

A Systems Approach to Improving Immunisation Timeliness

Ross Bailie

With Acknowledgments to the rest
of the ABCD Project team and to
participating services and staff

Sydney - July 2009



Overview

- The ABCD Action-Research Cycle
- The Child Health Audit
- Focus on timeliness of immunisation
- Audits results
- Systems Assessment
- Potential for Systems Improvement

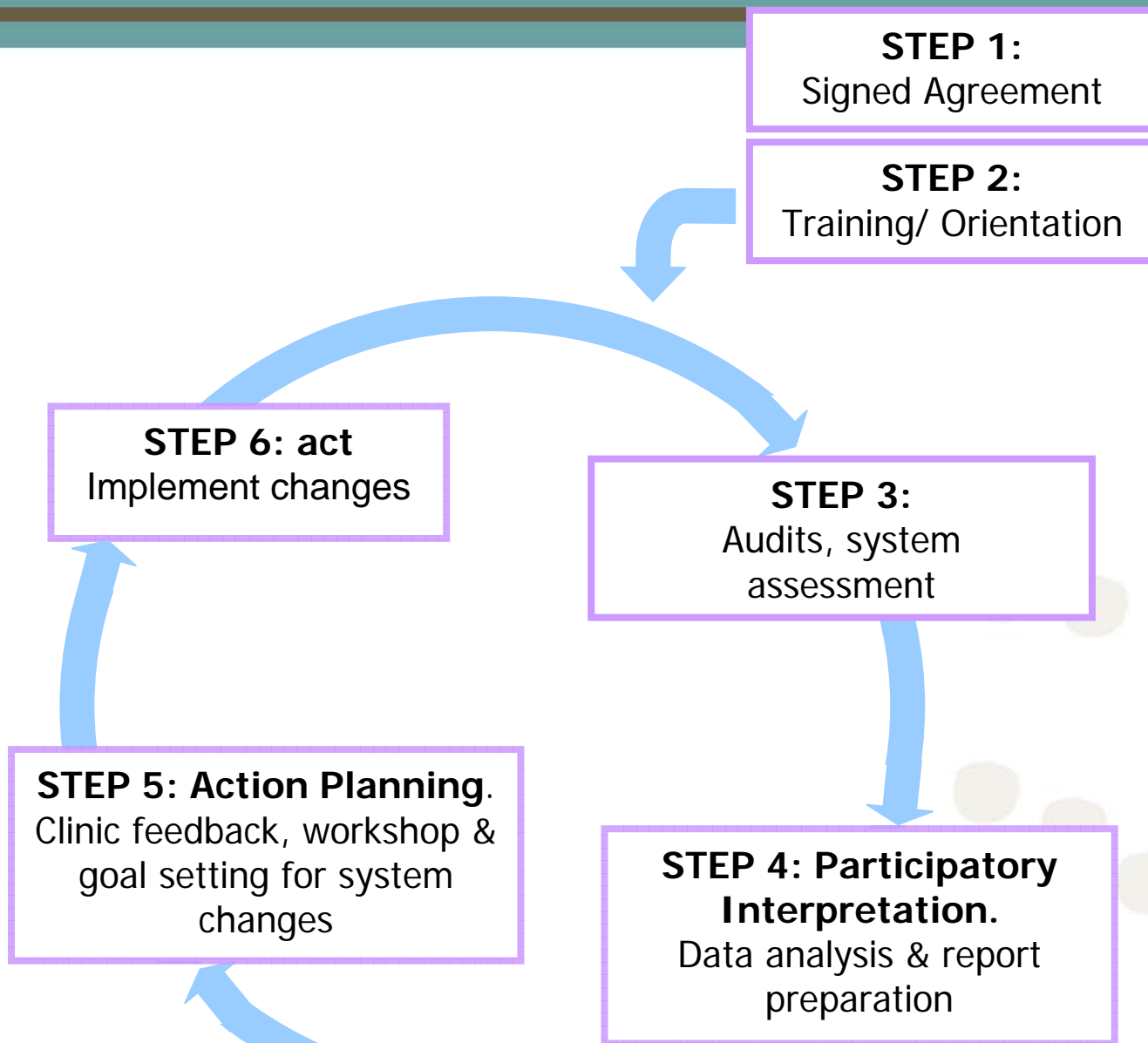
Evidence Base


Indigenous health research values and ethics

Quality improvement

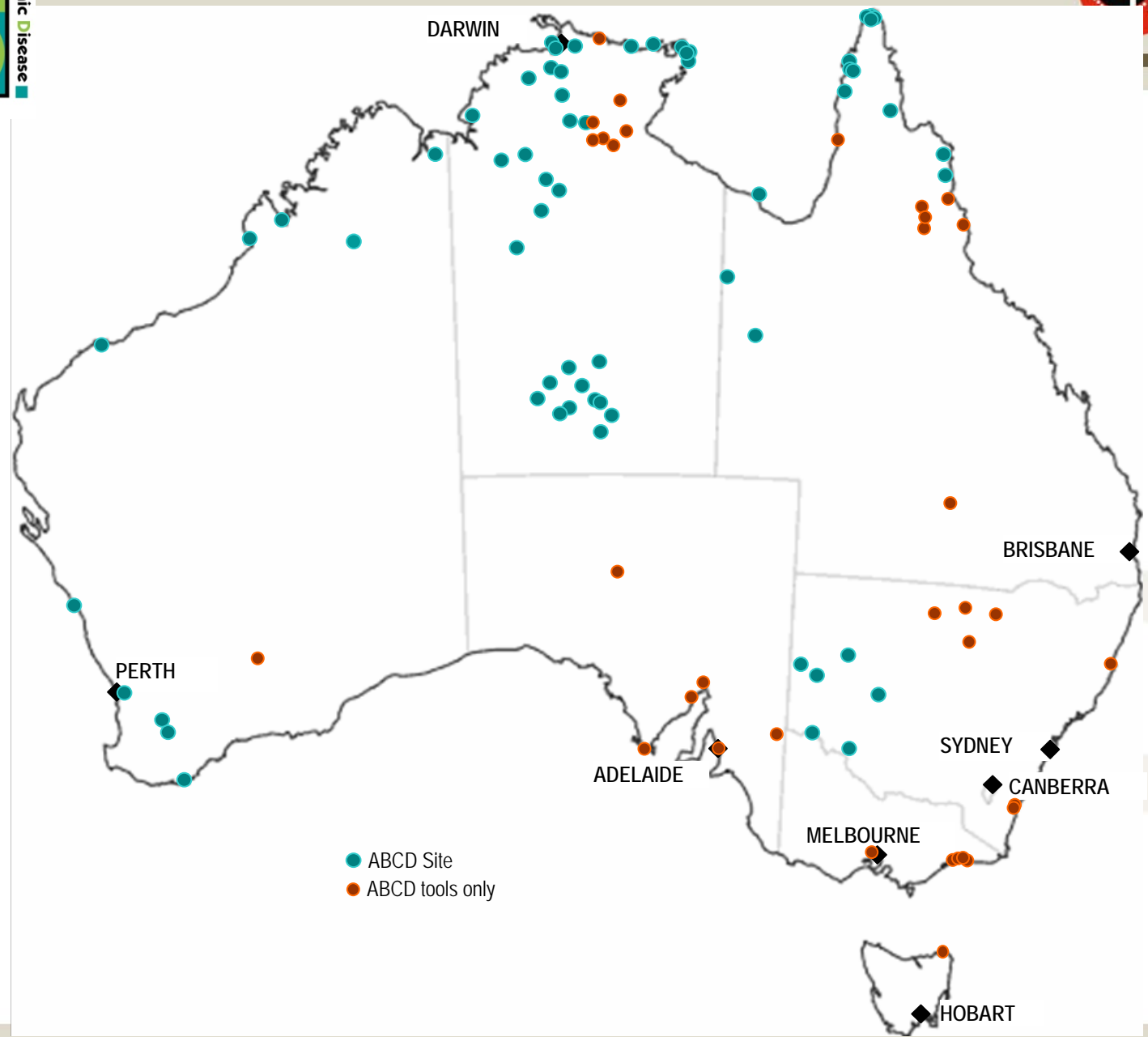
Action learning

Diffusion of innovation



- Diabetes
 - Preventive Care
 - Maternal Health
 - Child Health
- 

ABCD Associated Sites



Child Health Audit

- General Information (e.g. Medicare No, DoB, Sex, Indigenous status, Region)
- Most recent attendance at the health centre
- Key Summary Health Information (Growth chart, [Immunisation chart](#), Child health check)
- [Scheduled Immunisations](#)
- Scheduled Clinical Services (according to age)
- Follow up of abnormal findings

	NT	FW NSW	WA	Total
Number of health centres	13	6	5	24
Number of children	340	157	148	645
Aboriginal (not stated)	92% (1%)	75% (14%)	95% (1%)	89% (4%)
Attended HC within 12 months (range between health centres)	99% (95-100%)	80% (52-100%)	86% (69-97%)	91% (52-100%)

Example of system issues - Childhood Immunisation

- Relevance to Chronic Disease
- High coverage as reported by ACIR (90%+)
- Timeliness as ‘the next frontier’
- Limitations of Australian Childhood Immunisation Register
 - Not all vaccines
 - Reported coverage allows for significant lags
 - Limited access
 - Limited reporting capacity

Scheduled Age (delivery timeframe)	N	Timely Delivery
Birth (within 7 days) Hep B	526	80%
2 Months (before 3 months of age) Hep B, DTPa, Hib, Polio, 7vPCV	523	79-85%
4 months (before 5 months of age) Hep B, DTPa, Hib, Polio, 7vPCV	499	77-82%
6 months (before 7 months of age) Hep B, DTPa, Hib*, Polio, 7vPCV	472, 38	71-75%, 55%
12 months (before 14 months of age) Hib, MMR, MenCCV, Hep A*	354, 87	72-80%
18 months (before 20 months of age) VZV*, 23vPPV*, Hep A*	45, 199, 62	64%, 76%, 73%
4 years (before age 4 years and 6 months) DTPa, MMR, Polio	57	68-77%

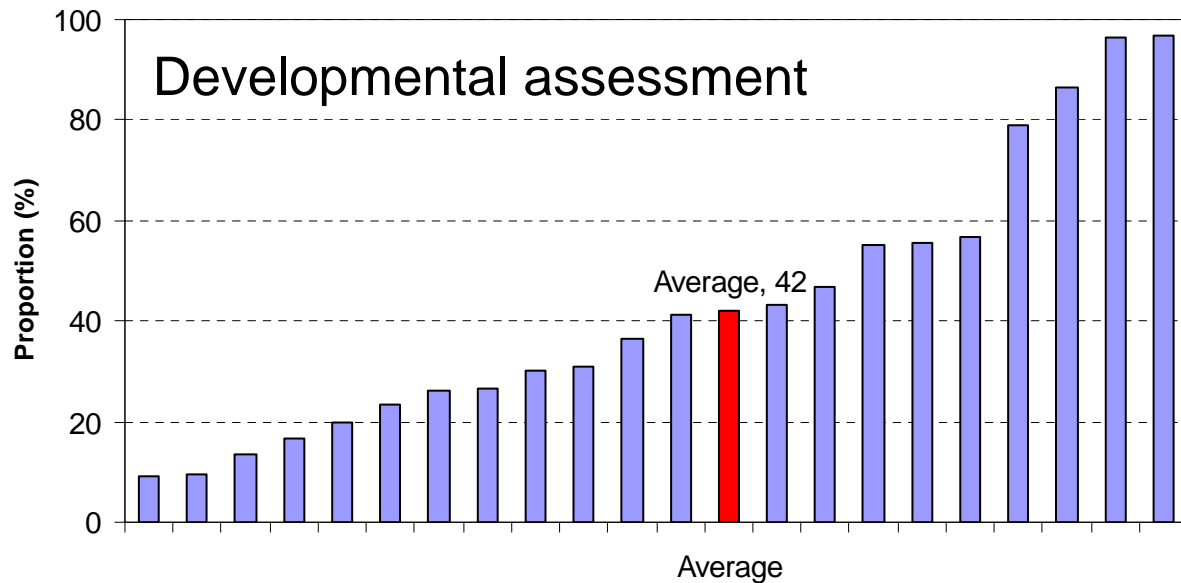
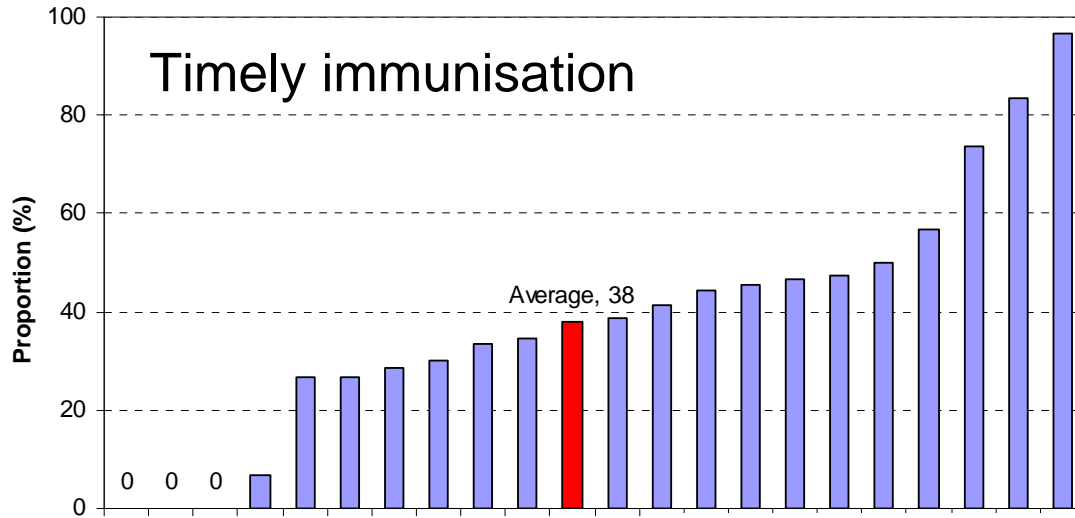
Overall Timely Delivery by age group

	N	Timely Delivery	95% CI
0-12 months	145	64%	57-71%
1-2 years	199	41%	35-48%
3-4 years	182	34%	28-39%
Combined (0-4 years)	526	45%	41-49%

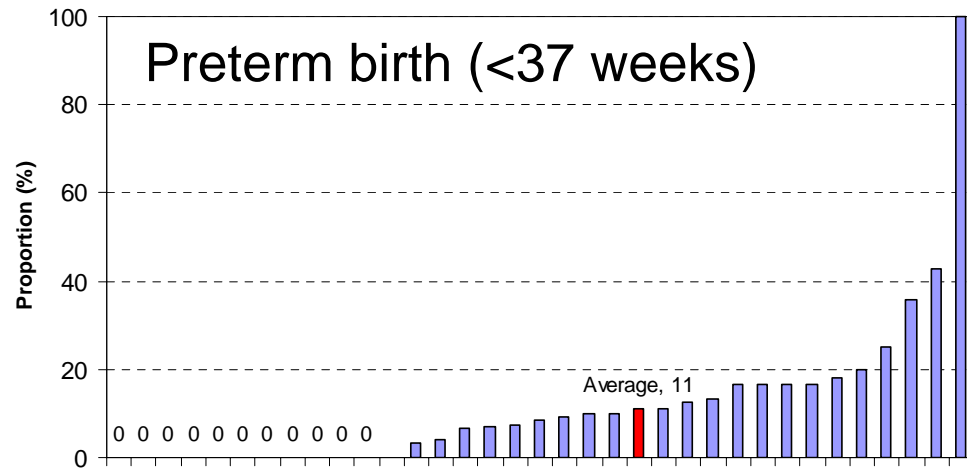
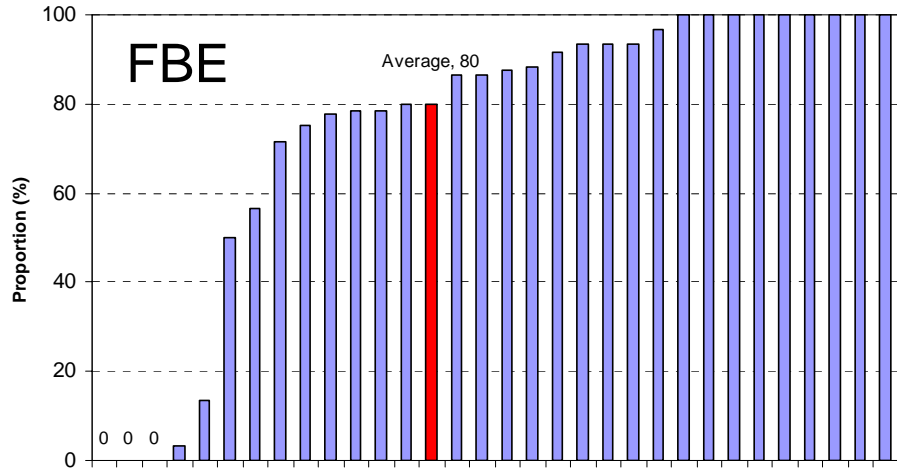
Primary Care Systems

603 records	NT (12) <i>53% (23-97%)</i>	FW NSW (6) <i>32% (21-53%)</i>	WA (5/2) <i>32% (23-41%)</i>
Delivery	<i>CHC staff</i>	<i>CHC staff Nurses GPs</i>	<i>Com Health Nurses NOT Hlth Centre staff</i>
Documentation	<i>Clinical record</i>	<i>Various</i>	<i>Com Hlth Record NOT in Clinical record</i>
Database	<i>Childhood Immunisation Database ? ACIR</i>	<i>? ACIR</i>	<i>? ACIR State Health Database</i>
Audit	<i>Clinical Record</i>	<i>Various</i>	<i>Com Hlth record - IF accessible</i>

Variation between health centres



Variation in antenatal care, birth outcomes, postnatal care



Discussion

- Multiple levels of system deficiency
 - Delivery system
 - Linkages
 - Information system (local and national)
- Rationalise and coordinate local approach to:
 - Delivery
 - Information
- Upgrade national information system (ACIR)
- Quality monitoring and quality management
 - Constructive and responsible use of:
 - data
 - power and influence

- Incorporate measure of timeliness into ACIR reports
- Report on high risk groups (Indigenous, jurisdictions)
- On-line access to all primary care providers
- Automated recall/reminder lists to all providers
- Report on population level timeliness measures
- More equitable incentives for timely reporting

Thank you

ross.bailie@menzies.edu.au



Bailie et al, A systems approach to
improving timeliness of immunisation.
Vaccine 27 (2009) 3669-3674

