

# RESTACKING THE ODDS



## Restacking the Odds

### Community assessment

Month  
Year

# Reducing intergenerational disadvantage in Australia

## FOCUS OF OUR WORK

Inequities emerging in early childhood often continue into adulthood, contributing to unequal rates of low educational attainment, poor mental and physical health and low income. In some cases, this experience is part of a persistent cycle of intergenerational disadvantage. Inequities constitute a significant and ongoing social problem and – along with the substantial economic costs – have major implications for public policy.

To redress inequities, research tells us that efforts should be delivered during early childhood (pregnancy to eight years of age) to deliver the greatest benefits. Restacking the Odds focuses on five key evidence-based interventions/platforms in early childhood: antenatal care; sustained nurse home visiting; early childhood education and care; parenting programs; and the early years of school.

These five strategies are only a subset of the possible interventions, but we have selected them carefully. They are notably *longitudinal* (across early childhood), *ecological* (targeting child and parent), *evidence-based*, *already available* in almost all communities and able to be targeted to benefit the 'bottom 25 per cent'. Our premise is that by 'stacking' these fundamental interventions for a given individual there will be a cumulative effect amplifying the impact & sustaining benefits.

## APPROACH

Our intent is to use a combination of data-driven, evidence-based and expert informed approaches to develop measurable best practice indicators of quality, quantity and participation:






**Quality:** Are the strategies *delivered effectively*, relative to evidence-based performance standards? A strategy with 'quality' is one for which there is robust evidence showing it delivers the desired outcomes. A large number of research studies have explored aspects of this question (i.e., "what works?"). Therefore, we pay particular attention to the quality dimension in our work and analysis.

**Quantity:** Are the strategies *available locally* in sufficient quantity for the target population? 'Quantity' helps us determine the quantum of effort and infrastructure needed to deliver the strategy adequately for a given population.

**Participation:** Do the appropriately targeted children and families *participate at the right dosage levels*? 'Participation' shows us what portion of the relevant groups are exposed to the strategy at the level required to generate the desired benefit (e.g., attending the required number of antenatal visits during pregnancy). Participation levels can be calculated whether the strategy is universal (for everyone), or targeted (intended to benefit a certain part of the population).

These indicators will help identify gaps and priorities in Australian communities. We will test preliminary indicators in 10 communities over the next three years to determine which are pragmatic to collect, resonate with communities, and provide robust measures to stimulate community and government action.

## Five fundamental strategies

Antenatal	Early childhood		School years
	Birth to 2 years	2-5 years	
 <b>Antenatal support</b> <ul style="list-style-type: none"> <li>Targeted at parents</li> <li>Centre-based</li> <li><i>Outcomes:</i> healthy birth weight, good brain health, appropriate care, "adequate parenting"</li> </ul>	 <b>Early childhood education and care</b> <ul style="list-style-type: none"> <li>Targeted in all children (in groups)</li> <li>High quality for all children</li> <li>Delivered out of home in a "pseudo-home-learning environment"</li> <li><i>Outcomes:</i> children on optimal developmental pathway (cognitive and social-emotional), school readiness</li> </ul>	 <b>Early years of school</b> <ul style="list-style-type: none"> <li>Targeted at all children</li> <li>School-based</li> <li><i>Outcomes:</i> children on optimal learning pathway by Year 3</li> </ul>	
 <b>Sustained nurse home visiting</b> <ul style="list-style-type: none"> <li>Targeted at disadvantaged parents</li> <li>Health and development support</li> <li>Home-based</li> <li><i>Outcomes:</i> parents develop parenting skills</li> </ul>	 <b>Parenting programs</b> <ul style="list-style-type: none"> <li>Targeted at parents whose children have behavioural issues (higher prevalence in disadvantaged families)</li> <li>Centre-based, delivered in groups or 1:1</li> <li><i>Outcomes:</i> remedy of specific emerging behavioural issues</li> </ul>		

## Assessment approach



The RSTO research team has **spent 18 months collecting and analysing data** to assess the community's performance in delivering the 5 fundamental strategies



Where manual data collection was required, effort focused on specified case study areas:



The **assessment extended to all service providers** within the defined scope of each strategy, and there was **strong cooperation** across the board



The **purpose of this report is to provide an objective, data-driven assessment** which will highlight the areas of need in the community as well as areas of relative strength



This report **does not provide recommendations** about 'what' the community should do next, those decisions are best made at the community-level

## Community summary assessment

- 1 Overall, participation and quality** showed the greatest need for improvement. Participation was especially low for those that needed these services the most (e.g. "at risk" groups).
- Given the **low participation level** across the 5 strategies, **quantity is currently sufficient for demand**, particularly for the universally available health and education platforms (antenatal care, early childhood education and care, and the early years of school).
- There were **specific areas of strong performance** (e.g. particular schools, ECEC centres, or suburbs) where a community could capitalise on and/or replicate where appropriate.
- Key stakeholders and service providers were **willing to provide data and work collaboratively** with the RSTO team, however **data availability, usability, and quality varied** substantially across strategies and services.



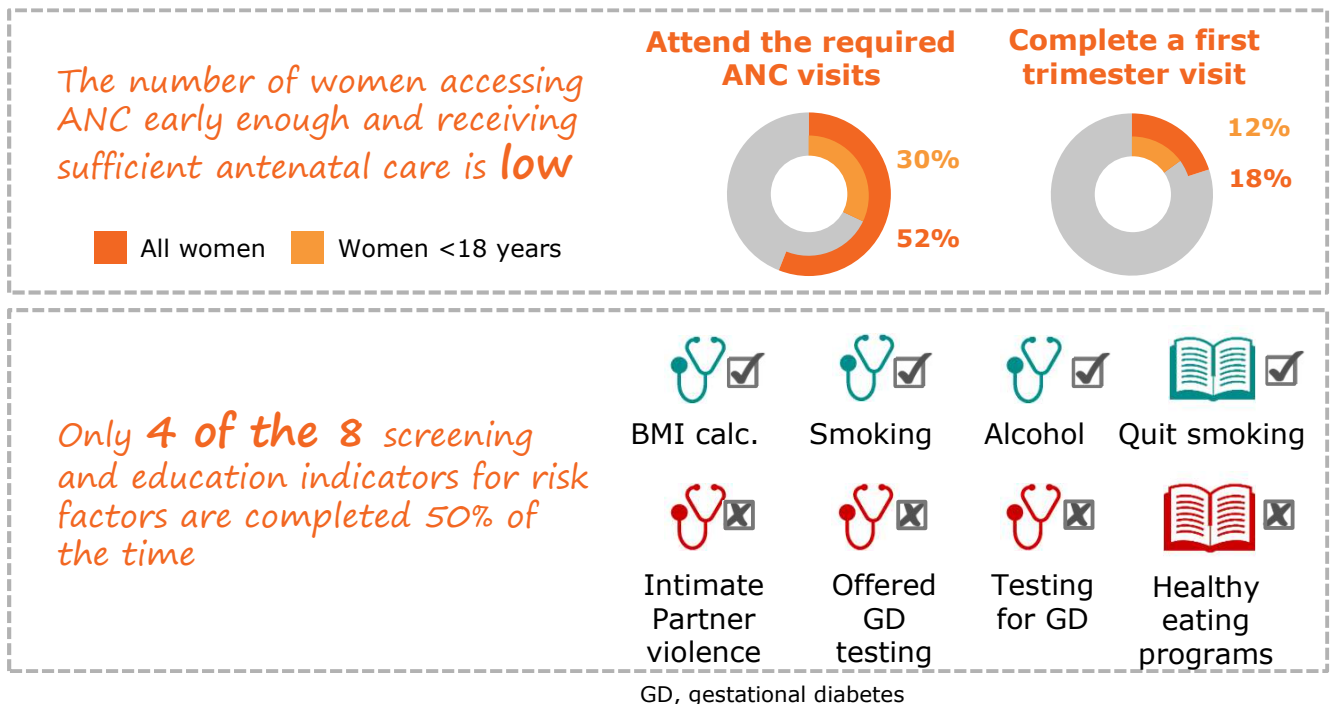
# Antenatal Care

## Context & methodology





- Research identified 48 important indicators for ANC, 33 were able to be calculated in the community, the remaining 15 could not be calculated due to issues with data availability.
- The scope of this assessment was on antenatal care (ANC) delivered by community health organisations, utilising medical & infrastructure records.
- Data was sourced from primary hospital data (database excerpts, patient notes, HR information & interviews) and secondary data (public reports & statistics) with ethical approval.
- Some indicators were calculated based on an annual data sample, while others were based on a monthly data audit due to a large population of pregnant women (~5,000) and the manual, time-consuming data collection processes required for some indicators.

## Key insights

- While there are sufficient midwives, the community has a significant shortage of GPs and OB/GYNs (this is similar to Australian-wide data).
- Research shows that continuity of care from a midwife is important, however, only 20% of women see the same midwife for more than half of their ANC visits.
- Screening and education for pregnant women is inconsistent, and especially poor for women in at-risk groups (i.e. hypertension, mental health, diabetes).
- Treatment for women with hypertensive conditions is poor, and most diabetic women have long wait times for the required specialist care.



# Summary of performance against each indicator

	Indicator	Community	Australia	Target	
<b>Participation</b> 	P1 First trimester visit	18%	20% (Public)	100%	
	P2 Frequent visits	52%	58%, 78%	100%	
	P3 First trimester visit – disadvantaged	18%, 12%	-	100%	
	P4 Frequent visits – disadvantaged	53%, 32%	-	100%	
<b>Quality – universal</b> 	QL1 Named midwife	45%	-	100%	
	QL5 BMI calculated	98%	96%	100%	
	QL6 Smoking status	93%	99%	100%	
	QL7 Alcohol use	91%	-	100%	
	QL8 Intimate partner violence	25%	90% (NSW)	100%	
	QL9 Offered testing for GD	55%	-	100%	
	QL10 Received testing for GD	61%	-	100%	
	QL11 Received advice on healthy eating	42%	-	100%	
	QL12 Referred to stop smoking service	85%	-	100%	
	QL17 Offered breech cephalic version	90%	-	100%	
	QL18 40wk vaginal examination	37%	-	100%	
	QL19 41wk vaginal examination	65%	-	100%	
	QL20 Fetal movements	74%	-	100%	
	<b>Quality – ‘at risk’</b> 	QL21 Hypertension: Pre-eclampsia risk recorded	96%	99.9%	100%
		QL22 Risk of Pre-eclampsia, aspirin	10%	-	100%
		QL23 Hypertension: Full assessment	45%	-	100%
QL24 Pre-eclampsia, admitted		38%	-	100%	
QL26 Hypertension: P-E, OBGYN birth plan		27%	-	100%	
QL28 Mental health: Info at booking		3%	-	100%	
QL33 Type 1 diabetes, folic acid		15%	-	100%	
QL34 Type 2 diabetes, folic acid		6%	-	100%	
QL35 Diabetes: Existing, joint team		46%	-	100%	
QL39 Diabetes: GD, joint team		40%	-	100%	
<b>Quantity</b> 	QN1 Facility density	0.3	-	-	
	QN2 Maternity bed density per 1,000 pregnant women	8	-	-	
	QN3 GP density per 10,000 women	45	51	~55-65	
	QN4 Midwife density per 10,000 women	58	40	~60-65	
	QN5 OBGYN density per 10,000 women	~3	~4	~7-10	

Abbreviations: GD, gestational diabetes; P-E, pre-eclampsia



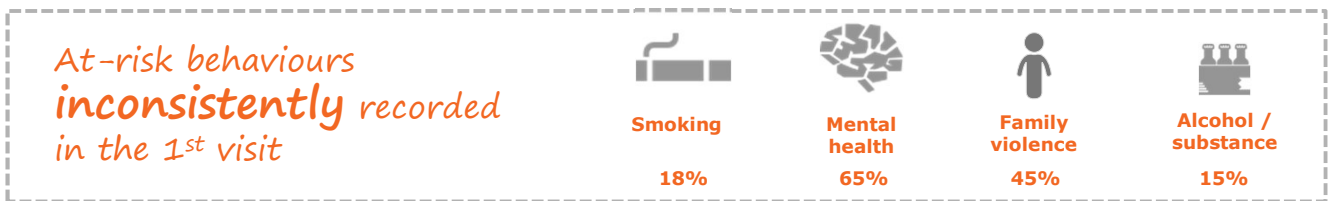
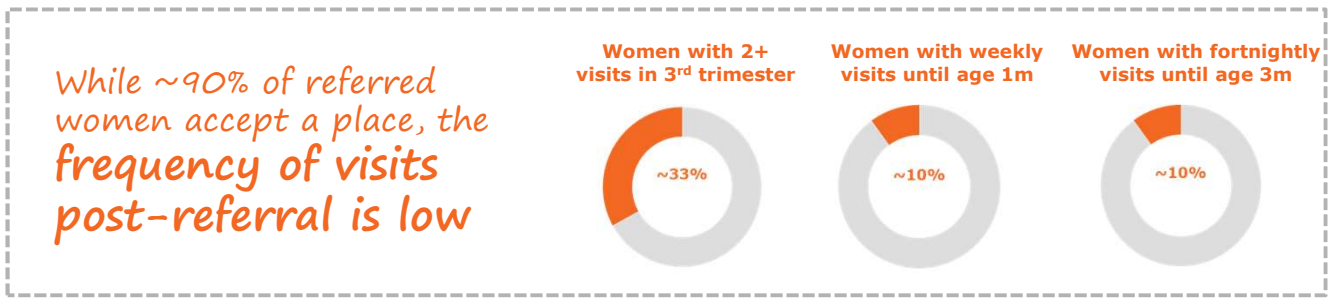
# Nurse Home Visiting

## Context & methodology




- Research demonstrated the efficacy of Sustained Nurse Home Visiting (SNHV) programs. RSTO created research-based indicators of quality for content, processes, and provider.
- Due to lack of SNHV programs in the community, the scope of assessment was broadened to include Enhanced Maternal & Child Health (EMCH) which also provides nurse home visiting services to disadvantaged mothers.
- Data on processes, visit content, attendance, and staff were collected from EMCH service databases and nurse notes, then analysed for 37 of 53 indicators. However a comparative assessment of was not able to completed given the absence of Australian/Victorian comparison points or appropriate targets.

## Key insights

- At-risk behaviours were inconsistently recorded, and limited formal processes exist for client feedback and staff supervision.
- Most women referred to EMCH accept a place, but frequency of visits post-referral is below evidence-based levels.
- No target or comparison benchmarks are available, however workforce density appears low.



# Summary of performance against each indicator

	Indicator	Community	Australia	Target
<b>Participation</b> 	P1 25+ visits by age 2yrs	4%	-	100%
	P2 Early dropouts	90%	-	100%
	P3 15+ visits by age 1yr	4%	-	100%
	P4 % of funded hours delivered	80%	-	100%
	P5 Primiparous women accepting a place	89%	-	100%
	P6 Young (<20yrs) accepting a place	98%	-	100%
	P7 ATSI women accepting a place	98%	-	100%
	P8 NESB women accepting a place	85%	-	100%
	P9 2+ visits in 3rd trimester	46%	-	100%
	P10 Weekly visits until age 1 month	10%	-	100%
	P11 Fortnightly until age 3 months	10%	-	100%
	P12 2+ visits in 3rd trimester (disadvantaged)	33%	-	100%
	P13 Weekly visits until age 1mo (disadvantaged)	8%	-	100%
<b>Quality</b> 	QL SNHV equivalent program available	0%	-	100%
	QL1 Home-learning environment addressed	44%	-	100%
	QL2 Parenting skills addressed	33%	-	100%
	QL4 Child health & development support	75%	-	100%
	QL6 Referral to evidence-based program	22%	-	100%
	QL7 Info on comm. engagement provided	84%	-	100%
	QL8 Target issues documented	84%	-	100%
	QL9 'Named' nurse (continuity of care)	80%	-	100%
	QL13 New staff observation	0%	-	100%
	QL14 Smoking status recorded in 1 <sup>st</sup> visit	18%	-	100%
	QL15 Mental health status recorded	65%	-	100%
	QL16 Family violence status recorded	45%	-	100%
	QL17 Alcohol / substance misuse recorded	15%	-	100%
QL22 Nurse feedback opportunities	5%	-	100%	
QL23 Program feedback opportunities	15%	-	100%	
QL25 Nursing experience level	100%	-	100%	
QL28 Monthly supervision	25%	-	100%	
QL29 Family partnerships training	30%	-	100%	
QL30 Professional development	87%	-	100%	
<b>Quantity</b> 	QN1 MCH facility density per 10,000 women	~2	-	-
	QN2 Funded EMCH places	~180	-	-
	QN3 Funded EMCH hours	~1700	-	-
	QN4 EMCH nurse density per 10,000 women	~0.7	-	-
	QN5 EMCH social worker density	~0.7	-	-
	QN6 Support worker density	~0.5	-	-



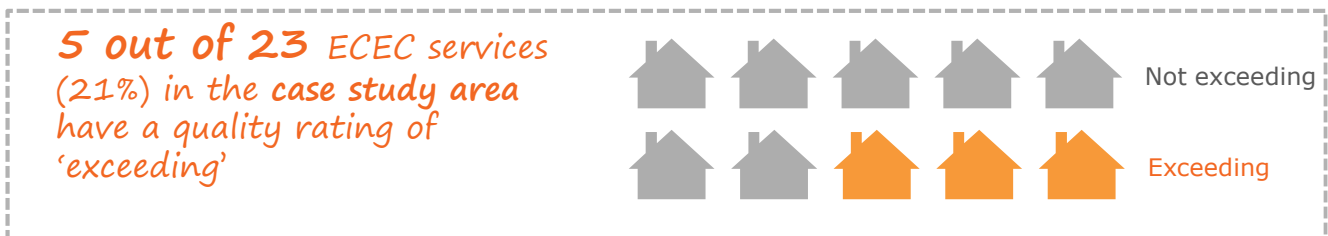
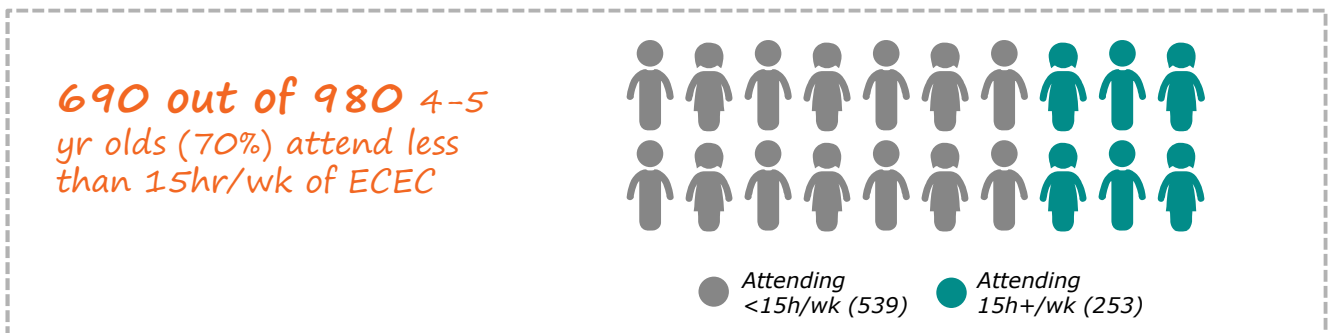
# Early Childhood Education & Care

## Context & methodology

- The early childhood education and care (ECEC) assessment focused on long day care, kindergarten and family day care (FDC) services in the community (80 services in total).
- 35% of all ECEC services in the community are FDC (28 services), however due to their small size they only account for ~7% of places.
- Quantity & quality were assessed for the entire community, however participation was assessed only for the case-study area.
- Quality was assessed utilising an RSTO adj. version of the NQS score, which requires an "exceed" rating for quality areas QA1, QA4, and QA5.




## Key insights

- Participation is low for all ages, with lowest rates for children in at-risk groups.
- Quality of ECEC in the community is similar to other low SEIFA areas, slightly below national levels, but falls significantly short of demonstrated best practice.
- The community has sufficient ECEC services for current demand.



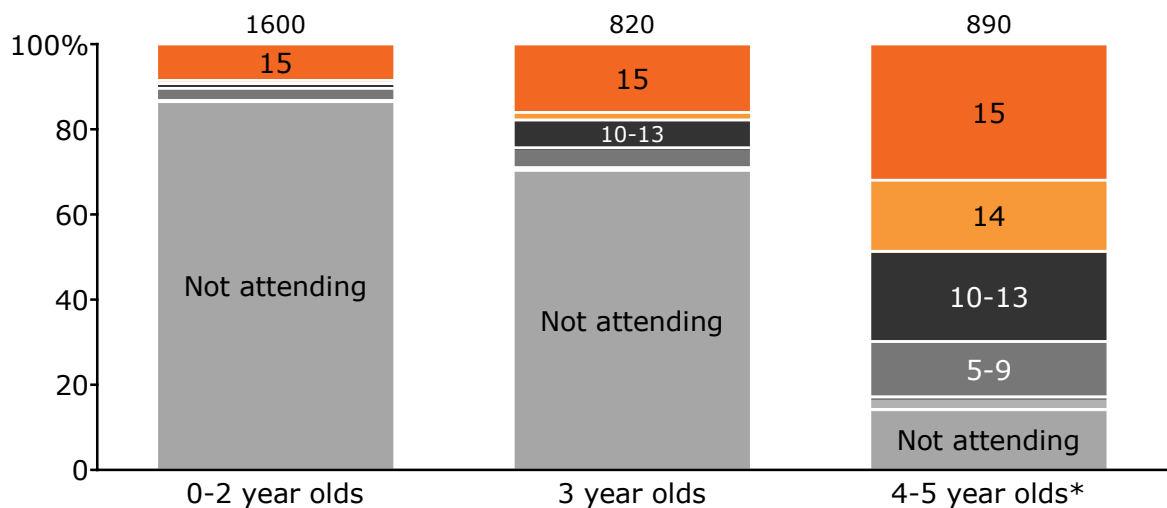


# Summary of performance against each indicator

		Indicator	Community	Australia	Target
<b>Participation</b> 	P1	% 4-5 yr old children attending recommended dosage of 15h+ / wk	35%	66%	100%
	<hr/>				
<b>Quality</b> 	QL1	% services rated exceeding using RSTO-adjusted NQS	21%	25%	100%
	<hr/>				
<b>Quantity</b> 	QN1	# approved places relative to population	50%	107%	Meets demand

## Breakdown of participation by hours attended

Weekly ECEC hours attended



% not attending 14h+ per week	93%	80%	49%
Mean hrs attended per week (of those who attend)	18 hrs	17 hrs	13 hrs

\* Assumes 30% of 5 year olds haven't started school



# Parenting Programs

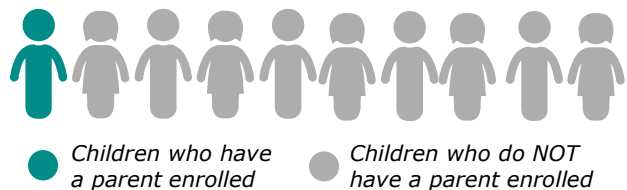
## Context & methodology

- The scope of this assessment included services offering Parenting Programs to prevent or treat behavioural problems in the case study area which were:
  - Targeted to parents of children 0-8 years old
  - Focused on parents of children with behavioural or emotional issues
  - Training parents to improve parenting and/or child behaviour
  - Implementing a set and prescriptive curriculum
- The assessment excludes programs such as supported playgroups, due limited evidence to support their efficacy. In the community approximately 480 families participate in supported playgroups.
- Data including course and participant information was sourced from service providers, two relevant programs were included in the analysis; 'Tuning in to Kids' & 'Being a Parent'.

## Key insights

- The three programs in the case study suburbs are **meeting current demand**
- **Tuning into Kids is Supported by the evidence** and Being a Parent was ranked as 'Promising', however **neither of the 2 programs** were implemented according to research.
- It is estimated that less than 1 in 10 parents of children with behavioural issues are **enrolled** in a parenting program, and **only 25% attend most sessions in the program**

*~930 children presenting with or 'at-risk' for behavioural issues do not have a parent enrolled in a parenting program*






*No parents in the case study are attending a parenting program both proven to be effective AND implemented according to the evidence*

Tuning in to  
**Kids**

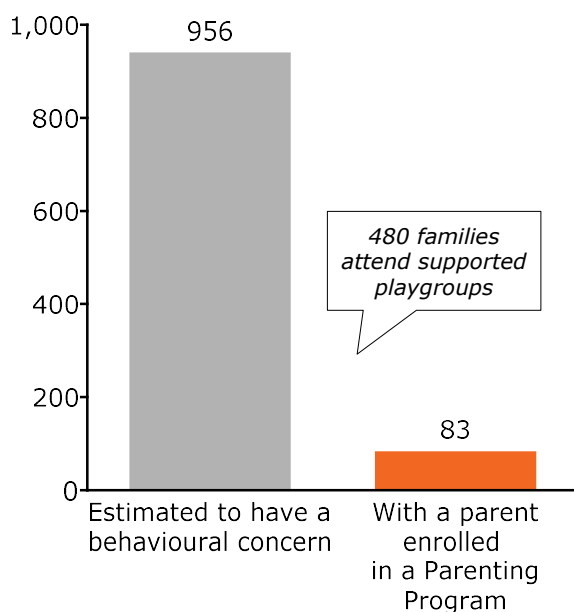


# Summary of performance against each indicator

	Indicator	Community	Australia	Target
<b>Participation</b> 	P1 # enrolments compared with # children with behavioural issues	12%	53%	100%
	% of parents attending >85% of prescribed hours of enrolled parenting program	25%	No data	100%
<b>Quality</b> 	QL1 % of Parenting Programs rated "supported" & implemented according to recommended standards	0%	No data	100%
<b>Quantity</b> 	QN1 # of Parenting Program places offered compared with # of children with behavioural issues	No data, but courses are readily scalable	No data	No data

# Enrolment & attendance in parenting programs

Number of children in case-study area



PROGRAM	COURSE START DATE	SESSIONS OFFERED	% PARENTS ATTENDING >85% OF SESSIONS
<i>Tuning in to Kids</i>	Feb 13 <sup>th</sup>	6	40%
	July 17 <sup>th</sup>	5	49%
	<b>All courses</b>	-	<b>45%</b>
<i>Being a Parent</i>	Mar 9 <sup>th</sup>	9	15%
	Aug 14 <sup>th</sup>	3	10%
	Aug 18 <sup>th</sup>	9	10%
	<b>All courses</b>	-	<b>15%</b>
<b>Total</b>			<b>25%</b>



# Early Years of School

## Context & methodology

- Within the case study both public and private schools were within scope.
- Early Years of School participation assessment conducted to date includes local government schools.
- Assessment is for children in Prep through to Year 3.
- Quality was assessed using 31 process and provider indicators across 9 school quality domains

## Key insights

- Schools in the community generally performed below best practice with an average of only 3 of 9 domains rated high quality.
- The attendance rate was ~90% across Prep to Year 3. The average attendance rate for Prep-Year 3 in NSW schools was ~93.9%.
- There was no significant or consistent differences observed between genders or children with Aboriginal and Torres Straight Islander (ATSI) status, however children from language background other than English (LBOTE) had a higher attendance rate (~95%) compared with children from an English language background (~68-78%).

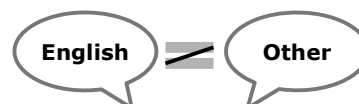
Absent days per enrolled student was ~19 (out of 198 school days)

3.3 weeks absent



Attendance was better for LBOTE.

No difference between sex & ATSI status



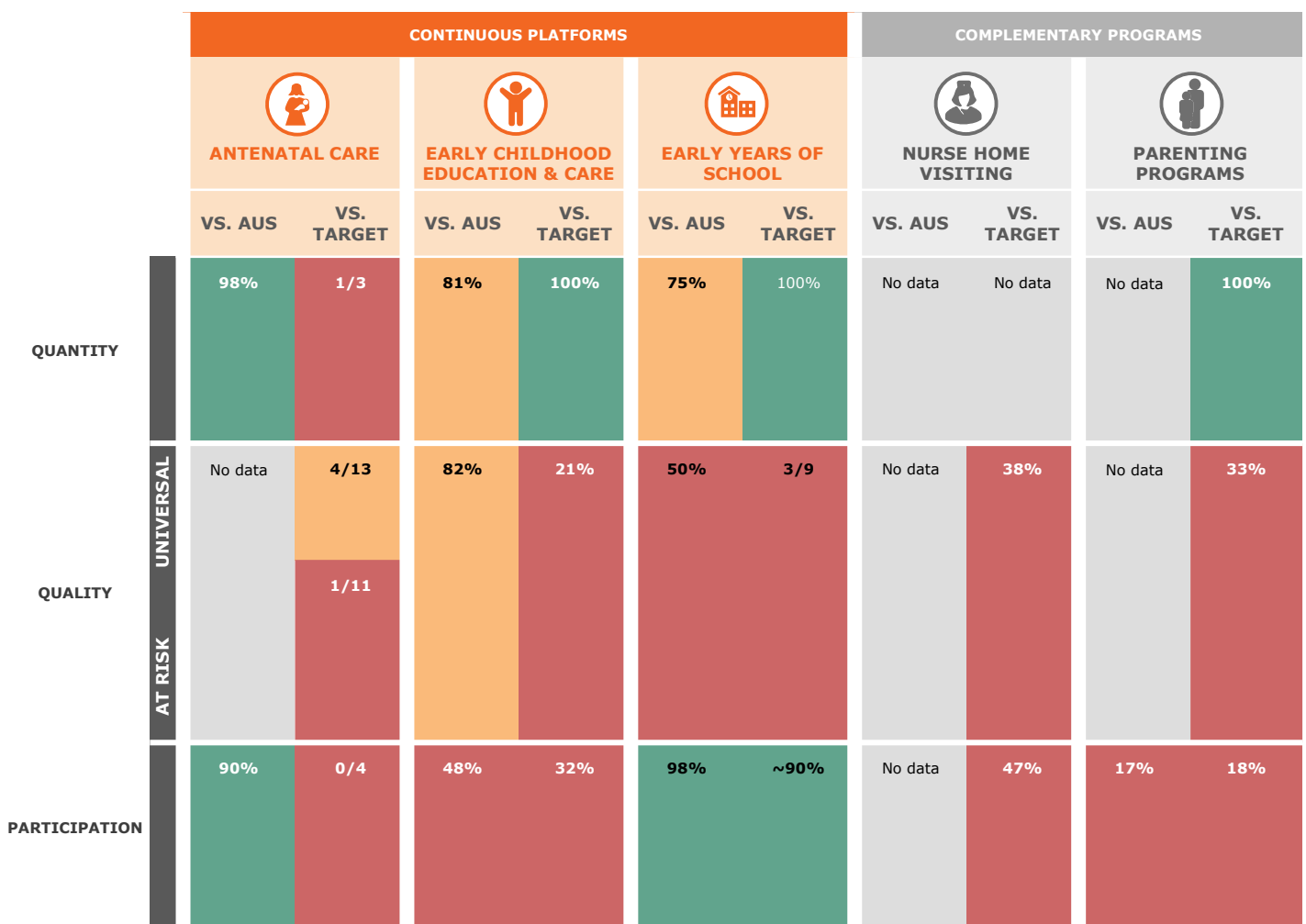


# Community Scorecard

## Context & methodology

- Assessment of each strategy and indicator has been aggregated and a single scorecard created to provide a summary of performance across early childhood services in the community.
- For each indicator, comparison of the community's figure to Australian data and aspirational targets is made by dividing the community's figure by the comparison figure. Where multiple indicators exist, a simple average of each indicator score is calculated.
- Red, amber and green colour coding is allocated according to relative performance as detailed in the legend below.

## Community scorecard



**Legend**

- >90% of target
- 75-90% of target
- <75% of target

# Sources

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- ANC
  - Australian Institute of Health and Welfare, 'Australia's mothers and babies in brief', 2015
  - Australian Bureau of Statistics, 'Census of Population and Housing', 2016
  - Australian Bureau of Statistics, 'Australian Demographic Statistics', 2017
  - NSW Health, 'Domestic Violence Routine Screening Snapshot Report 13', 2015
  - Safer Care Victoria, 'Victorian Perinatal Services Performance Indicators', 2017
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  - Department of Health, 'Health and Wellbeing Profile', 2013
  - Australian Institute of Health and Welfare, 'National Health Workforce Data Set (NHWDS)', 2017
  - Australian Health Practitioner Regulation Agency, Medical Board of Australia, 'Registrant Data', 2018
  - Western Health Sunshine Hospital data, 2017
- Nurse Home Visiting
  - Goldfeld et al., 'Designing, testing, and implementing a sustainable nurse home visiting program: right@home', Annals of the New York Academy of Sciences 1419(1):141-159, 2018
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- Parenting Programs
  - VICSEG Being a Parent website
  - Tuning in to Kids website
  - Molloy et al., 'A proof of concept analysis on the potential of 'stacking' interventions in the early childhood years', 2018
  - Australian Bureau of Statistics, 'Preschool Education', 2017
  - Primary data collection from Brimbank services, 2017
- Early Years of School
  - Department of Education and Training, primary school absenteeism data, 2016