



MRC

Scottish Collaboration
for Public Health
Research and Policy

Measuring Effectiveness of Early Childhood Interventions:

Early Development Instrument pilot in Scotland

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Introduction

- Who is SCPHRP (Scottish Collaboration for Public Health Research and Policy)?
- Mandate
 - Evidence into policy
 - Work towards reducing inequality
- Expert committee – working groups
- Review of what works in early childhood for social and cognitive development & scan of Scotland's early years policy & practice

Review : Outcomes measured & findings

Cognitive/ language	Social/ Emotional	School achievement	Health	Child neglect/ maltreatment	Criminal activity	Future success
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- Half of 26 programmes had statistically significant effects in 3+ domains
- IQ effects strong in early childhood but faded over time
- Longer-lasting gains: school achievement, grade retention, special education, high school completion, labour market & welfare outcomes, criminal activity
- Successful interventions utilize a mixed (centre & home-based), two-generation (child & parents) approach
- Greatest effects are seen in those at highest social risk

Measurement of effectiveness of early childhood interventions in Scotland

- Few evaluations of early years interventions report outcomes or have control groups
- Early childhood interventions often complex
- Frequently ethical/practical reasons why control group evaluation difficult
- Scotland lacking a standardised measurement of early child development



EARLY DEVELOPMENT INSTRUMENT

a population-based measure for communities

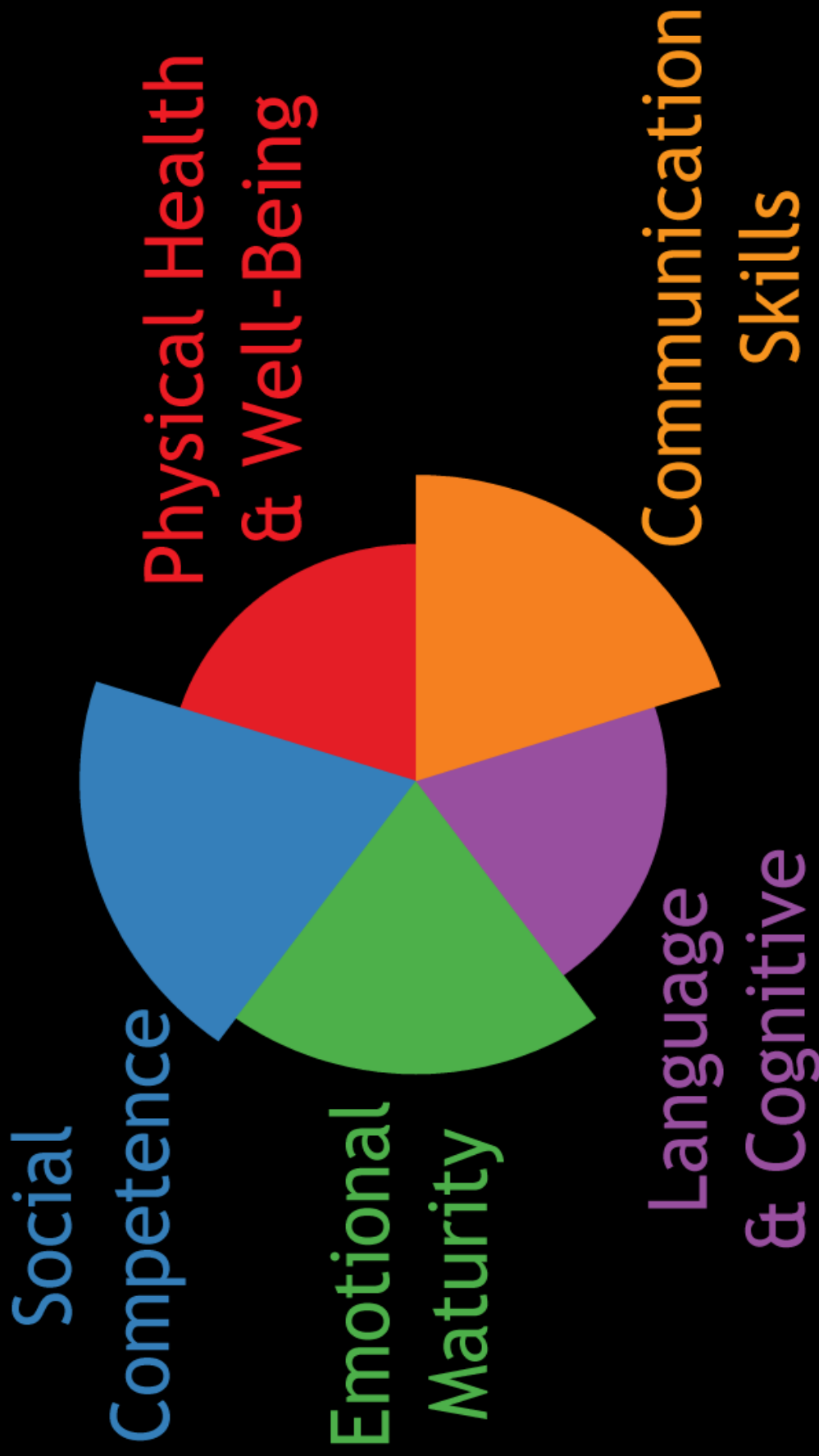
What is the EDI?



EARLY DEVELOPMENT INSTRUMENT
a population-based measure for communities

- The EDI is teacher-completed (20 minutes) checklist that assesses children's school readiness when they **enter** school.
- It measures the outcomes of children's **pre-school** (0-5 years) experiences as they influence their readiness to benefit from school.
- As a result, the EDI is able to **predict** how children will do in primary school.
- The EDI is designed to be interpreted at the **group level** & does **not** provide diagnostic information on individual children.

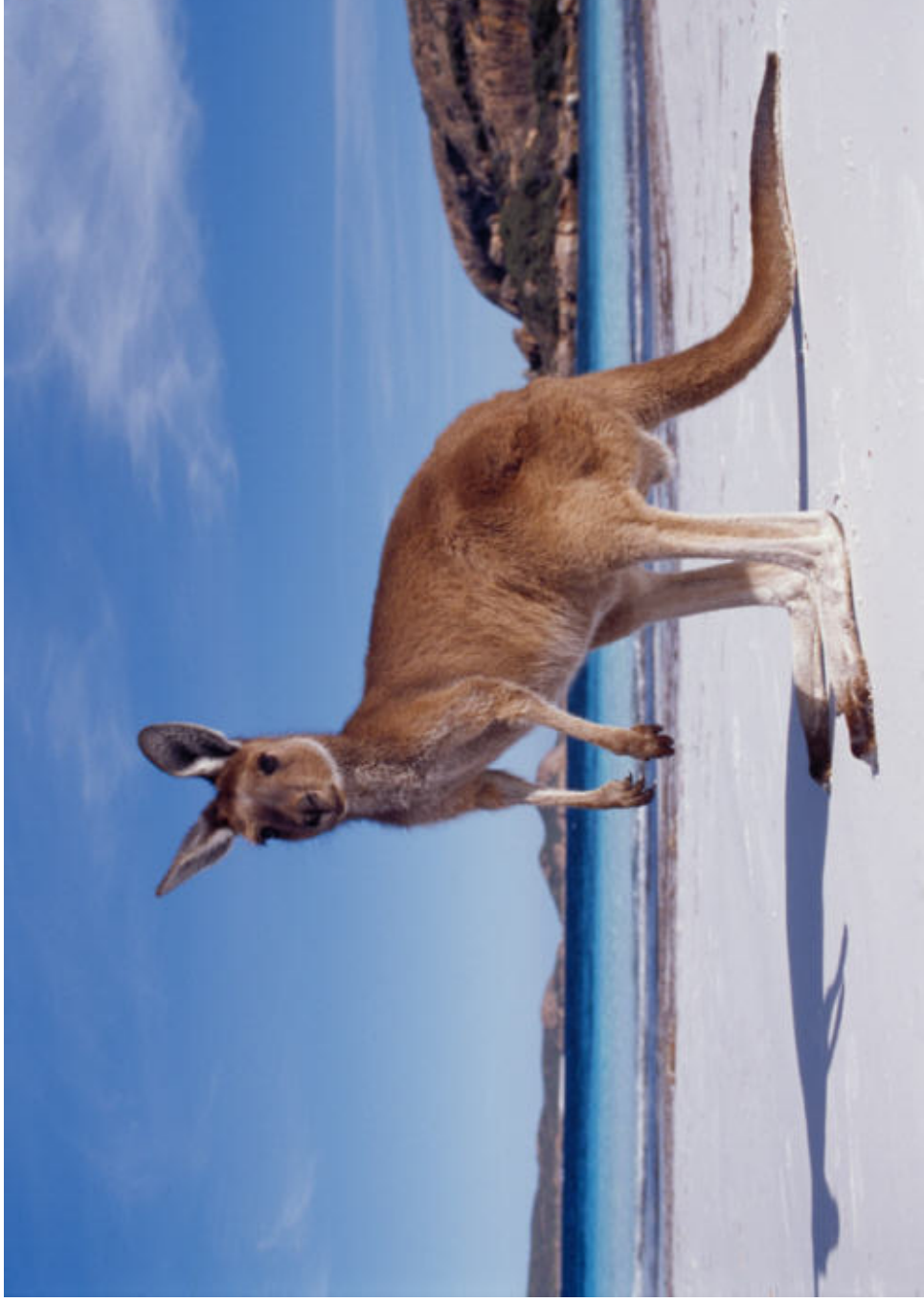
What Does the EDI Measure?



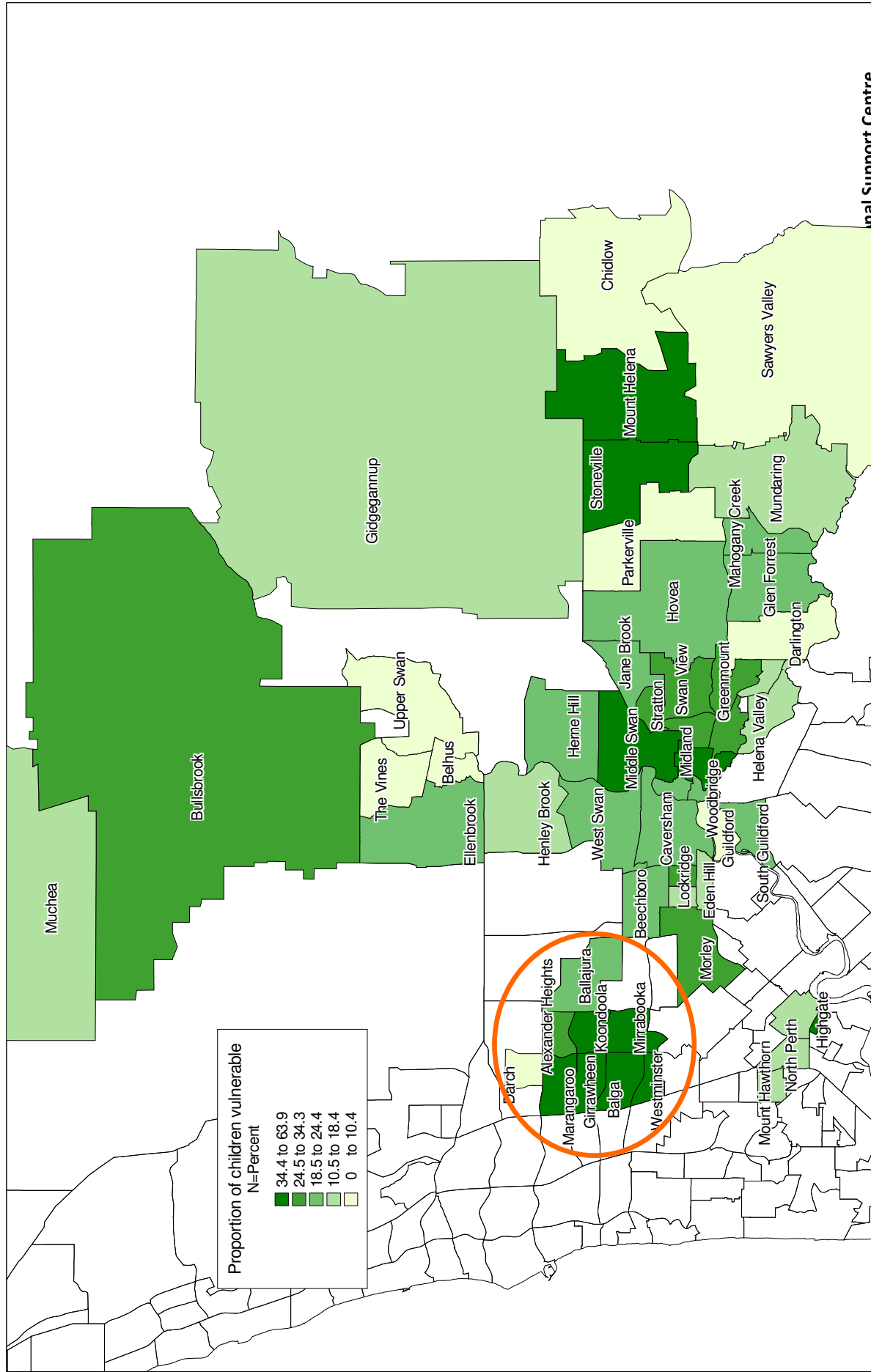
Using the EDI

- Teachers complete, children not present
- Triennial census on new cohorts of 5-year old children
- Score for each developmental domain
- Cut-offs:
 - ❖ <10th percentile = vulnerable
 - ❖ 10-25th percentile = at risk
 - ❖ >25th percentile = on track

Example of community action from
down under

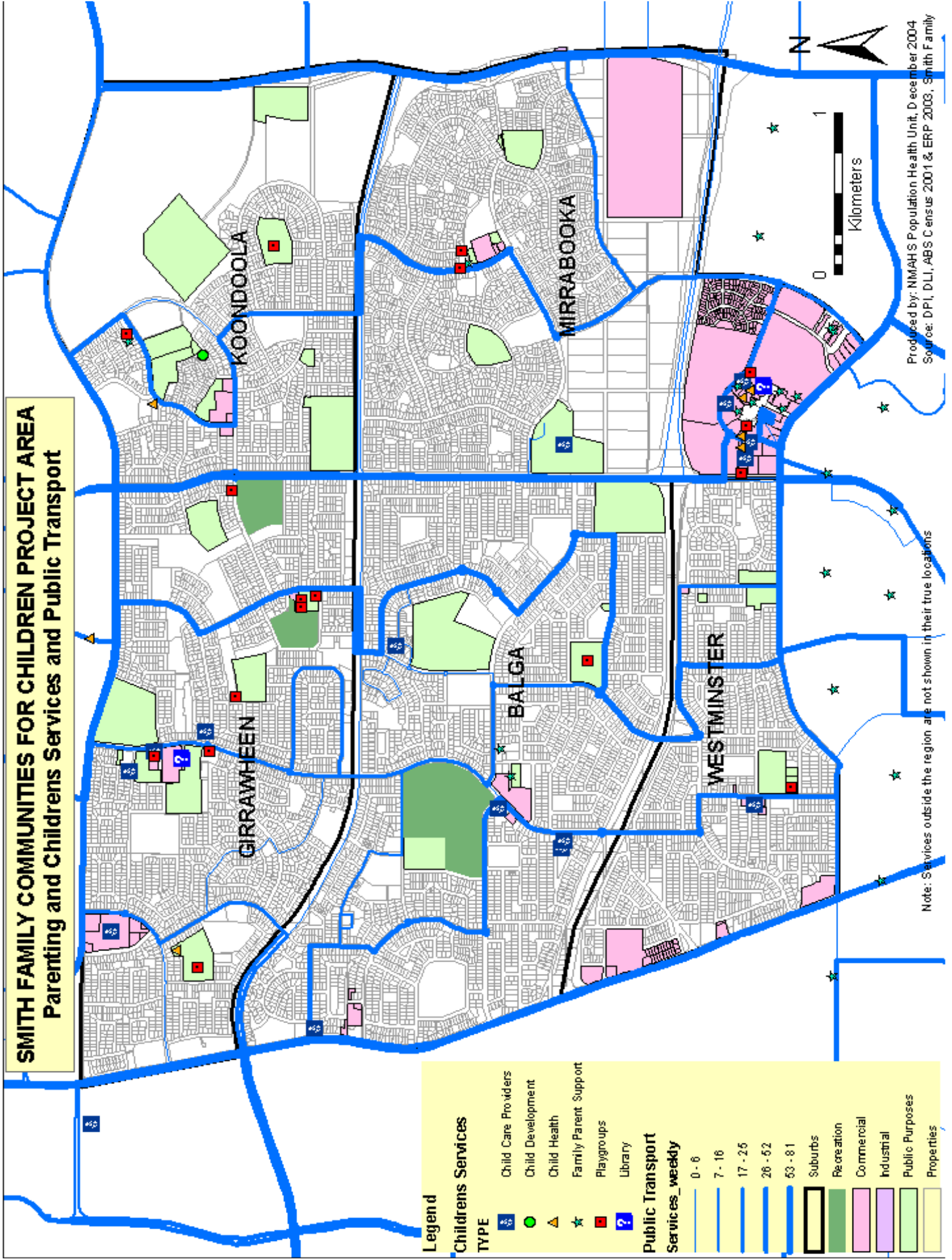


Asset Mapping Perth East Metropolitan region, Proportion of children vulnerable on one or more domains



SMITH FAMILY COMMUNITIES FOR CHILDREN PROJECT AREA







Parenting and Childrens Services and Public Transport



Legend






Childrens Services






TYPE

-  Child Care Providers
-  Child Development
-  Child Health
-  Family Parent Support
-  Playgroups
-  Library

Public Transport

Services_per_weekly

-  0 - 6
-  7 - 16
-  17 - 25
-  26 - 52
-  53 - 81

-  Suburbs
-  Recreation
-  Commercial
-  Industrial
-  Public Purposes
-  Properties

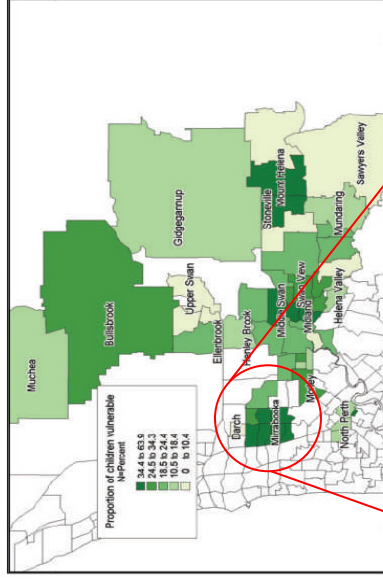
Produced by: NMAHS Population Health Unit, December 2004
 Source: DPLI, DLI, ABS Census 2001 & ERP 2003, Smith Family

Note: Services outside the region are not shown in their true locations

The AEDI community planning process

1. Identifying areas of particular need

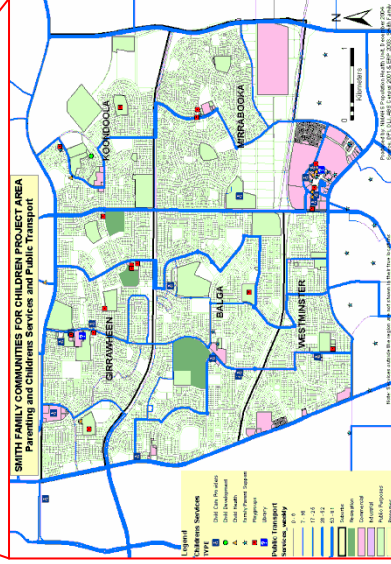
Proportion of children developmentally vulnerable on one or more domains of the AEDI



2. Assessing the local distribution of children's developmental vulnerability

Suburb	Proportion of children developmentally vulnerable										Average scores				
	No	Phys	Soc	Emot	Lang	Comm	Vuln 1	Vuln 2	Phy	Soc	Emo	Lang	Com		
Mirrabooka and surrounds															
Balga	91	19	15.5	8.3	24.1	27.4	45.2	25	8.64	7.71	7.25	7.69	7.19		
Girrawheen	109	16.2	11.4	11.4	18.1	15.2	36.2	17.1	9.09	8.75	8.46	8.46	8.75		
Koondoola	53	12.5	8.3	10.4	16.7	12.5	35.4	18.8	9.3	8.33	7.65	8.85	8.75		
Mirrabooka	90	14.9	5.7	5.7	34.9	18.4	43.7	21.6	8.18	8.54	7.69	7.31	8.68		
Westminster	37	11.1	11.1	17.1	50	19.4	63.9	30.6	8.92	7.98	7.12	5.77	7.19		

3. Community asset mapping



e.g. Mission Australia funds 3 year play group, language program & mums group at school

4. Mobilising community action



A partnership between



National Agenda for early childhood

Supported by



What the maps reveal...

- Large local area differences in the proportion of developmentally vulnerable children: typically 10% to 50 % range
- The high proportion of avoidable vulnerability – i.e. not biologically predetermined, but rather preventable by improving children’s *home and community learning environments*
- The degree to which socioeconomic context explains *and* does not explain variations in early development: room for hope!
- Which communities are doing better or worse than predicted: prompts the study of ‘why’ and learning between communities
- Change over time – so that improvements in services for pregnant mothers and children in communities can be evaluated

EDI pilot in Scotland - main objectives

- Adapt Canadian EDI to Scottish context & school system (phase 1)
- Implement fully in at least one local authority: East Lothian 2011/12 (phase 2)
- Link mean scores in each developmental domain to SES
- Determine % 'vulnerable' children in each developmental domain, and overall
- Generate reports, present results to stakeholders in LA & to Scottish Government, using user-friendly charts & maps
- Validate results, if possible, against Durham Uni's PIPS
- Provide data to Information Services Division for potential anonymous linking with routinely collected data such as maternal records and health visitor reports

When, who, and how much?

2 phases:

Phase	Purpose	Who	When	Cost
1	Test EDI tool for content, language, acceptability, usefulness	15 P1 teachers* each completed EDI for 11 children	March 2011	Funds for supply teachers for ½ day training & full day to complete EDI
2	Implementation of EDI to determine level of child development in population	All P1 teachers will complete EDI for all their P1 pupils	December /January 2011/12	Training during October in-service day & teacher time allocated for EDI completion

*teachers from each Musselburgh, Prestonpans, Tranent, Haddington, North Berwick and Dunbar

“No Data, No Problem, No Action”

Alfredo Solari



Useful websites & references

- www.scphrp.ac.uk Scottish Collaboration for Public Health Research and Policy:
- <http://www.offordcentre.com/index.html> Offord Centre for Child Studies
- http://www.rch.org.au/ccch/index.cfm?doc_id=10556 Australian Early Development Index - click on AEDI
- <http://www.ecdportal.help.ubc.ca/archive/faq.htm> British Columbia ECD mapping portal
- Hertzman C, Williams R. Making early childhood count. CMAJ. 2009 Jan 6;180(1):68-71.
- Lloyd JEV, Hertzman C. From Kindergarten readiness to fourth-grade assessment: Longitudinal analysis with linked population data. Social Science & Medicine. 2009;68(1):111-23.
- Hertzman C. Tackling inequality: get them while they're young. BMJ 2010; 340:346-8
- Marmot M. Fair Society, Healthy Lives. London: University College London; 2010.