crosses their path. Beyond that winning smile, your child's oral health plays an important role in their health and wellbeing. Read more in our helpful parent fact sheets on:

- [Healthy food for healthy teeth](#)
- [Looking after teeth and gums](#)

[Read more »](#)

Information for parents

[home](#)[grown-ups](#)[newborns](#)[babies](#)[toddlers](#)[preschoolers](#)[school age](#)[services & support!](#)[a-z power search](#)[my neighbourhood](#)[forums](#)[tools & activities](#)[make a book](#)[subscribe](#)[site help](#)**GROWN-UPS****all ages**

Looking after yourself
Family management
Returning to work
Stress

NEWBORNS**0-3 months**

Breast or bottle?
Colic
Baby equipment
Sleep patterns

BABIES**3-12 months**

Night feeds
Ready for solids?
Crying
Talking

TODDLERS**1-3 years**

Discipline
Toilet training
Fussy eating
Play ideas

PRESCHOOLERS**3-5 years**

Praise
Healthy food
Nightmares
Television

SCHOOL AGE**5-8 years**

Bedtime routines
Breakfast
Lunch boxes
Activities for school
kids

**Parenting in pictures**

Visual guides on essential information such as how to put baby to bed safely.

Parents like me

- ▶ Indigenous parents
- ▶ Dads

Proudly supported by

The resource



**2200 articles, videos,
parenting in pictures**

**Pregnancy, newborns
to teens**

Evidence-based

Quality assured

The demand



- **1 million visits per month**
- **2 million page views per month**
- **6,000 downloads Baby Karaoke per month**
- **40% of traffic via mobile**
- **80% traffic via parents search**
- **Top referral site: Facebook**

‘If you want your child to be intelligent, read them fairy tales; if you want your child to be more intelligent, read them more fairy tales.’

- *Albert Einstein*

LET'S READ



A simple guide
to reading with your child

www.letsread.com.au

Share rhymes, songs and stories every day



Let's Read has been designed to encourage and support you to share rhymes, songs and stories with your child from birth.

Reading with your child from birth gives them a great start to life and helps them to become better readers. Together you can read, play and learn with books. Sharing stories from birth is a really important way to help your child develop the skills they will need when it's time to start school.

This DVD has lots of simple and practical tips on how to enjoy books with your baby from four months of age right up until they start school.

Watch and learn from other parents reading with their child. See a range of books being read aloud in different and fun ways that you and your child will both love.

So Let's Read!



Hosted by Leah Vandenberg
and Alex Papps

Acknowledgments:

Children, families and staff that participated in the DVD
Goodstart Early Learning Centre, Braybrook
North Melbourne Library, City of Melbourne
The Royal Children's Hospital, Early Learning Centre
Yappera Children's Service Cooperative LTD

Produced by the Educational Resource Centre, The Royal Children's Hospital, Melbourne

For more information about
Let's Read visit:
www.letsread.com.au

The Australian Government is working in partnership with the Murdoch Childrens Research Institute and The Smith Family to deliver Let's Read.

Project partners:



The Royal Children's
Hospital Melbourne



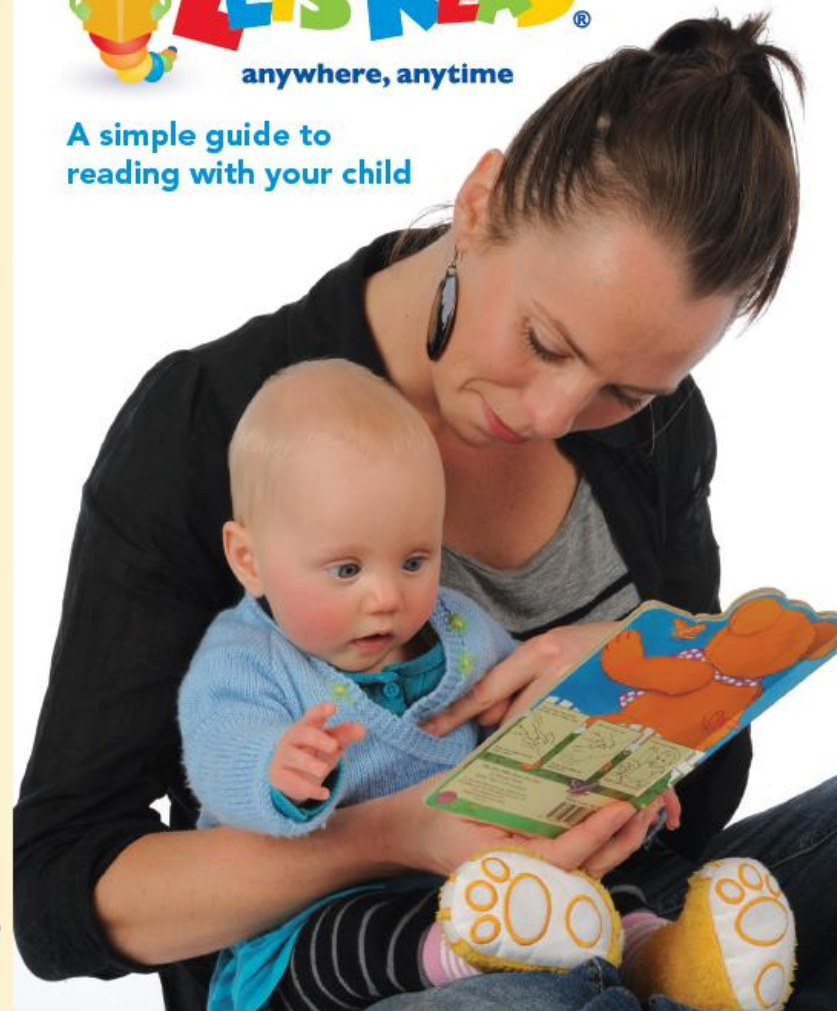
raisingchildren.net.au
the Australian parenting website

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Let's Read. A simple guide to reading with your child



A simple guide to
reading with your child



ERC 121480





LET'S READ
anywhere, anytime

FROM
12
MONTHS

Reading with babies

What babies like:

- sitting close, seeing the book and your face
- looking at and listening to the world around them
- moving to the rhythm of stories, nursery rhymes and music
- touching objects with different textures (soft, smooth, prickly)
- hearing the same songs, books and stories over and over again
- feeling and holding the book and helping to turn the pages — board books are great
- looking at books about family, food, animals and colours.

Share rhymes,
songs and stories
every day



LET'S READ
anywhere, anytime

FROM
18
MONTHS

Reading with little kids

What little kids like:

- to talk with you about the games they are playing
- to sing and hear stories about their home, culture and people
- to point to and name things they see
- to talk about where animals live
- to say the words they know in songs and stories
- to hear the same books, songs and stories over and over again
- to show you which book they want to read and help turn the pages.

Yarning with kids
from birth helps
them become
better readers
for life



Materials

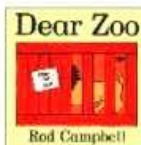


Dear Zoo

Rod Campbell

Pan Macmillan

- Help your child open the flaps.
- Your child will like to read this book over and over and they will soon learn the words that are repeated.

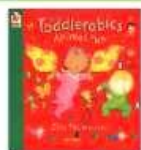


Toddlerobics animal fun

Zita Newcombe

Walker Books

- Play and have fun with this book. Get up and do the actions.
- Find a particular toddler on each page.



Spot goes on holiday

Eric Hill

Penguin

- Help your child to lift the flaps and ask them what they see.



all about ME

Debbie MacKinnon & Anthea Sieveking

Frances Lincoln

- Point to and name each part of your child's body as you read.

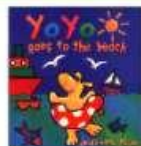


Yoyo goes to the beach

Jeannette Rowe

ABC books

- Point to the words as you read.
- Have fun opening the flaps and finding more of the story.



Cows in the kitchen

June Crebbin & Katharine McEwan

Walker Books

- You can sing along to this story.
- Have fun making the animal noises.
- There is lots to find in the pictures.



Going shopping

Sarah Garland

Penguin

- Point to each picture and say what you see.
- Talk about when you go shopping.

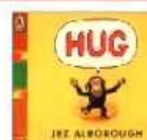


Hug

Jez Alborough

Walker Books

- Describe the animals using their names, and talk about how they are feeling.
- Find the monkey on each page.



Maisy's bedtime

Lucy Cousins

Walker Books

- This is a great book for the bedtime routine.
- You can talk about colours and actions.



Playmates

Jane Tanner

Puffin

- Ask your child to point to teddy on each page.
- Have fun with the sounds in the book.



Early detection (and engagement with parents)

PEDS PARENTS' EVALUATION OF DEVELOPMENTAL STATUS

AUTHORISED AUSTRALIAN VERSION

BRIEF ADMINISTRATION AND SCORING GUIDE

*A method for detecting and
addressing developmental
and behavioural problems
in children*



CENTRE FOR
Community
Child Health

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Royal Children's Hospital, Melbourne. Phone: (03) 9345 6150 Fax: (03) 9345 5900
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PEDS RESPONSE FORM

Child's Name _____ Parent's Name _____
 Child's Birthday _____ Child's Age _____ Today's Date _____

1. Please list any concerns about your child's learning, development, and behaviour.

2. Do you have any concerns about how your child talks and makes speech sounds?

Circle one: No Yes A little COMMENTS:

3. Do you have any concerns about how your child understands what you say?

Circle one: No Yes A little COMMENTS:

4. Do you have any concerns about how your child uses his or her hands and fingers to do things?

Circle one: No Yes A little COMMENTS:

5. Do you have any concerns about how your child uses his or her arms and legs?

Circle one: No Yes A little COMMENTS:

6. Do you have any concerns about how your child behaves?

Circle one: No Yes A little COMMENTS:

7. Do you have any concerns about how your child gets along with others?

Circle one: No Yes A little COMMENTS:

8. Do you have any concerns about how your child is learning to do things for himself/herself?

Circle one: No Yes A little COMMENTS:

9. Do you have any concerns about how your child is learning preschool or school skills?

Circle one: No Yes A little COMMENTS:

10. Please list any other concerns.

PEDS SCORE FORM – TEST VERSION



The Royal
Children's
Hospital
Melbourne

Child's Name _____ Date of Birth: _____ Date(s) of scoring: _____

Find appropriate column for the child's age. Place a tick in the appropriate box to show each concern on the PEDS Response form. See Brief Scoring Guide for details on categorizing concerns. Shaded boxes are significant predictors of difficulties. Non-shaded boxes are non significant predictors.

Child's Age:	0-3 mos.	4-5 mos.	6-11 mos.	12-14 mos.	15-17 mos.	18-23 mos.	24-35 mos.	36-47 mos.	48-53 mos.	54-71 mos.	72-83 mos.	84-96 mos.
1. Global/Cognitive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. Expressive Language and Articulation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3. Receptive Language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. Fine Motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5. Gross Motor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6. Behaviour	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Social-emotional	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Self-help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10. Other	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Count the number of ticks in the small shaded boxes and place the total in the large shaded box below.

<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------	-------------------------------------

If the number shown in the large shaded box is 2 or more, follow Path A on PEDS Interpretation Form. If the number shown is exactly 1, follow Path B. If the number shown is 0, count the number of small unshaded boxes and place the total in the large unshaded box below.

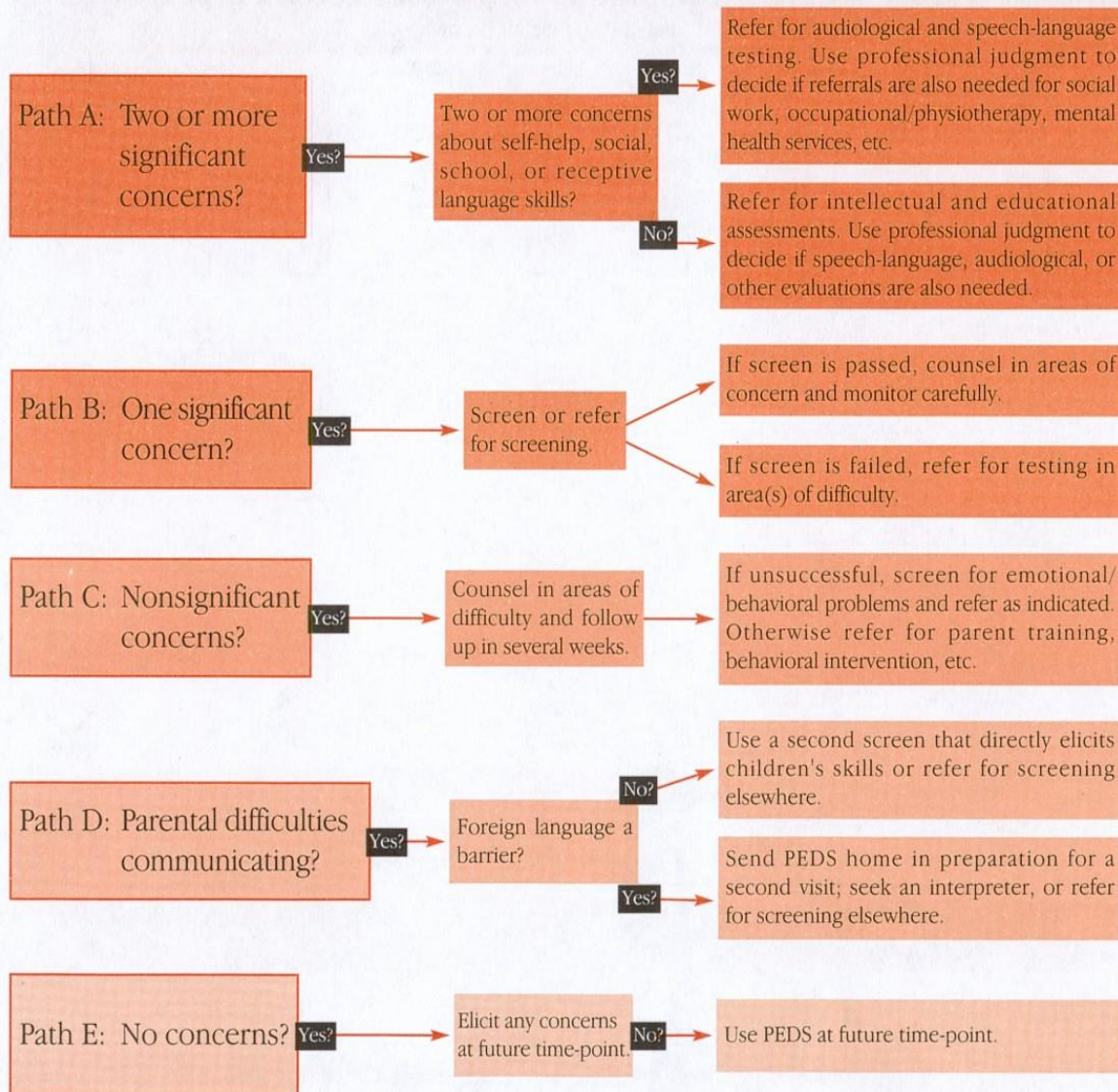
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

If the number shown in the large unshaded box is 1 or more, follow Path C. If the number 0 is shown, consider Path D if relevant. Otherwise, follow Path E.

Child's Name: _____ Date of Birth: _____

Specific Decisions

PEDS INTERPRETATION FORM – TEST VERSION



0-3 mos. _____

4-5 mos. _____

6-11 mos. _____

12-14 mos. _____

15-17 mos. _____

18-23 mos. _____

24-35 mos. _____

36-47 mos. _____

48-53 mos. _____

54-71 mos. _____

72-83 mos. _____

84-96 mos. _____

Reforming the service system

Infrastructure of existing services



- Child care
- Family day care
- GPs
- MCH nurses
- Preschool
- School
- Specialist services
- Parenting programs
- Neighbourhood houses
- Family support
- Telephone counselling
- Family violence
- Problem gambling
- Child protection
- Adoption/foster care
- Mental health services

Just because you have a service system in place does not mean that all families use it.

Barriers to using services

Structural barriers:

- Not aware service exists, cost, waiting list, transport, hours of opening, narrow eligibility

Family level barriers:

- Unstable housing/homelessness, low literacy levels, day to day stress, mental health problems

Relationship or interpersonal barriers

- Insensitive attitude by professional, lack of trust in services, fear of authorities

A fragmented service system



GPs and
paediatricians

Family
support

Childcare

School

Early intervention
programs

Child protection
agency

Parenting
programs

Kindergarten

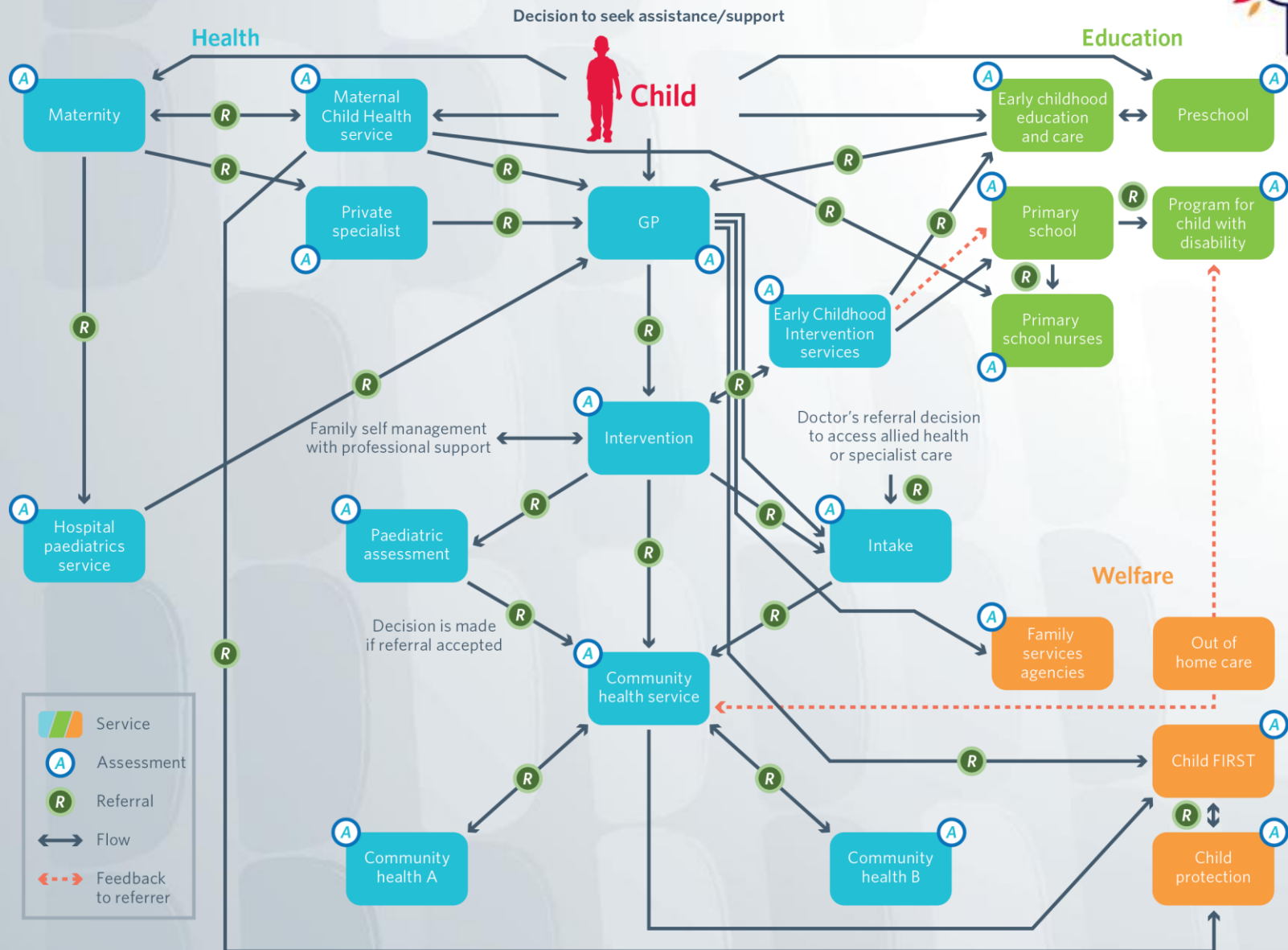
Preschool

Pediatrician

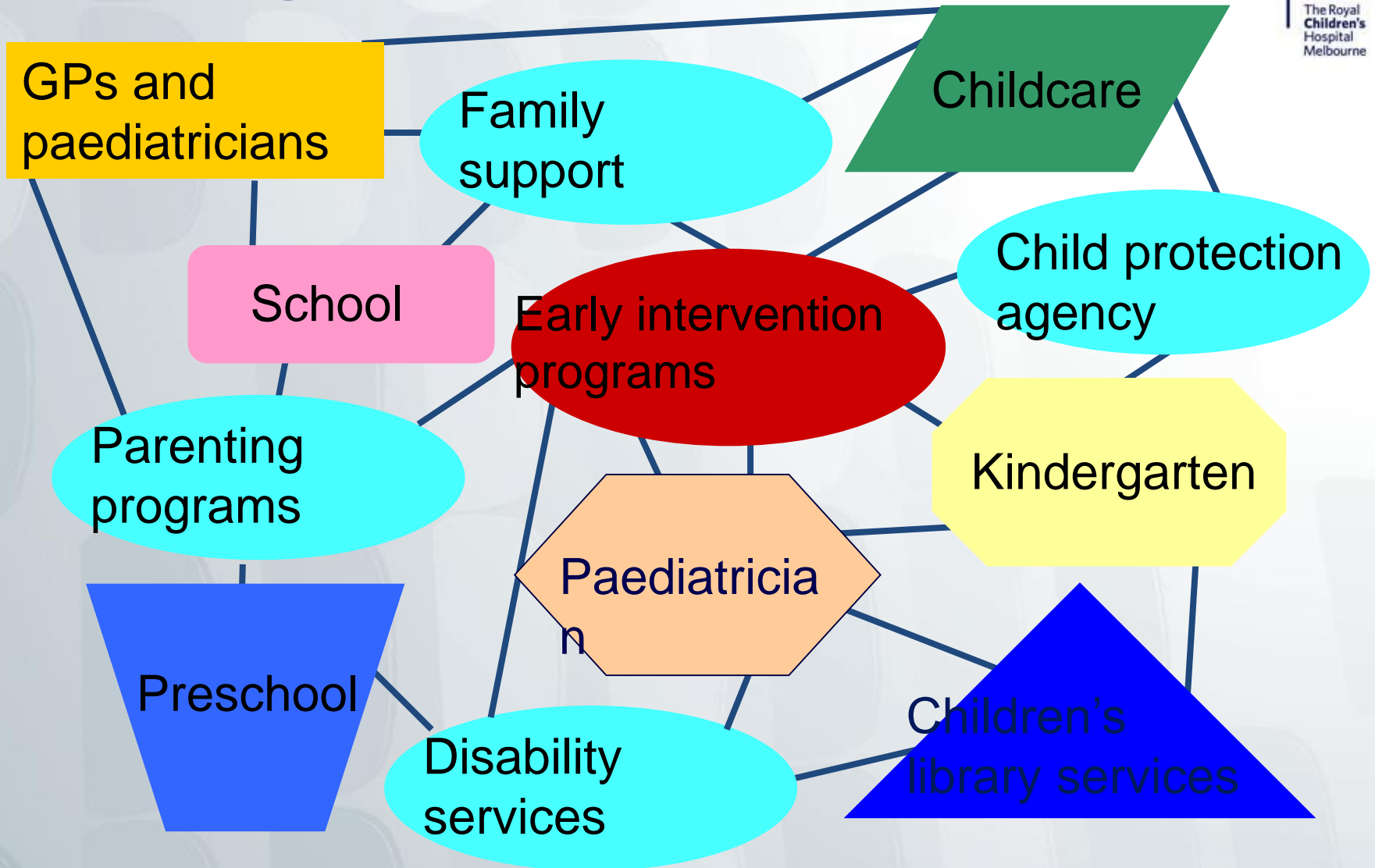
Disability
services

Children's
library services

Blue Sky Research Project: Mapping the current service system in a Victorian community

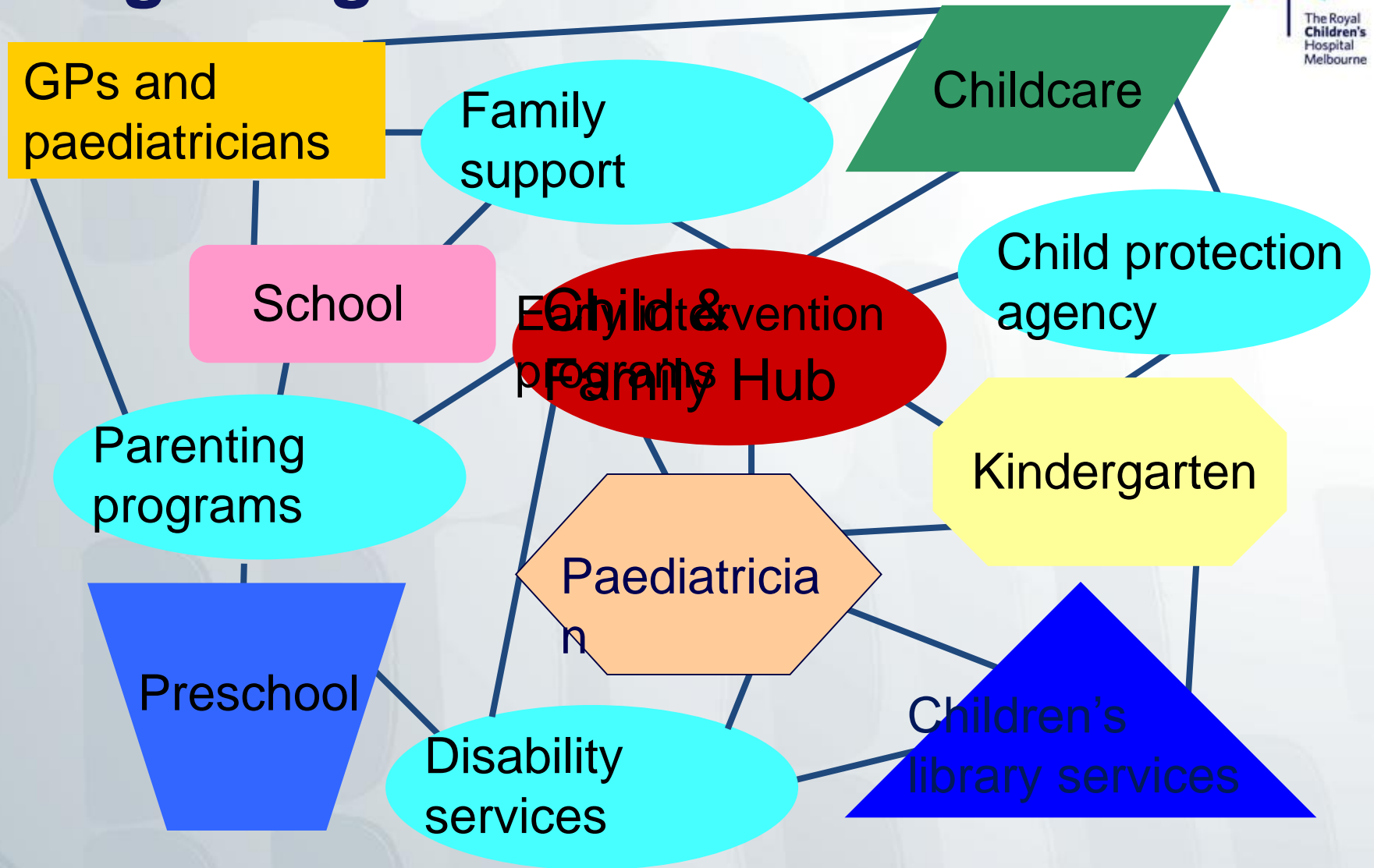


Linking services

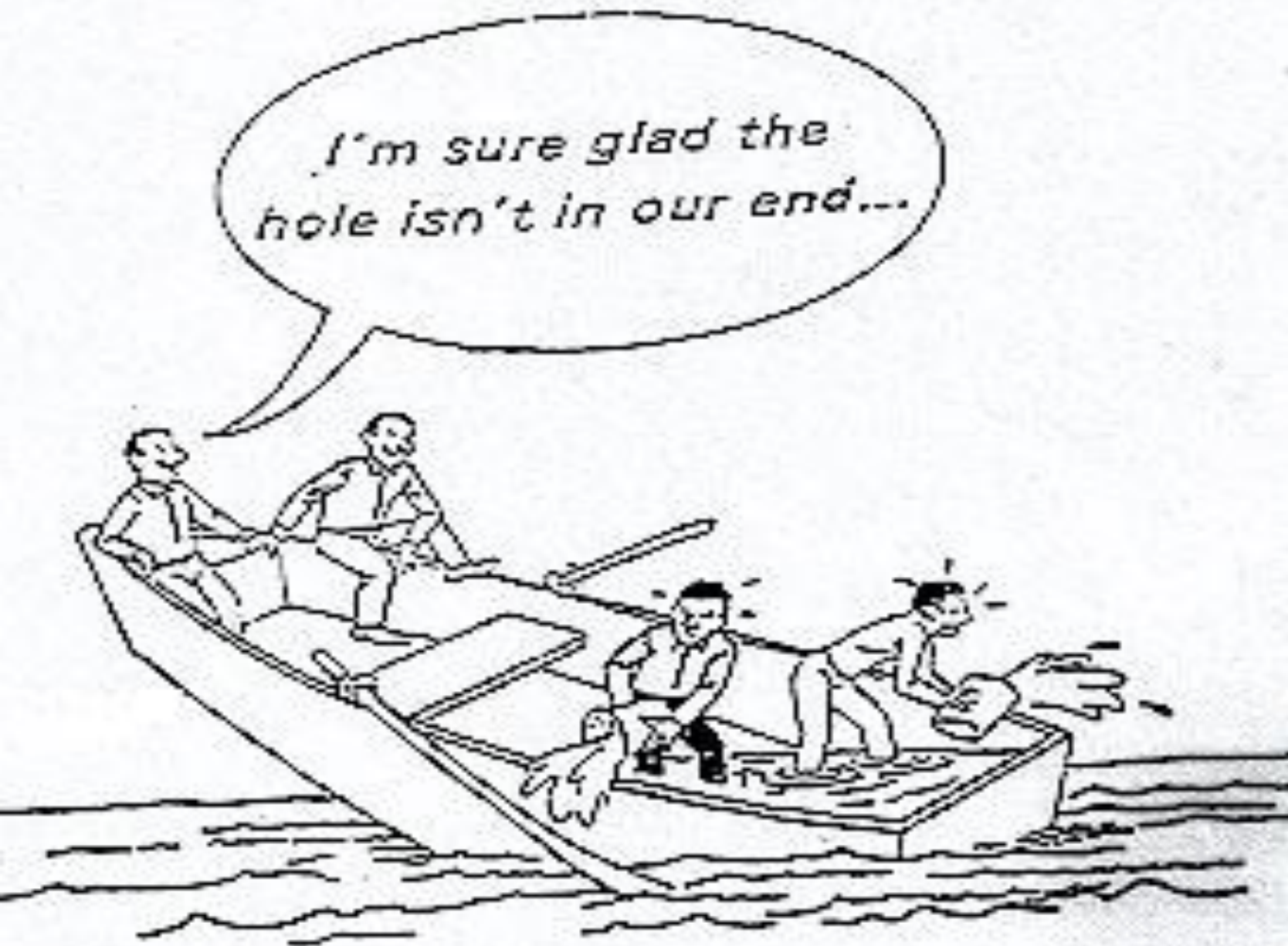


No wrong door!

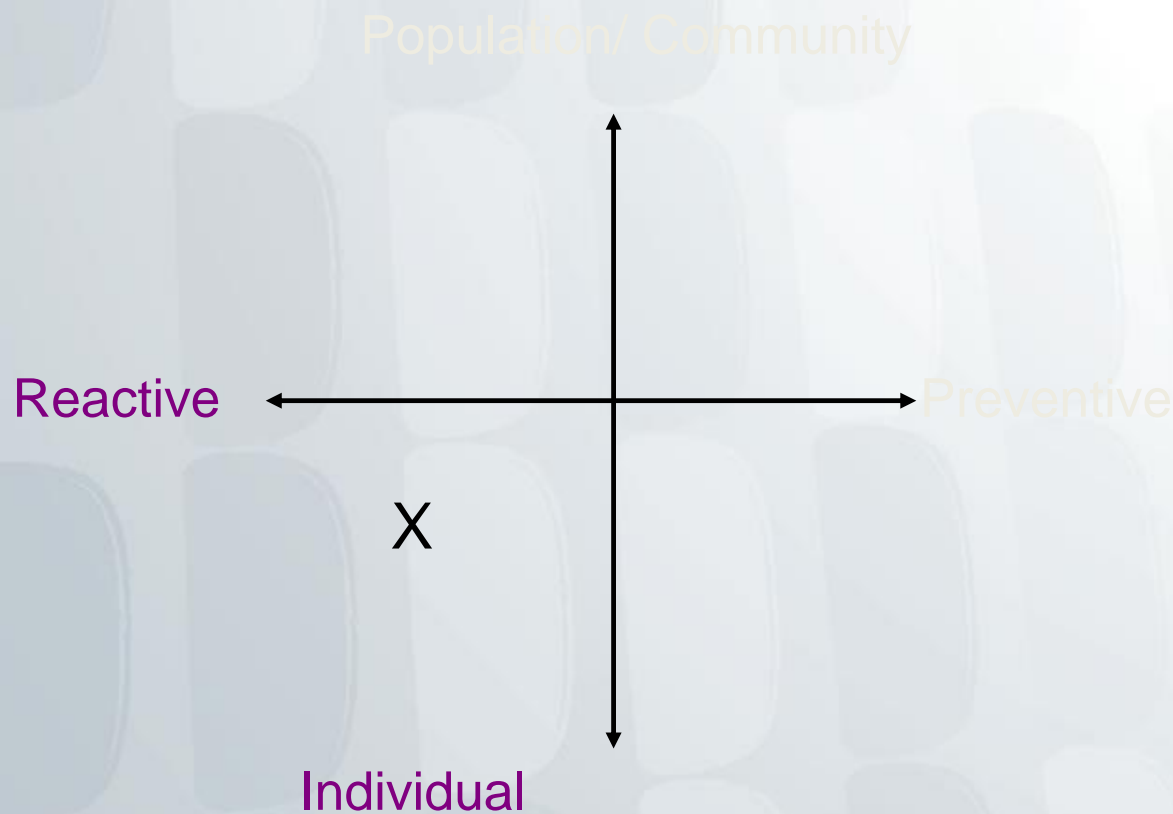
Integrating services



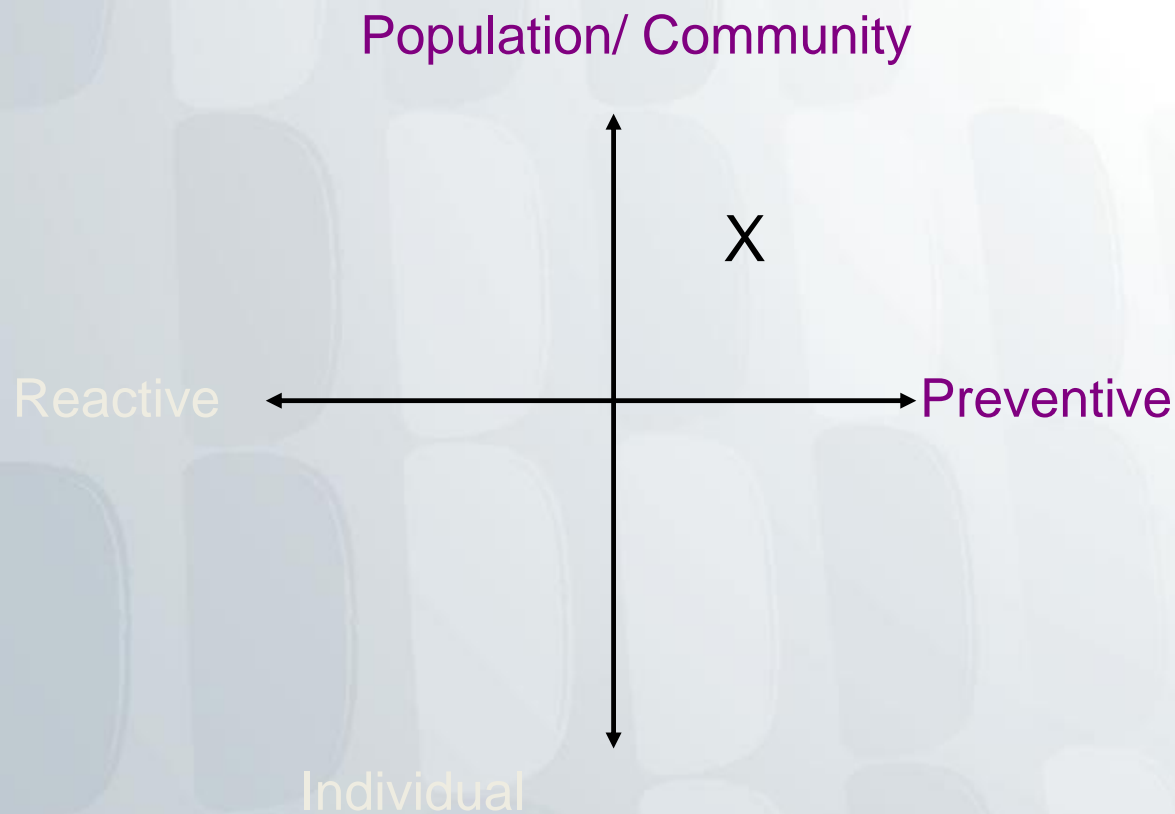
A population approach to improving outcomes



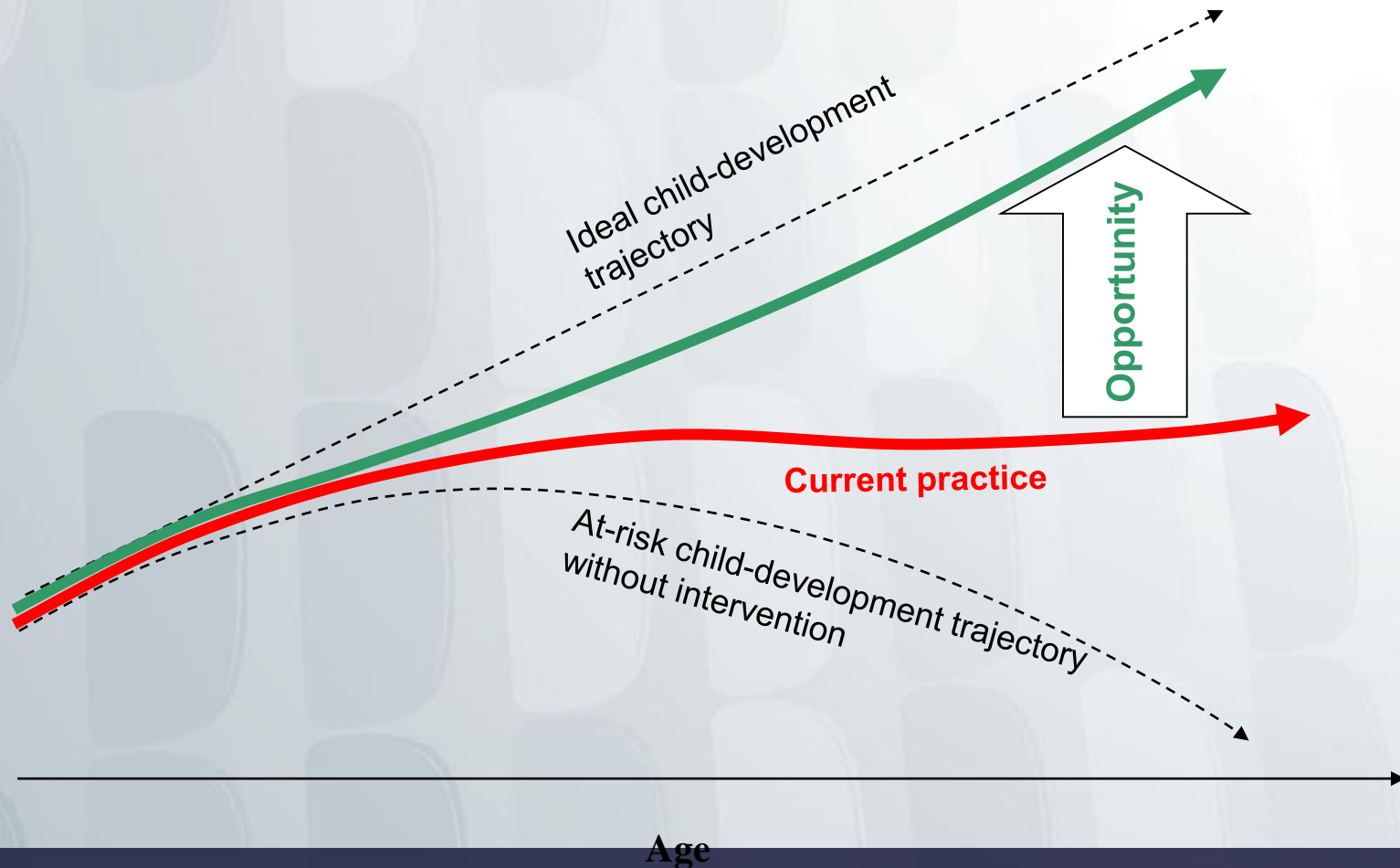
Where are our investments today?



Where our investments should be



Developmental health - Aims



Conclusion

- Promoting the healthy development of children is both an ethical imperative and a critical economic and social investment
- Our agenda for the 21st century has to be the application of science to policy and practice - *to close the gap between what we know and what we do*

Thank You!

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- www.rch.org.au/ccch
- www.raisingchildren.net.au