



**NATIONAL
RESEARCH
PARTNERSHIP**

*Improving practice
through research*



Engaging stakeholders in identifying priority evidence-practice gaps

and strategies for improvement in primary health care

(The ESP Project)

National child health care report

Phase 1

***REPORT ON NATIONAL CHILD HEALTH CLINICAL AUDIT AND SYSTEMS ASSESSMENT DATA
2012-2013***

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Table of Contents

1. Executive Summary	3
2. Background	4
2.2 Overview of the ESP Project	5
2.3 Identifying priority evidence-practice gaps	6
3. Profile of health centres	9
4. Recorded delivery of child health services	11
4.1 Immunisations	12
Priorities for improvement on immunisations	13
4.2 Physical checks	13
Priorities for improvement on clinical examinations	15
4.3 Brief interventions	16
Priorities for improvement on advice and brief interventions on common risks to health	18
4.4 Risk factors	18
Priorities for improvement in enquiry and advice on use of alcohol, tobacco, drugs:	19
4.5 Follow-up of abnormal clinical findings	19
Failure to thrive	19
Overweight and obesity	20
Anaemia	21
Recurrent or chronic ear infection	22
Recurrent or chronic respiratory disease	23
Proteinuria	23
Infected skin sores and scabies	24
Developmental delay, social and environmental risk factors	25
Priorities for improvement in follow-up of abnormal clinical findings and identified risks to health	26
5. Systems assessment	28
Priorities for system improvements to enable health centres to provide high quality child health services	30
6. Sources	31
APPENDIX A – DATA TABLES	32



1. Executive Summary

The ABCD National Research Partnership and One21seventy are founded on the premise that a holistic or comprehensive approach to primary health care (PHC) is fundamental to an effective health system. The data available through the ABCD National Research Partnership represents the largest and most comprehensive set of data on clinical performance in primary healthcare in Australia.

This report focuses on identifying the priority evidence–practice gaps (or priorities for improvement) across the range of services participating in the ABCD National Research Partnership. The rationale for our focus on system wide evidence-practice gaps is that where there are aspects of care that are not being done well across a range of PHC services, this is likely to be due to deficiencies in the broader PHC system and indicates that system-level action is required to improve performance in these areas.

The report represents the first phase of the ESP Project, which aims to engage key stakeholders in the interpretation and use of aggregated ABCD data – specifically to engage them in a process for determining priorities for improvement at a system-level, identifying barriers and enablers to high quality care, and using the information from this process to inform development of system-level strategies for improvement.

The priority evidence-practice gaps, as identified through Phase 1 of the ESP Project, are:

- **Immunisations:** improve systems for systematic recording of all immunisations in child health records, and the delivery of immunisations scheduled for delivery at birth and at 2 years and older.
- **Clinical examinations:** improve systematic monitoring and recording in child health records of key measures, specifically including weight, haemoglobin and developmental milestones.
- **Advice and brief interventions on common risks to health:** improve delivery and recording of advice on common and important risks to child health, specifically including child nutrition (including breastfeeding), passive smoking, infection prevention and hygiene, injury prevention, domestic/social and environmental conditions (including food security, financial resources, housing conditions, social and family support), and child development (including physical and mental stimulation, physical activity, social and emotional wellbeing, education progress).
- **Enquiry and advice on use of alcohol, tobacco and other drugs:** improve enquiry - and recording of enquiry - regarding use of cigarettes, alcohol and illicit drugs, and discussion and/or advice provided on risks to children in the relevant age ranges.
- **Follow-up of abnormal clinical findings and identified risks to health:** improve recording and follow-up action for growth faltering/failure to thrive, anaemia, chronic ear infections, developmental delay, and risks related to the domestic environment, financial situation, housing and food security. This may require review of guidelines and systems for detection and follow-up.
- **Health centre systems:** strengthen systems in health centres with low scores across the range of system components, with a focus on supporting health centres that have scores in the lowest 20% of health centres. With regard to strengthening of specific system components, systems for effective links between health centres and communities, and systems to support regional health planning, are priority areas for improvement.

The ESP Project aims to support the development of strategies that will address system level barriers and enablers for narrowing the priority evidence-practice gaps and thereby strengthen the comprehensive PHC approach. We look forward to the continuing contribution of a range of stakeholders in the next phases of this project.



2. Background

The ABCD National Research Partnership and One21seventy

The ABCD National Research Partnership and One21seventy are founded on the premise that a holistic or comprehensive approach to primary health care (PHC) is fundamental to an effective health system. One21seventy continuous quality improvement (CQI) tools and methods have to date been used by more than 200 Aboriginal and Torres Strait Islander primary health care centres across the country. Data from 170 of these PHC centres are available for research use as a result of agreement from those health centres to take part in the ABCD National Research Partnership, producing the most comprehensive and up-to-date set of data on clinical performance in primary healthcare in Australia.

Until now, CQI data of this kind have not been widely used beyond the health centre or region level. The establishment of this growing dataset has been made possible by the active contributions of health centre staff, CQI facilitators, managers, policy makers, researchers and clinical leaders. Their ongoing contributions are vital to making most effective use of data for improving the quality of care for Aboriginal and Torres Strait Islander people across Australia. (For a description of the scope and quality of data, and how data is collected, see Box 1.)

One21seventy audit tools are based on clinical guidelines and reflect best practice across the scope of primary health care.¹ They are regularly updated by an expert working group to reflect changes in guidelines and state/territory requirements. The Systems Assessment Tool reflects the core system components required to support delivery of best practice care. It was adapted from the internationally recognised Assessment of Chronic Illness Care (ACIC) Scale² specifically to suit Aboriginal and Torres Strait Islander primary health care settings. Data collected using One21seventy audit and systems assessment tools cover a range of key areas of primary health care, including child health, preventive health, maternal health, vascular and metabolic syndrome management.

Over the course of 2014, these key areas of care will be the focus of a series of three-phase action research cycles. This project addresses a key area of interest for the ABCD National Research Partnership, and is referred to as Engaging Stakeholders in Identifying Priority Evidence-Practice Gaps and Strategies for Improvement Project (or ESP Project). The ESP Project aims to encourage national and state/territory level conversations about systemic barriers or enablers that could affect improvement in the delivery of child health care, and help inform system changes to direct resources and efforts where they can most improve the health of Aboriginal and Torres Strait Islander children.

This report: National child health care data and priorities for improvement

This report is a product of the first phase of the ESP project, and identifying priority areas for improvement in Aboriginal and Torres Strait Islander child health care. The data presented reflect indicators of quality across the scope of clinical practice and health centre systems for child health care (based on national and jurisdictional care protocols). It comes from participating health centres that used the One21seventy child health audit tool and systems assessment in the period 2012-2013.

The data shows some health centres are doing very well in various aspects of child health, and it is important to acknowledge the good quality care provided by these services³. However there are a number of areas of care that are not being consistently delivered in some health centres. These evidence-practice gaps were summarised into a set of preliminary priorities by the ABCD project team, and circulated to key stakeholders in a draft report for feedback and comment (via online survey). Feedback on the report on preliminary priorities has been incorporated into this refined version of the report. A more detailed description of phase 1 is presented in Section 3.

¹ For more information on the ABCD Partnership Project: <<http://www.menzies.edu.au/abcd/>>
For more information about One21seventy: <<http://www.one21seventy.org.au/>>

² Bonomi, Wagner & Vonkoff, 2002

³ The ABCD team is conducting separate research on factors associated with delivery of high quality care, and these analyses will be the subject of separate papers and reports

2.2 Overview of the ESP Project

The ESP project explores how CQI data can be used across the broader health system to identify and address priority areas for improvement, where gaps between guideline recommended services and actual practice are relatively large, more common or more important.

Project Aims

- Identify participant views on the priorities and strategies for improvement in primary health care for Aboriginal and Torres Strait Islander children, in light of the CQI data presented.
- Provide opportunities for discussion and use of CQI data and evidence from research to inform improvement across all levels of the health system.
- Learn more about how CQI data can be presented and made available to leaders, managers and influencers across the health system.

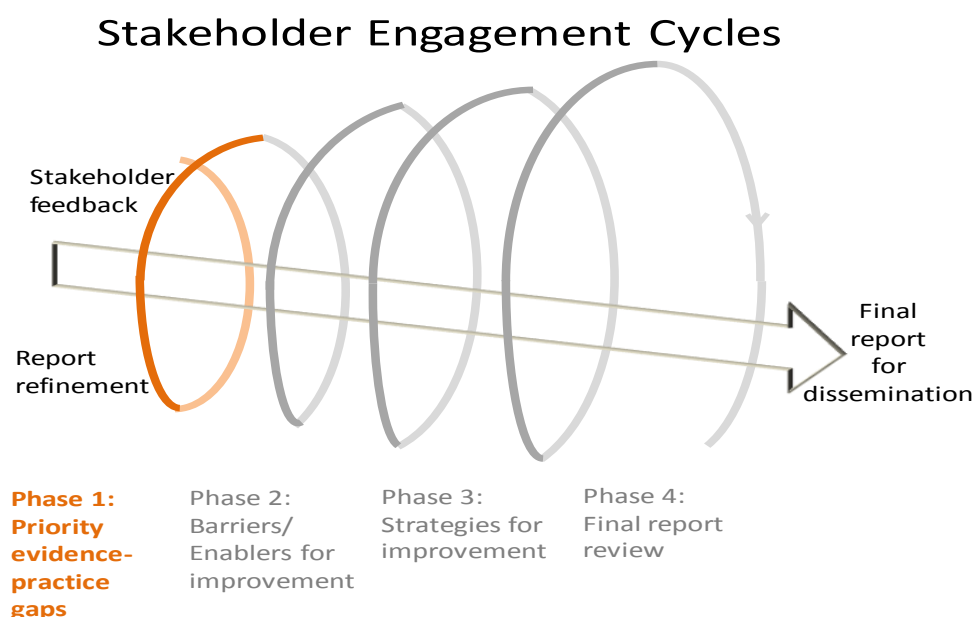
Using CQI data to inform changes across the health system

Large-scale improvement in the delivery of primary health care requires change at multiple levels of the health system, not only at the local health centre level. Where there are aspects of care that are not being done well across a range of health centres, this is likely to be due to inadequacies in the broader PHC system. These broader systems therefore directly impact health care and health outcomes for Aboriginal and Torres Strait Islander children. Improvements to systems need to be based on evidence about what is working well and what service gaps need to be addressed. Quality CQI data can contribute to this evidence.

This project aims to engage key stakeholders in the interpretation and use of aggregated CQI data; specifically, to engage them in a process for determining priorities for improvement, identifying barriers and enablers to high quality care, and using the information from this process to inform development of system-wide strategies for improvement.

The ESP Project aims to support the development of strategies that address system level barriers and enablers for narrowing the priority evidence-practice gaps and thereby strengthen the comprehensive PHC approach. This focus should not be seen to detract from the importance of providing holistic and comprehensive primary healthcare. Indeed, the aim of the project is to strengthen the capacity of the broader system to provide high quality comprehensive healthcare on a wide scale.

Figure 1: Diagram of ESP project phases



Phase 1 – Evidence-practice gaps

This phase focuses on the identification of priority areas for improvement (priority evidence-practice gaps) in the delivery of child health care in Aboriginal and Torres Strait Islander primary health care.

Data shared

- aggregated CQI data (2012-2013) about the delivery of child health care presented in national and state/territory child health reports
- preliminary priority areas for improvement, based on national data

Feedback/data collection

Online questionnaire, workshop sessions and email responses.

Outputs

Refined national and state/territory child health reports. Refinements based on feedback and survey data. Refined report returned to participants for review. Feedback will be incorporated in final child health report.

Phase 2 – Barriers and enablers

This phase focuses on trends in indicators relevant to the identified priority evidence-practice gaps, and on influences that may enable or hinder improvement at different points in the health system. In particular, it seeks to identify those factors that may be most important in addressing the identified priority evidence-practice gaps in child health care identified in Phase 1.

Data shared

Report on trends over time for key indicators relevant to priority evidence-practice gaps in child health.

Feedback/data collection

Online questionnaire, including questions about barriers and enablers to improvement based on international, national and Aboriginal and Torres Strait Islander-specific evidence and frameworks.

Outputs

Draft report on barriers and enablers to improvement in care relevant to identified priority evidence-practice gaps, based on responses to the online questionnaire. The draft report will be returned to participants for review in Phase 3.

Phase 3 – Strategies for improvement

This phase focuses on identifying new or existing strategies that could be introduced or strengthened to enable improvement in priority evidence-practice gaps.

Data shared

- draft report on barriers and enablers to improvement in care relevant to the identified priority evidence-practice gaps (report from Phase 2)
- An evidence brief synthesising findings from research about barriers, enablers and strategies for improvement in the delivery of primary health care, with particular attention to research in the Australian Aboriginal and Torres Strait Islander health context.

Feedback/data collection

Online questionnaire. Participants will be encouraged to draw on their own experience, the evidence brief and the data presented throughout the project to identify strategies to address priority evidence-practice gaps.

Outputs

Draft report on strategies to address priority evidence-practice gaps. This report will be based on the Phase 2 report on barriers and enablers and on expert input on strategies for improvement provided through Phase 3.

Phase 4 – Review and final report

A draft report on strategies for improvement will be returned to participants for review. Comments from the review will be used to inform a final report on strategies for improvement in identified priority-evidence practice gaps. This final report will be provided to key stakeholders in all participating jurisdictions. Project findings will be reported in academic journals and in conference presentations and workshops.

2.3 Identifying priority evidence-practice gaps

The priorities for improvement, or priority evidence-practice gaps, reported here were determined by identifying clinical services that were:

- a) basic aspects of clinical care that were being delivered and recorded at a high level of performance by the majority of services, but that were being delivered at a much lower level by a proportion of services;
- b) important aspects of comprehensive primary health care that were generally recorded at low levels in child health records; and,
- c) components of primary health care centre systems that were identified in the Systems Assessment data as being relatively poorly developed.

These criteria were used by the ABCD Project team to identify a preliminary set of priorities, and a first version of this report was circulated widely through the ABCD National Research Partnership networks, with invitation to comment on the report. Versions of the report that contained comparative data for each state or territory were provided to stakeholders in each jurisdiction. Feedback was received from more than 30 people from a range of organisations and roles in remote, regional and urban locations, and from the NT, Qld, SA and WA. In general, the feedback endorsed the priorities that were identified in the first version of the report, with all respondents saying the identified priorities were 'mostly consistent' or 'very consistent' with what they would have regarded as priorities before reading the report.

About 70% of respondents indicated that priorities for their state or territory would NOT be different to the priorities identified from the national child health data. For those who indicated that the priorities for their state/territory should be different, the comments indicated the differences would be in terms of relative priority rather than different priorities as such, and that there may be differences between jurisdictions in the rates of acute and severe infectious disease and related complications.

The feedback was also useful in identifying areas for clarification in the report. This version of the report addresses the feedback received through the above process.

A number of comments made on the first version of this report were related to underlying causes of poor child health, or to barriers to, or strategies for, improvement. The latter will be addressed in the next phase of the ESP Project. Other responses highlighted the urgency of delivering improved child health and developmental outcomes on a wide scale, and the need for a system wide response to maximise coverage of effective programs and services – these points are consistent with the overall aims of the ESP Project. A short report on the feedback is available on request.

Box 1. Overview of how One21seventy data are collected and reported to health centres

Where do the data in this report come from? The report is based on analysis of audits of clinical records of children who attend services that use One21seventy CQI tools AND participate in the ABCD National Research Partnership. The child health audit tool was developed by an expert working group, with participation of child health experts and health service staff from a number of States and the Northern Territory. The tool is designed to enable services to assess their actual practice against best practice standards, and is accompanied by a protocol that includes reference to the guidelines and standards that form the basis of the tool (the reference list is included at the end of this report). The tool was made available to services in 2007 to assist health centres assess service delivery to children aged 3 months to 6 years. A review of the tool in 2011 extended the age range to <15years. The audit data are supported by a summary of system performance as assessed by staff in health centres that completed a systems assessment tool (SAT) related to child health service delivery. Copies of the One21seventy Child Health Audit Tool and how the audits are conducted are available on request.

Who collects the audit and systems assessment data? The clinical audits are generally done by health centre staff, trained in the use of One21seventy tools and supported by quality improvement facilitators and One21seventy staff. In some centres where staff are not available or lack skills or confidence the audits are done by QI facilitators. The Systems Assessment is completed by health centre staff in a process that is facilitated by a QI facilitator.

How do health centres use the data? The data collected through One21seventy CQI tools and entered into the One21seventy web-based information system are analysed and made available to health centres in real time for use in quality improvement activity. Reports of aggregated data for clusters of health centres, by region or by state are also available through the One21seventy web-based information system in order to support regional or state/territory level QI efforts. The ESP Project is intended to contribute to enhancing the quality of reporting and use of aggregated QI data for the purpose of service improvement.

Restrictions and limitations on the data presented. The data in this report are not expected to be representative of all health centres nationally or for specific jurisdictions because participation of health centres is either through self-selection or through regional decision making processes. In jurisdictions where a high proportion of health centres are participating, the data may be more generalisable; for jurisdictions where there are relatively few health centres participating the data are less generalisable.

The data reflect what has been documented in electronic and paper based patient records, depending on what record systems are used in each health centre. There has been a trend in recent years to increasing use of electronic records. Many health centres are still using paper-based system, and some are using a mix of paper and electronic systems. The quality of recording of clinical care is variable in both paper and electronic systems, and the audit data may not provide a true reflection of actual care. However, accurate and clear recording of care is an important aspect of quality of care and has important implications for continuity and coordination of care, for medico-legal purposes and for efficient use of resources.

Criteria for inclusion of records in the audit: A child's health record is eligible for audit if the child has been resident in the community for 6 months or more of the past 12 months (or if the child is <12 months, resident in community for at least half of the time since birth) and has no major health anomaly such as Down Syndrome, cerebral palsy, heart defects or inherited disorders. Where the eligible population is 30 children or less, the audit protocol recommends including all records. Where the eligible population is greater than 30, the protocol provides guidance on the **random** selection of a number of records, with the number depending on the precision of estimates required by health service staff. The samples are **stratified** by age group and gender with equal numbers of males and females in the following categories: 3-<12mths; 12mths-<3yrs; 3-<6yrs; 6-<9yrs; 9-<12yrs; and 12-<15yrs.

3. Profile of health centres

The child health audit tool was used in 94 different health centres in 2012 or 2013 (Table 1). These health centres had used the child health audit tools for varying numbers of cycles prior to 2012/2013, and the prior experience of use of the child health audit tool varied between jurisdictions (Table 2). The child health audit tool had been used by a relatively large number of health centres in Qld and the NT, and in relatively more audit cycles in FWNSW, NT and Qld. The data included in the analysis for this report were extracted in July 2013. A total of 4,011 records were audited in the 94 health centres in 2012 or the first half of 2013. For 45 of these health centres the child health audit tool had been used most recently in 2012 (1,889 records audited), and for 49 health centres the audit tool was used in 2013 (2,122 records audited). A smaller number of health centres (62) recorded a completed systems assessment in the One21seventy database, with the majority of these being in Qld and the NT.

Table 1: Most recent child health audit and systems assessment completed in 2012 or 2013 (number of child health records audited, number of health centres and number of SATs)

		2012	2013	Total
FWNSW	#Audits		179	179
	#Centres		4	4
	#SATs		0	0
NT	#Audits	802	316	1,118
	#Centres	24	13	37
	#SATs	13	10	23
QLD	#Audits	798	1,500	2,298
	#Centres	16	30	46
	#SATs	11	26	37
SA	#Audits	229	67	296
	#Centres	4	1	5
	#SATs	0	0	0
WA	#Audits	60	60	120
	#Centres	1	1	2
	#SATs	1	1	2
Total	#Audits	1,889	2,122	4,011
	#Centres	45	49	94
	#SATs	25	37	62

Table 2: Most recent child health audit completed in 2012 and 2013 by audit cycle (number of child health records audited and number of health centres)

		Cycle							Total
		1	2	3	4	5	6	7	
FWNSW	#Audits							179	179
	#Centres							4	4
NT	#Audits	410	258	270	37	113	30		1,118
	#Centres	12	11	9	1	3	1		37
QLD	#Audits	281	100	787	771	359			2,298
	#Centres	6	3	15	15	7			46
SA	#Audits	202	94						296
	#Centres	4	1						5
WA	#Audits			60		60			120
	#Centres			1		1			2
Total	#Audits	893	452	1,117	808	532	30	179	4,011
	#Centres	22	15	25	16	11	1	4	94

Over 80% of the health centres are in remote communities and over 80% are government managed (Table 3). Overall 92% of audited records were for children who were identified as Aboriginal or Torres Strait Islander. Overall 95% of audited records showed a record of attendance at the child health centre within the previous 12 months. Over 50% of these attendances were for acute care, and about 20% were for a 'child health check'. National data shows that initial assessment at the health centre was most commonly by a nurse, with an Aboriginal or Torres Strait Islander Health Worker (AHW) being next most common professional to do the initial assessment.

Table 3: Characteristics of health centres and children whose records were audited during 2012/2013 (N & %)

Primary Health Care Centres		Total 94	
Location	Urban	4	4%
	Regional	10	11%
	Remote	80	85%
Governance	Government	77	82%
	Community Controlled	17	18%
Size of population served	≤500	46	49%
	501-999	22	23%
	≥1000	26	28%
Completed child health audit cycles	Baseline	22	23%
	1-2 cycles	40	43%
	≥3 cycles	32	34%
Number of audited records		4011	
Age Groups	<1 year	530	13%
	1-<3 years	969	24%
	3-<6 years	1045	26%
	≥6 years	1467	37%
Gender	Males	2046	51%
	Females	1965	49%
Indigenous status	Indigenous	3682	92%
	Non-indigenous	252	6%
	Not stated	77	2%
Attended within past 12 months		3792	95%
Reason for last attendance	Acute care	2067	52%
	Child Health Check	879	22%
	Immunisation	540	13%
	Other	525	13%
	AHW	687	17%
Profession child first seen by	Nurse	2455	61%
	GP	582	15%
	Specialist	109	3%
	Allied Health	73	2%
	Other	31	1%
	Not stated	74	2%

4. Recorded delivery of child health services

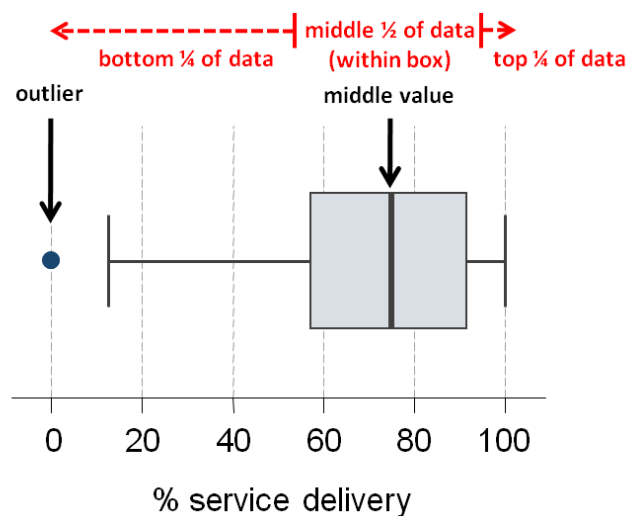
The presentation of audit findings on the delivery of child health services follows the structure of the child health audit tool, with sections on immunisation; physical checks; discussion of key influences on health and brief interventions; enquiry about risk factors; and follow-up of abnormal findings.

A summary of the identified priorities for improvement is included for each of these sections.

The mean percent delivery of each service item is calculated for each health centre and displayed within a 'box and whisker plot' to show the distribution (or variation) in delivery of that item across health centres.

Box and whisker plots show:

- the minimum and maximum values (ends of whiskers if no outliers);
- outliers which are values far away from most other values in the data set (or a distance that is greater than 1.5 times the length of the box);
- the range of service item delivery by dividing the dataset into quarters:
 - the box represents the middle 50% of the dataset, and the line within the box represents the median (or middle value);
 - the right hand whisker (and outliers if present) represents the top 25% of the data
 - the left hand whisker (and outliers if present) represents the bottom 25% of the data; and
- the longer the boxplot, the greater the range (or variation).

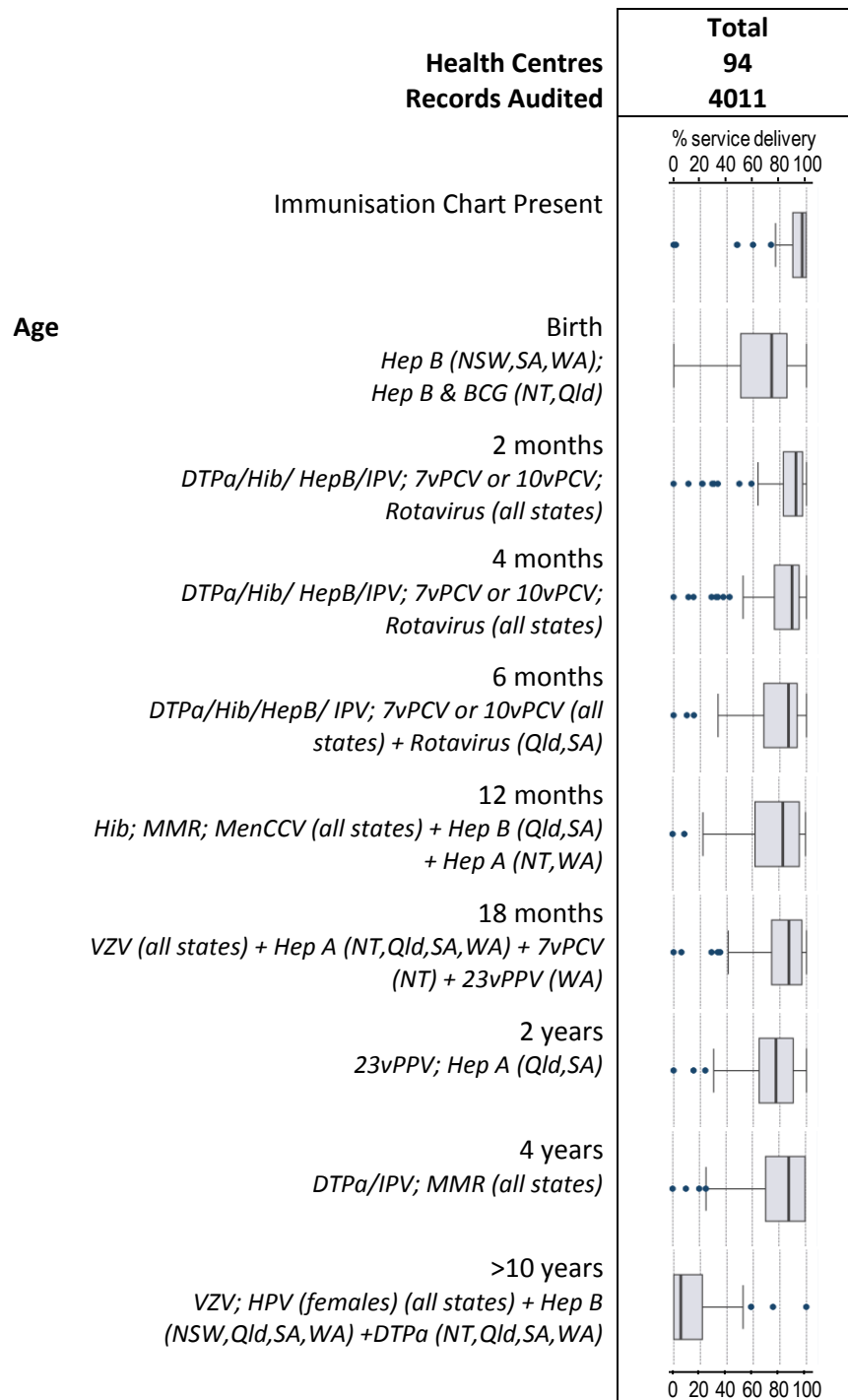


Appendix A includes the tables that show mean, standard error and range for individual service items that were originally presented within this report.

4.1 Immunisations

Figure 2 shows boxplots of health centre percentages of child clients within specific age groups that have completed immunisations as per the relevant jurisdictional schedule.

Figure 2: Record of immunisation completeness according to recommended schedule for health centres during 2012/2013.



Priorities for improvement on immunisations

- Improve systems for systematic recording of immunisations in child health records. A significant number of records do not include a chart for recording of immunisations, and there is wide variation between health centres in the proportion of children with an immunisation chart in their clinical record (Figure 2).
- Improve delivery and recording of immunisations scheduled for delivery at birth. There is wide variation in the recording of these immunisations between jurisdictions and between health centres (Figure 2).
- Improve delivery and recording of immunisations scheduled for delivery at 2 years and older. While there is room for improvement in coverage in all age groups and all jurisdictions, there appears to be a progressive fall off in coverage for children aged 2 years or more. This is particularly marked for immunisations scheduled for delivery to children over the age of 10 years (Figure 2).

4.2 Physical checks

The figures in this section show boxplots of health centre percentages of children with a record of having received scheduled physical checks according to jurisdictional guidelines, including clinical measurements, examinations and developmental checks. A service is recorded as received if provided within the last 12 months of the audit date. Different checks apply to different age groups and jurisdictions as indicated in each figure.

Figure 3: Record of clinical measurements within the past 12 months for health centres during 2012/2013.

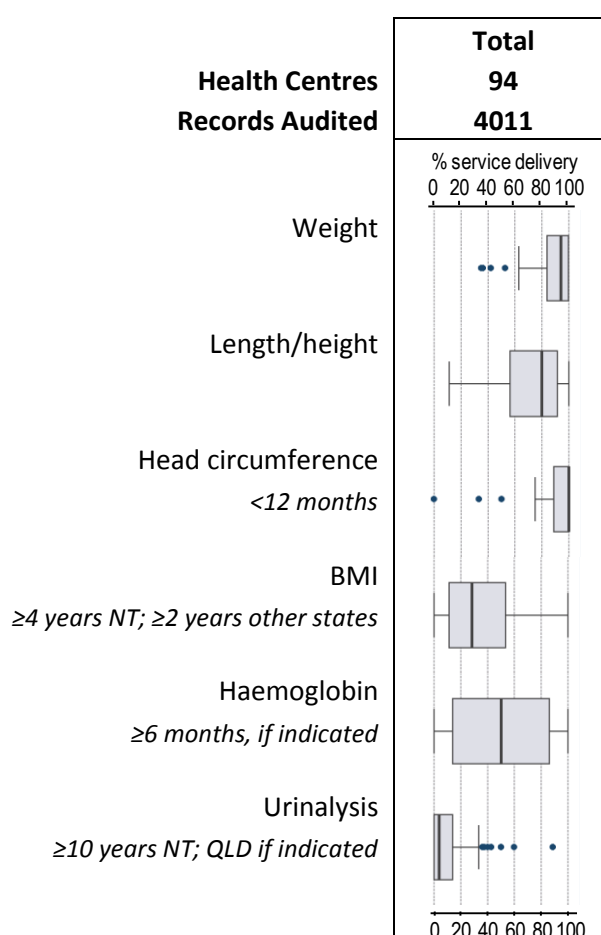


Figure 4: Record of clinical examinations within the past 12 months for health centres during 2012/2013.

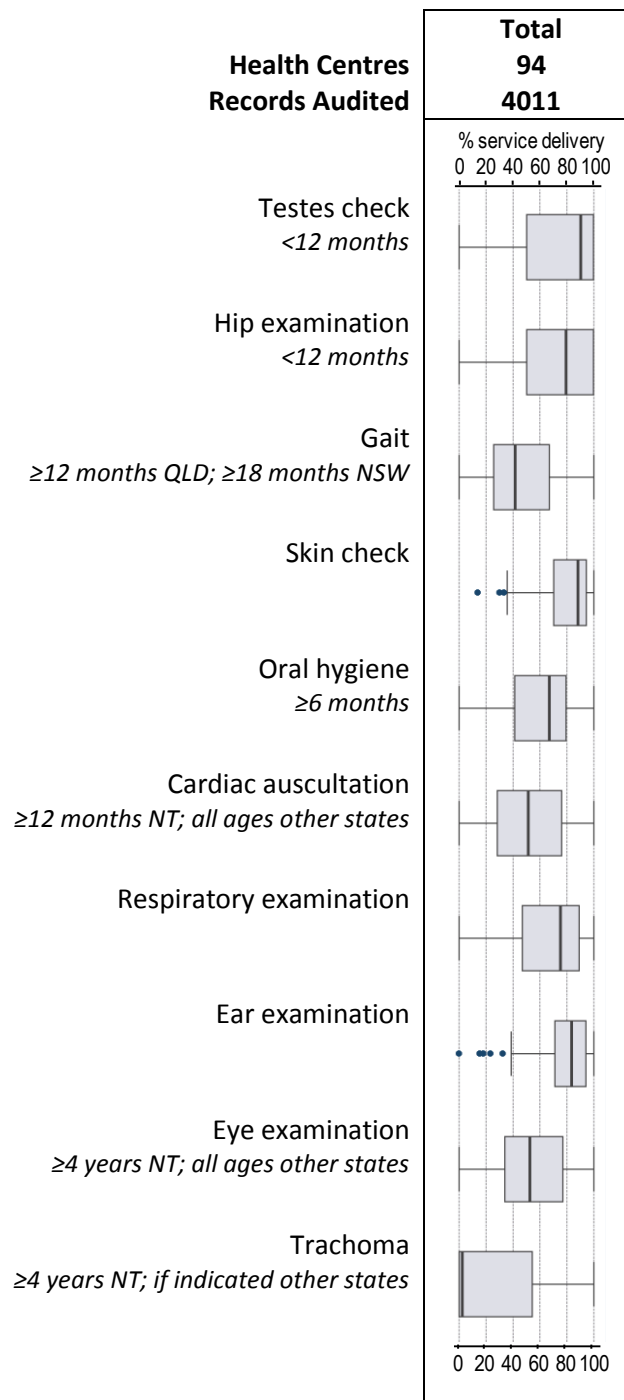
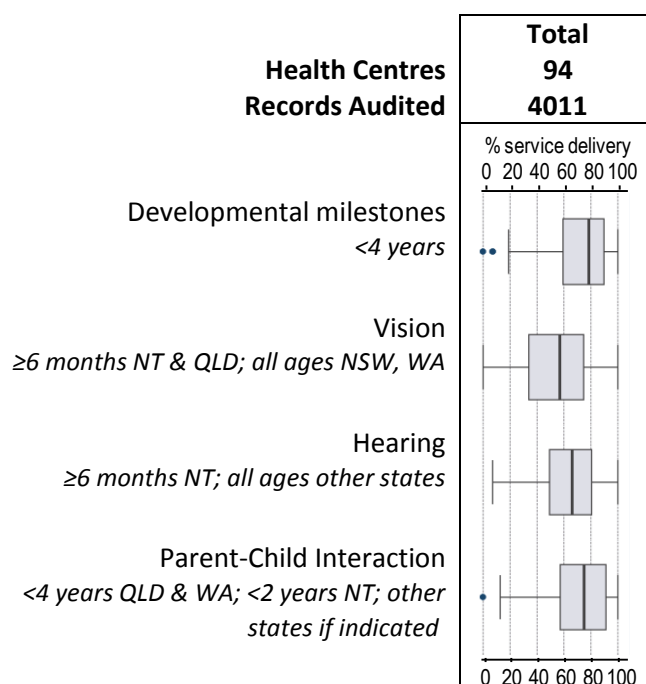


Figure 5: Record of developmental checks within the past 12 months for health centres during 2012/2013.



Priorities for improvement on clinical examinations

- Improve systems for systematic recording of essential measures such as weight in child health records. Weight is an important indicator of growth, development and general health in children. A significant number of records do not include a recent record of the child's weight, and there is wide variation between health centres in the proportion of children with a recent measure of weight (Figure 3). Low levels and wide variation of recording between health centres appears to be more marked among participating health centres outside of the NT.
- Improve monitoring and recording of haemoglobin according to regional best practice guidelines. Aboriginal and Torres Strait Islander children in many areas suffer from high rates of anaemia, which impacts on their general health and development. The causes of anaemia in many children should be remediable through following recognised clinical guidelines. A significant number of records do not include a recent record of haemoglobin monitoring, and there is wide variation between health centres in the proportion of children with a recent record (Figure 3).
- Improve monitoring and recording of developmental milestones – including for vision and hearing. Many children do not have a record of assessment of developmental milestones according to regional best practice guidelines, and there is wide variation between health centres in the proportion of children with a record (Figure 5).

4.3 Brief interventions

The following figures show boxplots of health centre percentages of child clients receiving brief interventions on a number of recommended issues. A record of a brief intervention indicates that there has been discussion and/or advice given on the issue within the last 12 months. Different brief interventions apply to different age groups and jurisdictions as indicated in each figure.

Figure 6: Record of discussion on nutrition and preventive factors within the past 12 months during 2012/2013.

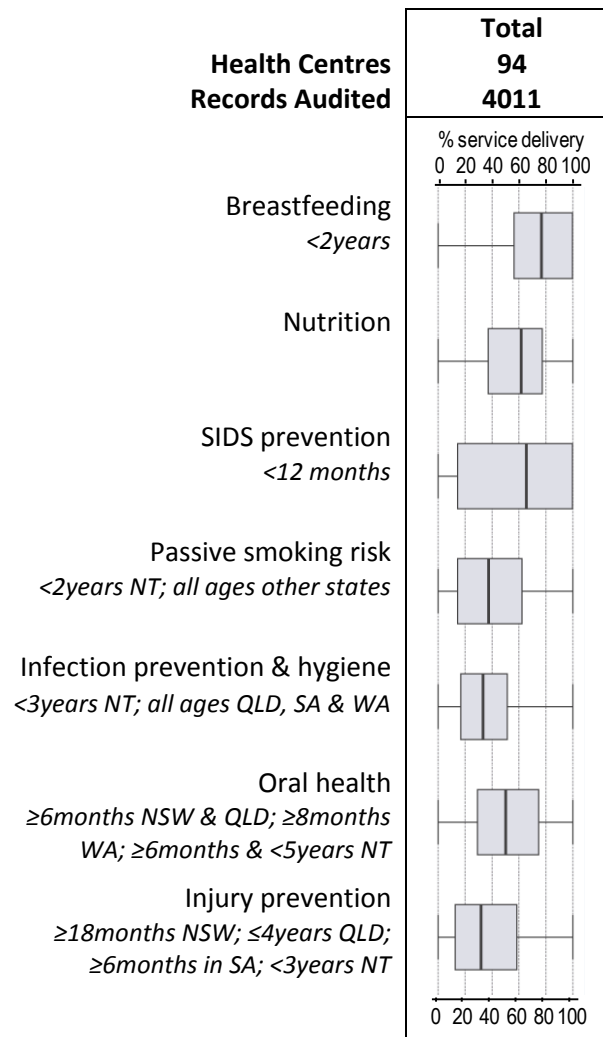


Figure 7: Record of discussion on domestic, social, environmental factors within the past 12 months during 2012/2013.

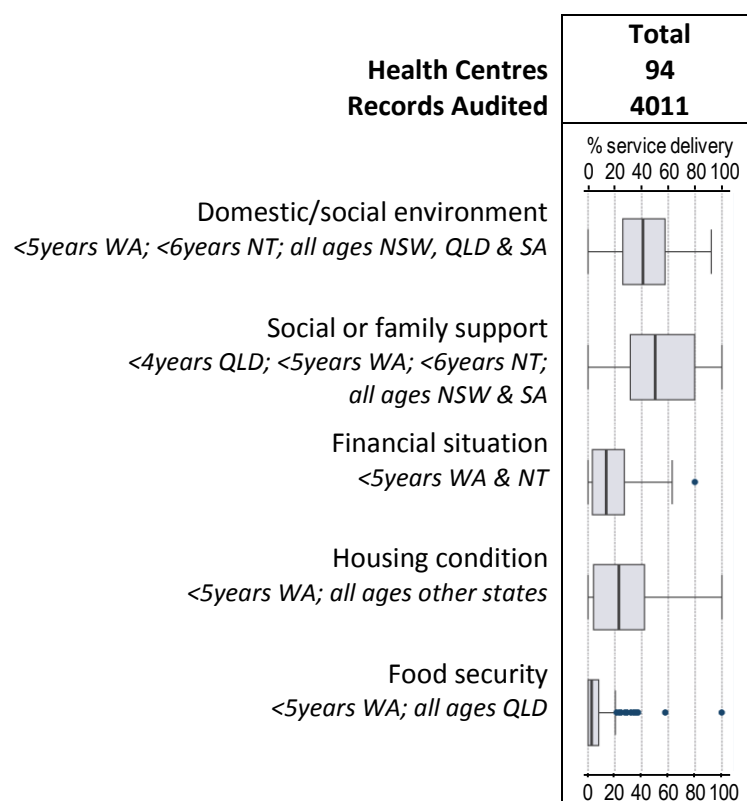
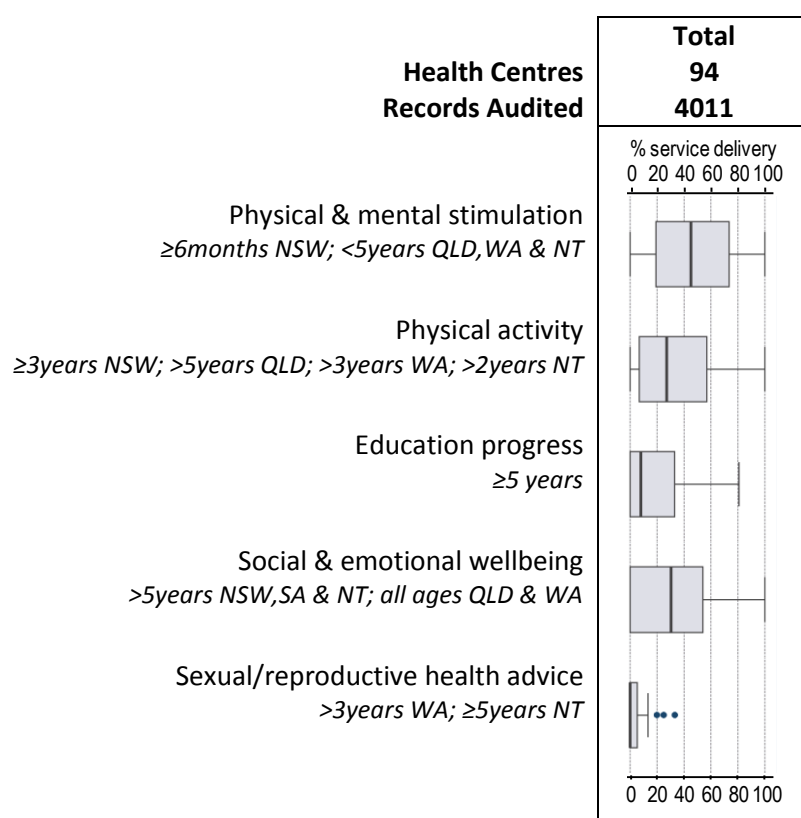


Figure 8: Record of discussion/delivery of brief intervention for developmental factors within the past 12 months during 2012/2013.



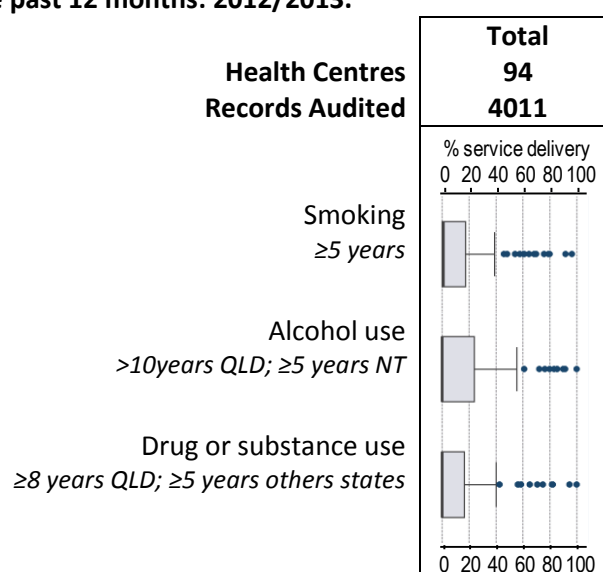
Priorities for improvement on advice and brief interventions on common risks to health

- Improve delivery and recording of advice on child nutrition – including on breastfeeding. Poor nutrition is an underlying factor for many aspects of poor child health. While social and environmental factors contribute to poor nutrition, it is important to provide appropriate advice to carers for providing the best possible diet for their children in any given situation. Many children do not have a record of relevant advice being provided, and there is wide variation between health centres in the proportion of children with a record of advice (Figure 6).
- Improve delivery and recording of advice on the risks of passive smoking, infection prevention and hygiene, and injury prevention. Children in many communities live in houses where a number of adults smoke, and where they have high exposure to infection and injury due to environmental conditions. Recording of advice on these issues is generally low (Figure 6).
- Improve attention of clinical staff to domestic/social and environmental conditions, including food security, financial resources, housing conditions, social and family support. These conditions have important implications for clinical care of individual patients, as well as for the health of communities and populations. Recording of discussion on these issues is generally low (Figure 7).
- Improve attention of clinical staff to factors relevant to child development, including physical and mental stimulation, physical activity, social and emotional wellbeing, education progress. These factors contribute to, or may be reflective of, mental and physical health. Recording of discussion on these issues is generally low (Figure 8).

4.4 Risk factors

Figure 11 shows boxplots of health centre percentages of child clients receiving a discussion on alcohol, tobacco or other harmful substances to identify at risk behaviours. Risk factor recording indicates that a discussion and/or education has been provided within the last 12 months. Different risk factor interventions apply to different age groups and jurisdictions as indicated in the figure.

Figure 9: Record of enquiry regarding use of cigarettes, alcohol and illicit drugs, and discussion and/or advice provided on their risks within the past 12 months: 2012/2013.



Priorities for improvement in enquiry and advice on use of alcohol, tobacco, drugs:

- Improve enquiry - and recording of enquiry - regarding use of cigarettes, alcohol and illicit drugs, and discussion and/or advice provided on risks to children in the relevant age ranges. Many children do not have a record of relevant enquiry or advice being provided, and there is wide variation between health centres in the proportion of children with a record of advice (Figure 9).

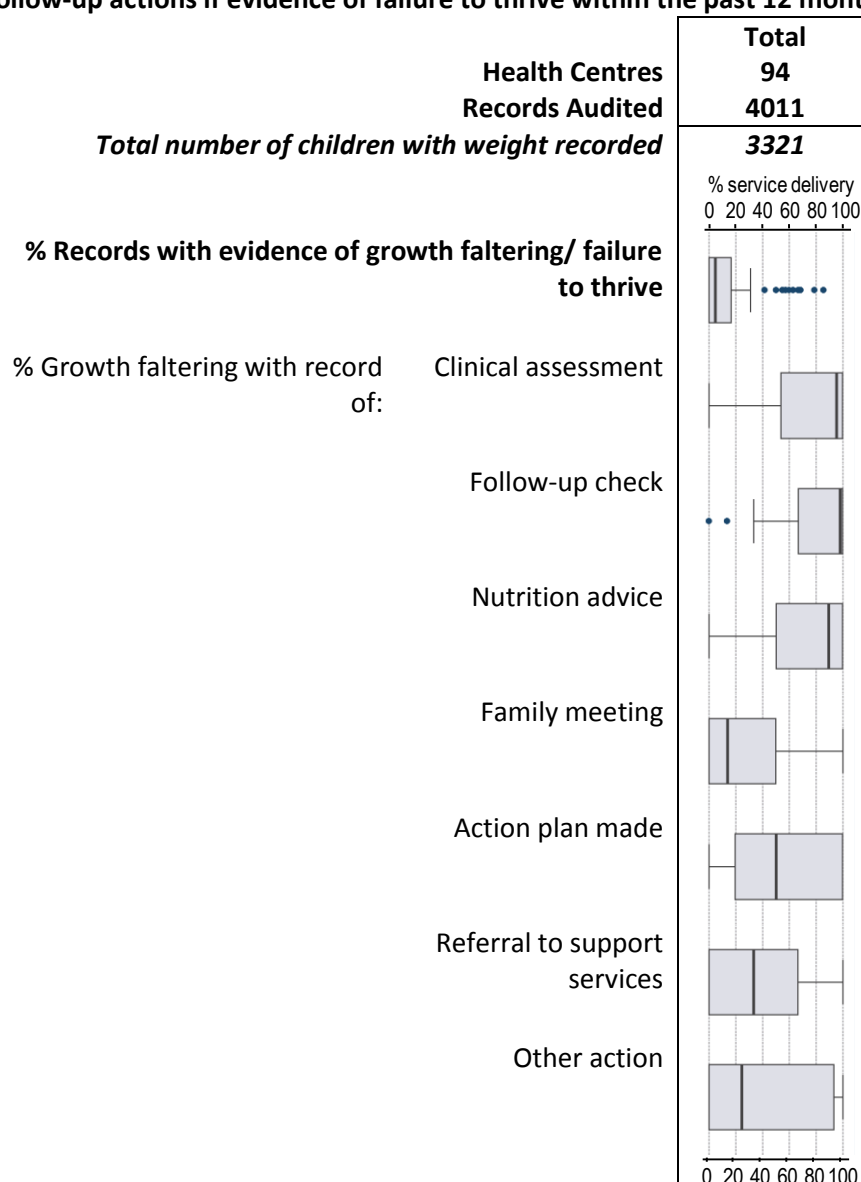
4.5 Follow-up of abnormal clinical findings

The following figures show boxplots of health centre percentages of child clients who receive follow-up action if a particular concern is noted within the last 12 months.

Failure to thrive

Failure to thrive is defined as a 'child whose weight is less than normal for gestational corrected age/gender and past medical history' (Primary Clinical Care Manual 6th ed 2009). Growth faltering is defined as 'a flattening or drop off of the growth curve following a period of steady growth' (CARPA, 5th ed 2009).

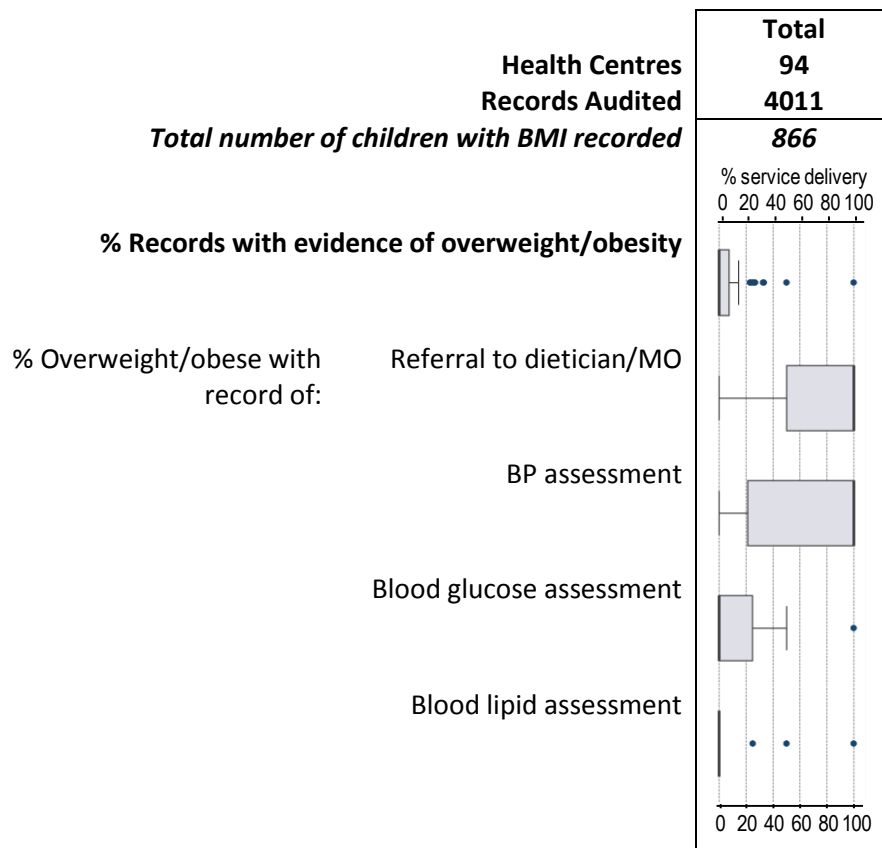
Figure 10: Record of follow-up actions if evidence of failure to thrive within the past 12 months during 2012/2013.



Overweight and obesity

Overweight or obesity in childhood is defined as a BMI in the 85-95th percentile and >95th percentile respectively.

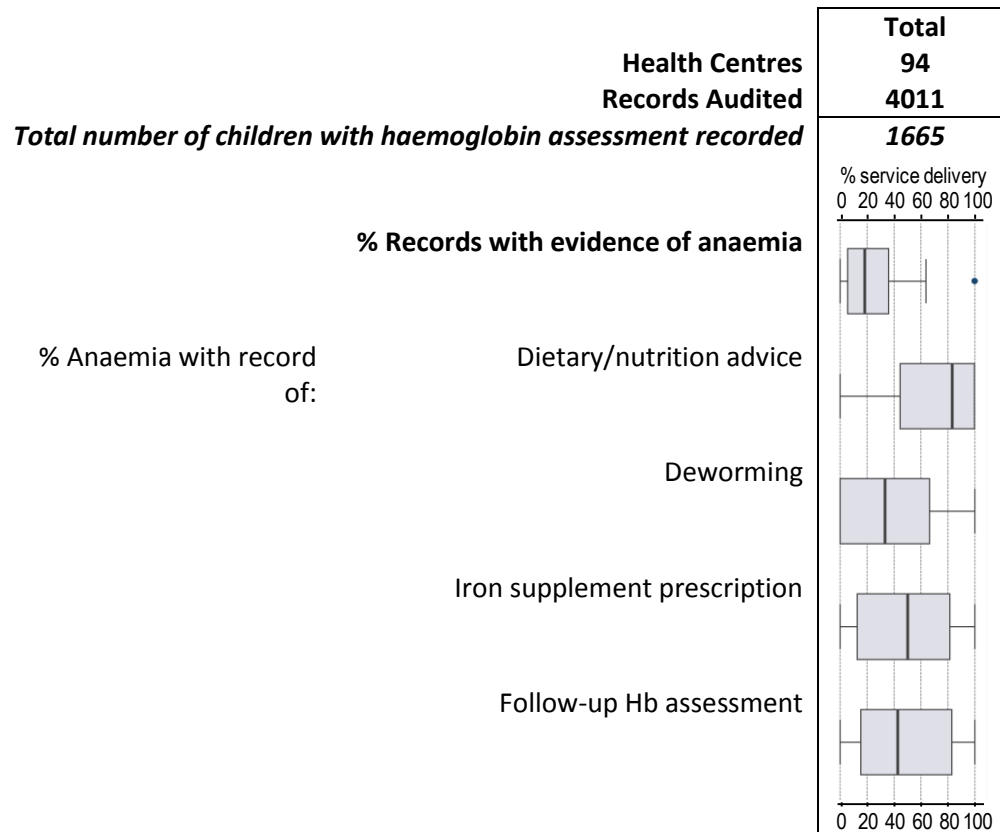
Figure 11: Record of follow-up actions if overweight or obese within the past 12 months during 2012/2013.



Anaemia

Anaemia is defined as <110g/L; or in Queensland:<105g/L for children aged 6-<12mths and <100g/L for children aged ≥12mths; or in the Northern Territory:<105g/L 6-<12mths, <110g/L 1-<5yrs,<115g/L 5-<8yrs, <119g/L 8-<12yrs, <118g/L 12-<15yrs female and <125g/L 12-<15yrs male.

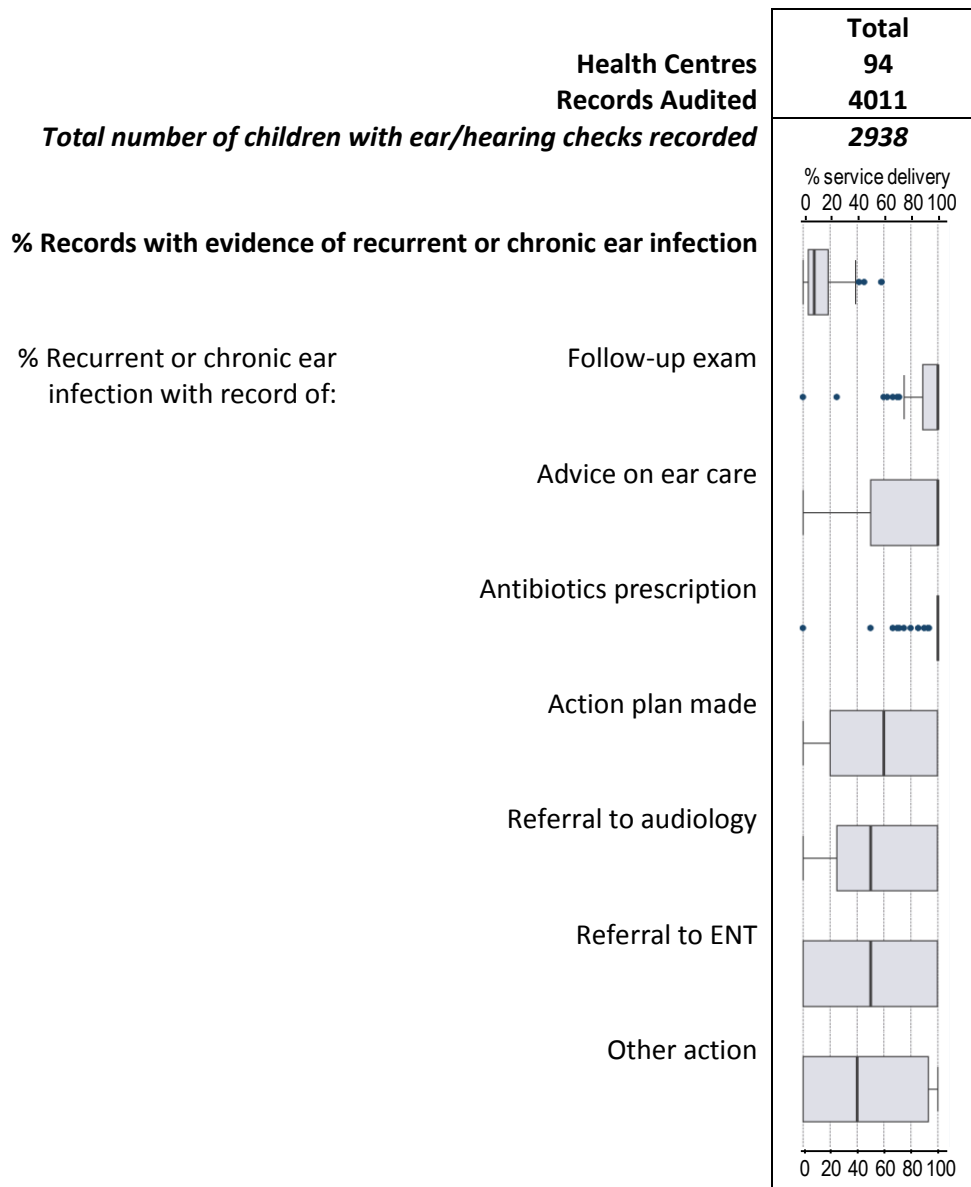
Figure 12: Record of follow-up actions if evidence of anaemia within the past 12 months during 2012/2013.
(NB: Haemoglobin tests only if indicated in each state/territory.)



Recurrent or chronic ear infection

Recurrent ear infections refer to two or more ear infections in the past year and chronic ear infections refers to ear infections persisting for two weeks or more in the past year.

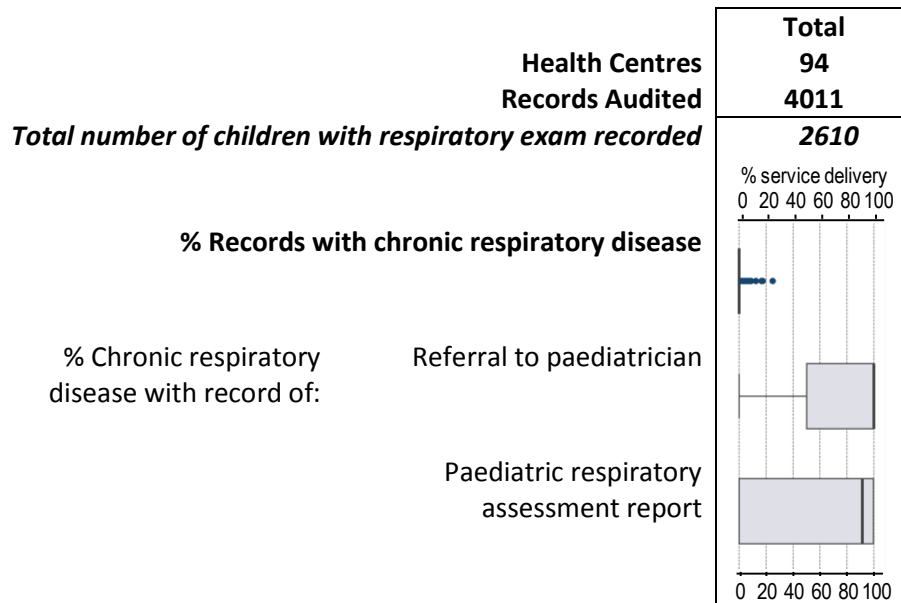
Figure 13: Record of follow-up actions if evidence of recurrent or chronic ear infection within the past 12 months during 2012/2013.



Recurrent or chronic respiratory disease

Recurrent or chronic respiratory disease is defined as more than three episodes of chest infection requiring antibiotics within the last 12 months. Respiratory disease can include asthma, slow lung growth, frequent coughs, pneumonia and bronchitis.

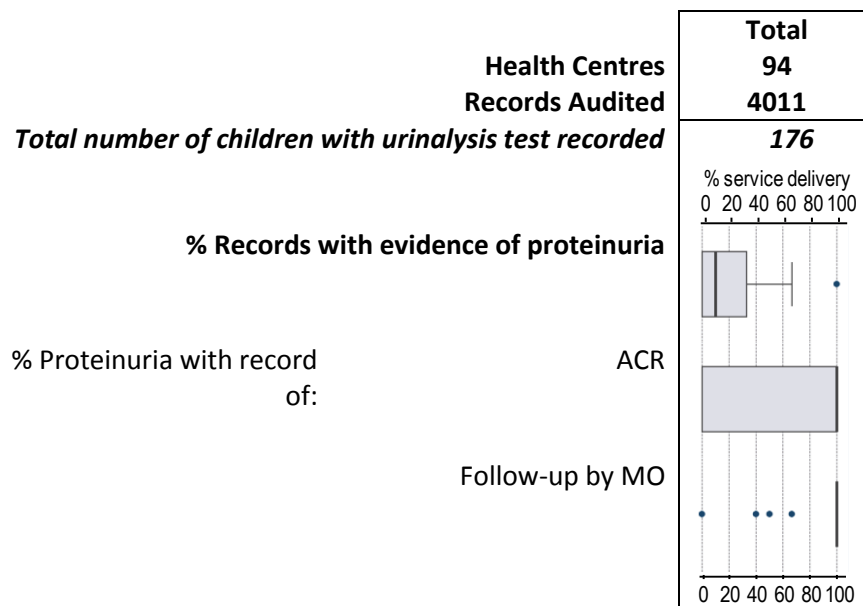
Figure 14: Record of follow-up actions if evidence of recurrent or chronic respiratory disease within the past 12 months during 2012/2013.



Proteinuria

Evidence of proteinuria is defined as 1+ of protein or more in urinalysis check. Urinalysis check applies to children resident in Queensland (if indicated) or resident in the Northern Territory and ≥ 10 years.

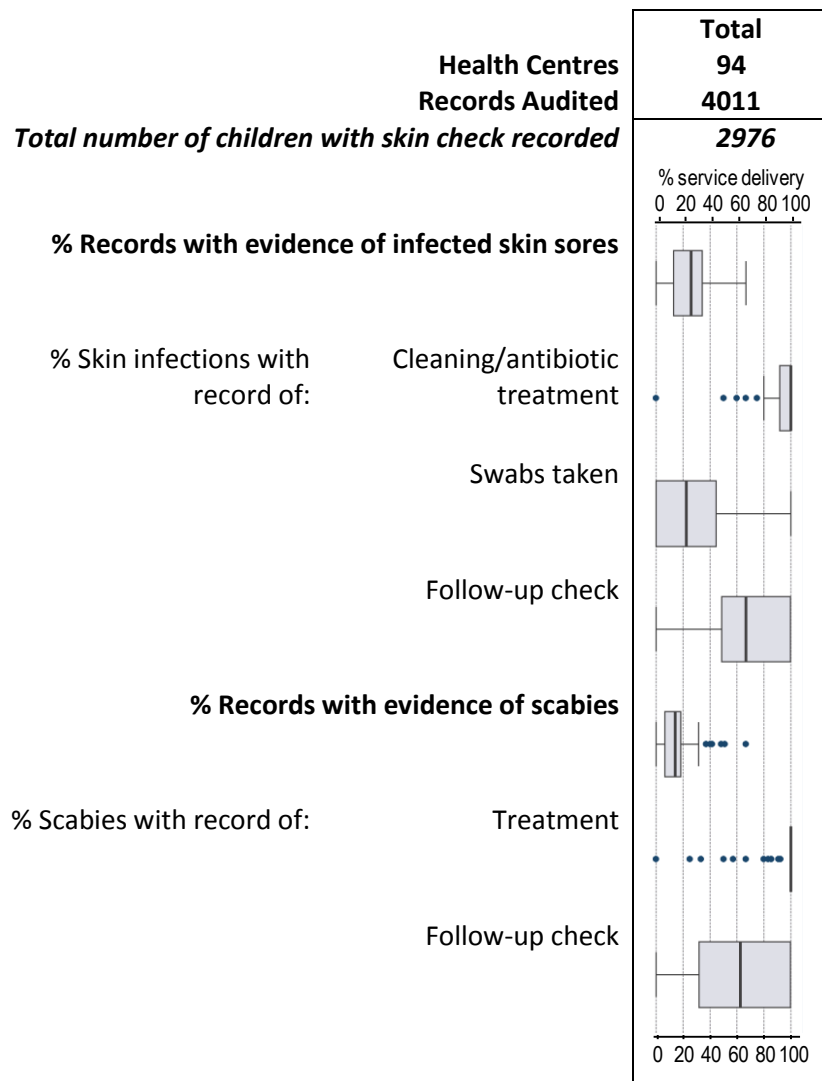
Figure 15: Record of follow-up actions if evidence of proteinuria within the past 12 months during 2012/2013.



Infected skin sores and scabies

Infected skin sores refers to yellow-brown crusted sores that are often surrounded by redness and swelling and may include evidence of pus, discharge or bleeding.

Figure 16: Record of follow-up actions if infected skin sores or scabies within the past 12 months during 2012/2013.



Developmental delay, social and environmental risk factors

Developmental delay may relate to biological, psychological and sociocultural factors affecting infant development. Developmental delay can occur when milestone-specific tasks are not met. Concerns regarding domestic environment include living conditions generally, exposure to physical and emotional violence, substance misuse and gambling. Concerns over housing and food security include overcrowding, access to clean water and access to nutritious food on a regular and reliable basis.

Figure 17: Record of follow-up actions if concern regarding developmental, social or environmental factors within the past 12 months for 2012/2013.

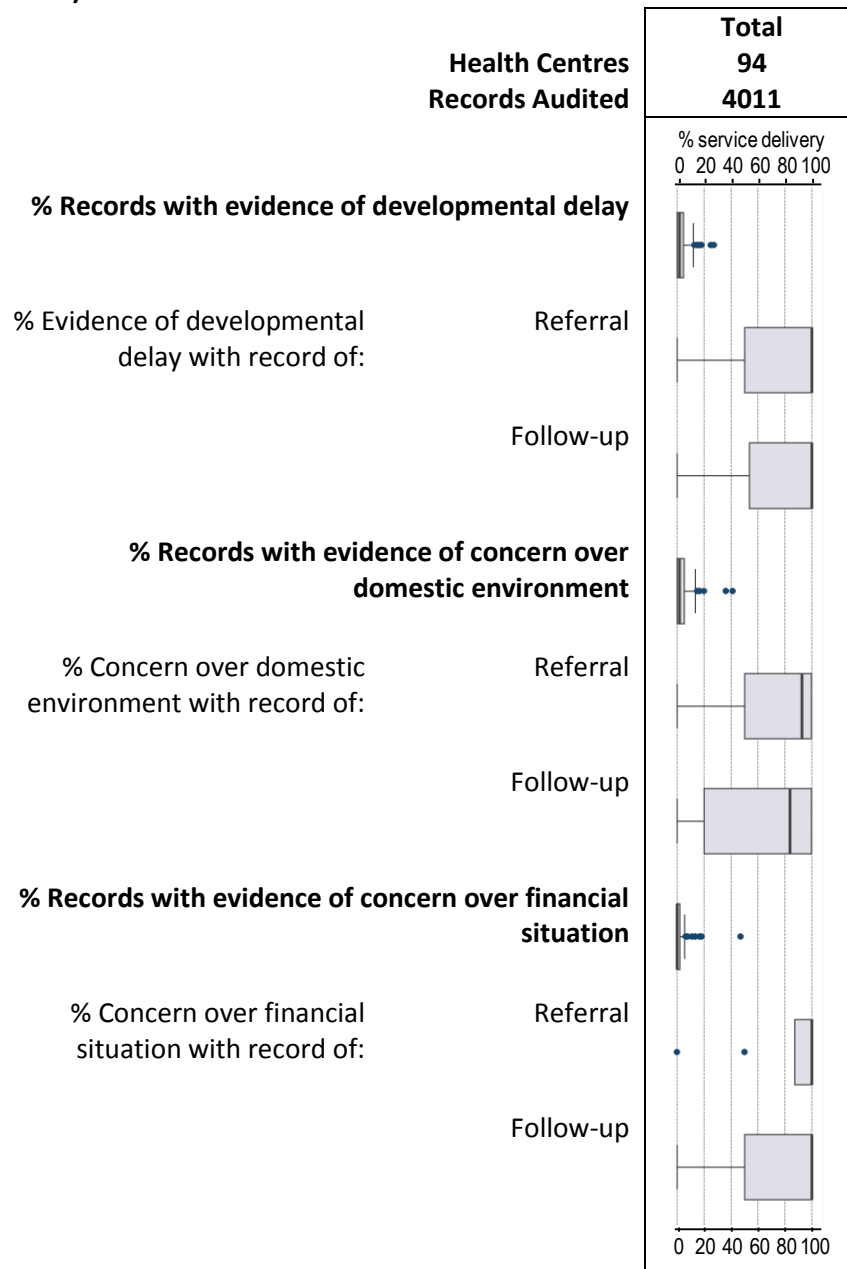
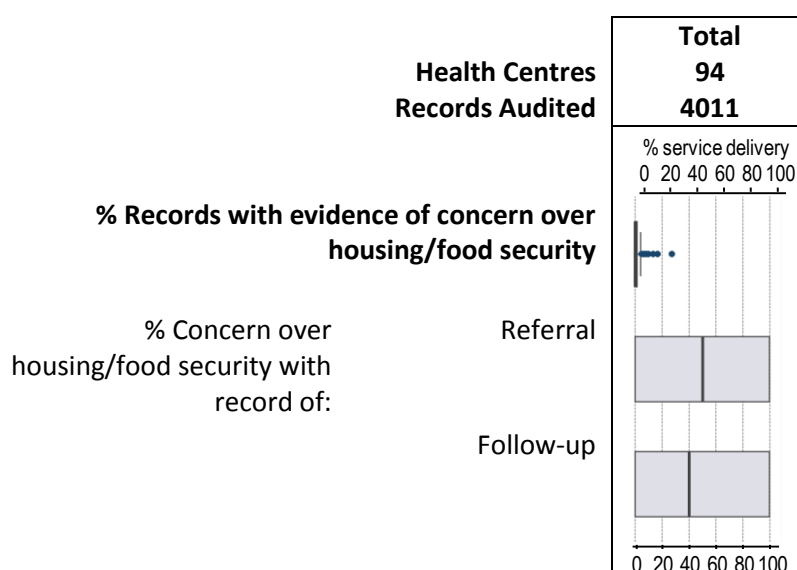


Figure 17 cont: Record of follow-up actions if concern regarding developmental, social or environmental factors within the past 12 months for 2012/2013.



Priorities for improvement in follow-up of abnormal clinical findings and identified risks to health

- Improve recording of **growth faltering/failure to thrive**. Growth faltering/failure to thrive is a key indicator of poor and deteriorating health in children, and should prompt investigation and action. There is wide variation between jurisdictions and between health centres in the proportion of children with a record of growth faltering or failure to thrive, with records being much less than would be expected from other evidence on the population incidence of these conditions (Figure 10).
- Improve follow-up action for children identified with growth faltering or failure to thrive. There is a wide variation between health centres in the recording of follow-up action, and generally low levels of recording of systematic actions being taken for these children – including clinical assessment, development of an action plan, or referral to support services (Figure 10).
- Review guidelines for screening and case finding for **anaemia** in children. There is wide variation between health centres in the proportion of children with a record of anaemia, with records being lower in some health centres than would be expected from other evidence on the population incidence of anaemia. This indicates that in many areas anaemia may not be detected because lack of clarity and/or inappropriate guidelines, which will compromise systematic and appropriate approaches to screening and case finding (Figure 12).
- Improve follow-up action for children identified with anaemia. There is a wide variation between health centres in the recording of follow-up action, and generally low levels of recording of systematic actions being taken for these children – including deworming, prescription of iron supplements, nutritional advice, and follow-up monitoring of haemoglobin (Figure 12).
- Improve recording of **chronic ear infections**. Chronic ear infections are common in many Aboriginal and Torres Strait islander communities, and can have serious consequences for children's development. There is wide variation between health centres in the proportion of children with a record of chronic ear infection, with records being much less than would be expected from other evidence on the population incidence of such infections (Figure 13).

- Improve follow-up action for children with chronic ear infections. There is a wide variation between health centres in the recording of follow-up action, and generally low levels of recording of systematic actions being taken for these children – including follow-up examination, advice on ear care, development of an action plan, or referral to an ENT specialist (Figure 13).
 - Improve recording of ***evidence of developmental delay, and concerns over the domestic environment, financial situation, housing and food security***. There is wide variation between health centres in the proportion of children with a record of such evidence or concerns, with records being much less than would be expected from other evidence on the population prevalence of such conditions (Figure 17).
 - Review and improve systems and services for referral and follow-up support for children who are identified with developmental delay or who are living in poor social or environmental conditions. There is wide variation between health centres in the proportion of children with a record of referral or follow-up for such children (Figure 17).
-

5. Systems assessment

The ABCD/One21seventy Systems Assessment Tool (SAT) has been developed to enable providers of Aboriginal and Torres Strait Islander primary health care services to undertake a structured assessment of the strengths and weaknesses of their systems to support best practice care. The SAT evolved from the Chronic Care Model and the associated Assessment of Chronic Illness Care (ACIC) tool and from the World Health Organization's (WHO) Innovative Care for Chronic Conditions (ICCC) Framework.

International experience has identified five key components of health systems to be effective across primary health care in improving the quality of care of clients with chronic illness:

- delivery system design
- information systems and decision support
- self-management support
- link with community, other health services and other resources
- organisational influence and integration

These five components are incorporated into the SAT. Each component contains a number of items (Table 4) that health centre teams (managers and staff) discuss and come to a consensus about how well their systems are working.

Table 4: ABCD/One21seventy systems assessment tool components and items

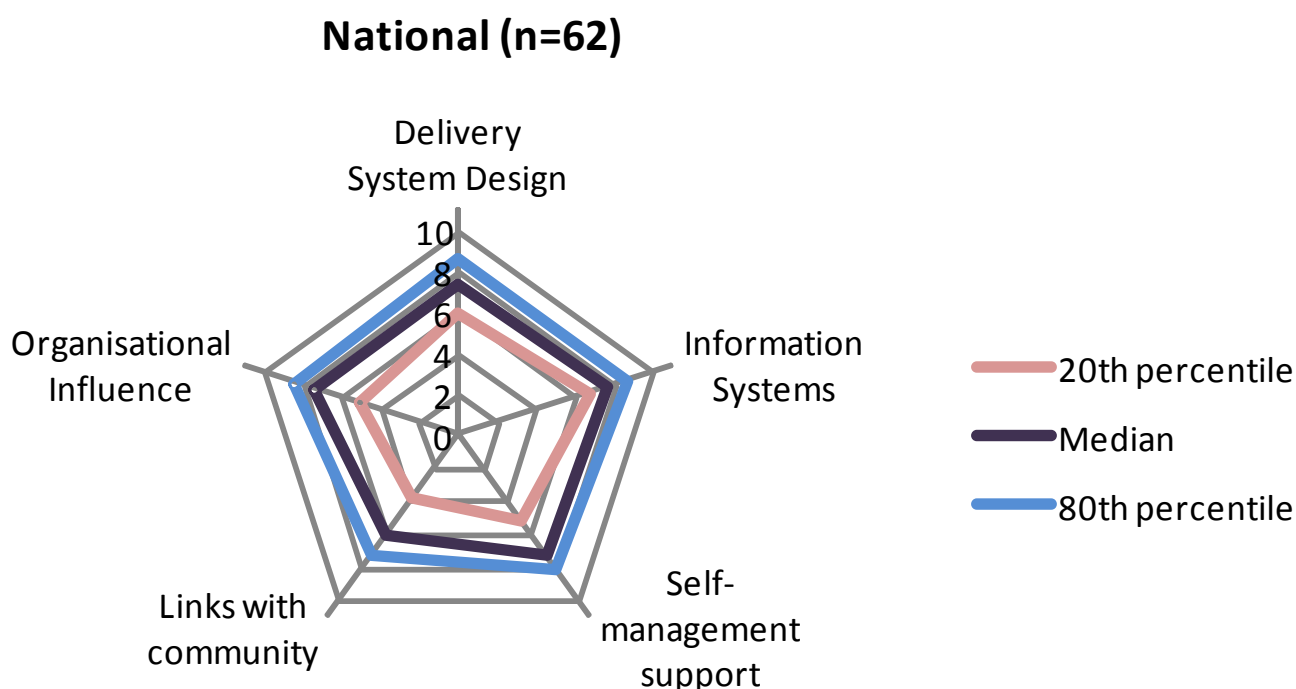
Components of systems	Items for each component
Delivery System Design This component refers to the extent to which the design of the health centre's infrastructure, staffing profile and allocation of roles and responsibilities, client flow and care processes maximise the potential effectiveness of the centre.	<ul style="list-style-type: none"> • Team structure and function • Clinical leadership • Appointments and scheduling • Care planning • Systematic approach to follow-up • Continuity of care • Client access/cultural competence • Physical infrastructure, supplies and equipment
Information systems and decision support This component refers to clinical and other information structures (including structures to support clinical decision making) and processes to support the planning, delivery and coordination of care.	<ul style="list-style-type: none"> • Maintenance and use of electronic client list • Evidence-based guidelines • Specialist-generalist collaborations
Self-management support This component refers to structures and processes that support clients and families to play a major role in maintaining their health, managing their health problems, and achieving safe and healthy environments.	<ul style="list-style-type: none"> • Assessment and documentation • Self-management education and support, behavioural risk reduction and peer support.
Links with the community, other health services and other services and resources This component refers to the extent to which the health centre uses external linkages to inform service planning, links clients to outside resources, works out in the community, and contributes to regional planning and resource development.	<ul style="list-style-type: none"> • Communication and cooperation on governance and operation of the health centre and other community-based organisations and programs • Linking health centre clients to outside resources • Working out in the community • Communication and cooperation on regional health planning and development of health resources.
Organisational influence and integration This component refers to the use of organisational influence to create a culture and support organisational structures and processes that promote safe, high quality care; and how well all the system components are integrated across the centre.	<ul style="list-style-type: none"> • Organisational commitment • Quality improvement strategies • Integration of health system components.

Each item is scored separately on a scale of 0-11. System component scores are derived from the average of the scores for each item within the system component. Higher scores reflect better function.

The data presented in Figure 18 are from 62 health centres that undertook a systems assessment in 2012 or 2013.

Scores for each system component, aggregated for all health centres nationally, are shown in the radar plot below.

Figure 18: Radar plot showing median, 20th and 80th percentiles* of aggregated system component scores as assessed by health centres (n=62) nationally in 2012/2013.



*Similar to the box plots, the median is the middle value for all health centres that have reported SAT data, the 20th centile is the value where 20% of health centres have a score at or below this value, and the 80th centile is the value where 80% of health centres have a score at or below this value.

Nationally, the system components for which the median score was relatively high were: Organisational Influence; Delivery System Design; and Information Systems (Figure 18). The system component for which the median score was relatively low was Links with the Community. The 20th centile for Links to the Community was also relatively low, indicating that the health centre teams for 20% of services gave this system component a score of less than 4 out of 11.

Scores for the individual items within each system component, aggregated for all health centres nationally, are shown in Table 5 below.

Nationally, the median scores for individual items for all health centres nationally ranged between 4.5 and 9, with the lowest score being for Regional Health Planning, and the highest score being for Evidence-based Guidelines (Table 5). More importantly, there is a wide range between health centres on scores for all individual items. The range between the highest and lowest scores for each item extends from 0 or 1 up to the maximum of 11 for the majority of items. For many items, the range between the 20th centile and the 80th centile is 4 or 5 points.

Table 5: Aggregated individual item scores for each system component as assessed by health centres nationally (n=62) in 2012/2013.

Component	Item	Min	20 th percentile	Median	80 th percentile	Max
Delivery System Design (overall median 7.4)	Team structure and function	1	4	8	9	11
	Clinical Leadership	0	5	8	10	11
	Appointments and scheduling	2	6	8	9	11
	Care Planning	2	6	8	9	11
	Systematic approach to follow-up	1	7	8	9	11
	Continuity of care	2	5	7	9	11
	Client access/cultural competence	2	6	8.5	10	11
	Physical infrastructure	1	5	7	9	11
Information systems and decision support (overall median 7.7)	Maintenance and use of electronic client list	0	5	8	9	11
	Evidence based guidelines	3	7	9	10	11
	Specialist and generalist collaborations	1	5	8	9	11
Self-management support (overall median 7.3)	Assessment and documentation	1	5	7	9	11
	Self-management education and support	1	6	7	8	11
Links with community (overall median 6.0)	Communication and cooperation on governance and operation	1	4	5	7	11
	Linking clients to outside resources	1	4	7	9	11
	Working out in community	0	4	6	8	11
	Regional health planning	0	2	4.5	7	9
Organisational influence & integration (overall median 7.3)	Organisational commitment	0	4	6	8	11
	Quality improvement strategies	0	6	8	9	11
	Integration of health system components	0	4	7	9	11

Priorities for system improvements to enable health centres to provide high quality child health services

- Strengthening systems for more effective links between health centres and communities is a potential priority area for action, particularly in health centres with relatively lower scores in this area (Table 5).
- Improvement of systems to support regional health planning activities appears to be an area of particular need. Good regional planning systems, including community input, is important for coordinated delivery of community and health services that meet the needs of the population (Table 5).
- There appears to be a need to work with health centre teams to strengthen systems in general in those health centres with relatively low scores. As a starting point, it may be appropriate to focus on supporting health centres that have scores in the lowest 20%, with a particular focus on those items with the lowest scores (Table 5).

6. Sources

The Child Health clinical audit protocol draws heavily on the following:

1. CARPA (Central Australian Rural Practitioners Association) (2009). *Standard treatment manual: A clinical manual for primary health care practitioners in remote and rural communities in Central and Northern Australia*, 5th edition, CARPA, available at <http://www.carpa.org.au/fmanual.htm> (from here on referenced as 'CARPA, 5th edn, 2009').
2. MBS (Medical Benefits Scheme) *Health assessment for Aboriginal and Torres Strait Islander people* (MBS Item 715), available at: http://www.health.gov.au/internet/main/publishing.nsf/Content/mha_resource_kit (from here on referenced as 'MBS 715').
3. Queensland Health, Royal Flying Doctor Service (Queensland Section) and Apunipima Cape York Health Council (2010), *Chronic disease guidelines*, 3rd edition, Queensland Health, Royal Flying Doctor Service (Queensland Section) and Apunipima Cape York Health Council, Cairns (from here on referenced as 'CD Guidelines, 3rd edn, 2010').
4. Royal Flying Doctor Service (Queensland Section) (2009), *Primary clinical care manual (PCCM)* 6th edn, available at http://www.health.qld.gov.au/pccm/pccm_updates.asp (from here on referenced as 'PCCM, 6th edn, 2010').

Other references include:

5. AHMC (Australian Health Ministers' Advisory Council), 2011, *National Framework for Universal Child and Family Health Services* [ONLINE] Available at: [http://www.health.gov.au/internet/main/publishing.nsf/Content/119CD12CB66F8514CA257B660002C659/\\$File/NFUCFHS.PDF](http://www.health.gov.au/internet/main/publishing.nsf/Content/119CD12CB66F8514CA257B660002C659/$File/NFUCFHS.PDF) [Accessed 9 August 2013]
6. Australian Government, 2013, *National Aboriginal and Torres Strait Islander Health Plan 2013-2023*, Commonwealth of Australia [ONLINE] Available at: [http://www.health.gov.au/internet/main/publishing.nsf/Content/2B39FA14C286E3EECA2579E800837B5F/\\$File/health-plan.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/2B39FA14C286E3EECA2579E800837B5F/$File/health-plan.pdf) [Accessed 12 August, 2013]
7. Centre for Eye Research, 2013, *Indigenous Eye Health*, [ONLINE] Available at: <http://www.cera.org.au/our-research/key-projects/indigenous-eye-health> (Accessed 9 August 2013)
8. COAG, (Council of Australian Governments), 2009 *National Strategy for food security in remote indigenous communities*, [ONLINE] available at: http://www.coag.gov.au/sites/default/files/nat_strat_food_security.pdf [accessed 16 August 2013]
9. CDNA (Communicable Disease Network Australia), 2006 *Guidelines for the public health management of Trachoma in Australia*, [ONLINE] available at [accessed 9 August 2013] [http://www.health.gov.au/internet/main/publishing.nsf/Content/1EBA6A6D1AEB9569CA2571570008FB93/\\$File/Trachoma2.pdf](http://www.health.gov.au/internet/main/publishing.nsf/Content/1EBA6A6D1AEB9569CA2571570008FB93/$File/Trachoma2.pdf)
10. Department of Health and Families, Northern Territory, 2010, *Healthy Skin Program, Guidelines for Scabies, Skin sores and Crusted Scabies in the Northern Territory* [ONLINE] available at http://digitalibrary.health.nt.gov.au/dspace/bitstream/10137/436/1/Healthy_Skin_Program_2010.pdf [accessed 9 August 2013]
11. Healthy Under 5's kids Program (HU5Ks), Northern Territory Government Department of Health and Families, October 2010 http://remotehealthatlas.nt.gov.au/healthy_under_5_kids_program.pdf
12. NACCHO/RACGP, 2012 *National guide to a preventive health assessment for Aboriginal and Torres Strait Islander people*. 2nd edn. South Melbourne: The RACGP, [ONLINE] Available at: <http://www.racgp.org.au/guidelines/nationalguide> [accessed 23 April 2013]
13. National Immunisation Program schedule, Australian Government Department of Health and Ageing. Available at <http://www.health.gov.au/internet/immunise/publishing.nsf/content/nips2>.
14. RACGP (Royal Australian College of General Practice), 2012, *Guidelines for preventive activities in general practice, 8th edition* [ONLINE] Available at: <http://www.racgp.org.au/your-practice/guidelines/redbook/preventive-activities-in-children-and-young-people/> [accessed 12 August 2013]
15. Western Australian Aboriginal Child Health Survey (WAACHS), 2004 Telethon Institute for Child Health Research and Kulunga Research Network. Available at <http://www.ichr.uwa.edu.au/waachs>
16. Western Australian Aboriginal Child Health Survey (WAACHS), 2006 Telethon Institute for Child Health Research and Kulunga Research Network. Available at <http://www.ichr.uwa.edu.au/waachs>
17. WHO (World Health Organization) (2004). *Family and community practices that promote child survival, growth and development. A review of the evidence* (executive summary), WHO, Geneva.



APPENDIX A – DATA TABLES

For each service item within the appendix tables, the following summary statistics are recorded:

- Mean:** For each health centre, every instance of an indicator (service item) being recorded on a child's clinic record as delivered is summed up and divided by all records to derive an average percent delivery for that audit cycle. An average percent across all health centres is then calculated by summing individual mean percents and dividing by the number of health centres. In the example below, the mean value of immunisation charts being recorded as present was 97% across all 37 health centres.
- Range:** Refers to the levels of delivery (%) for the health centre with the lowest level and the health centre with the highest level for each indicator. In the example below, the lowest health centre had 82% of immunisation charts present for child health records audited and the highest health centre had 100% of charts present for all children records audited.
- Standard Error:** The standard error is a measure of how accurate the mean (%) estimate is to the true mean value. The lower the standard error, the better the estimate.

Health Centres Audits	Example	Mean % Standard Error Range
	37 1118	
Immunisation Chart Present	97 ±0.74 (82-100)	

Immunisations

Table A.4: Record of immunisation completeness according to recommended schedule for health centres during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011	Immunisation schedule:
Immunisation Chart Present		91 ± 1.78 (0-100)	
Age	Birth	67 ± 2.74 (0-100)	Birth - Hep B (NSW,SA,WA); Hep B & BCG (NT,Qld)
	2 months	84 ± 2.39 (0-100)	2 & 4 months - DTPa/Hib/ HepB/IPV; 7vPCV or 10vPCV; Rotavirus (all states)
	4 months	81 ± 2.39 (0-100)	
	6 months	75 ± 2.55 (0-100)	6 months - DTPa/Hib/HepB/ IPV; 7vPCV or 10vPCV (all states) + Rotavirus (Qld,SA)
	12 months	78 ± 3.12 (0-100)	12 months - Hib; MMR; MenCCV (all states) + Hep B (Qld,SA) + Hep A (NT,WA)
	18 months	81 ± 2.36 (0-100)	18 months - VZV (all states) + Hep A (NT,Qld,SA,WA) + 7vPCV (NT) + 23vPPV (WA)
	2 years	69 ± 4.32 (0-100)	2 years - 23vPPV; Hep A (Qld,SA)
	4 years	81 ± 2.73 (0-100)	4 years - DTPa/IPV; MMR (all states)
	>10 years	16 ± 3.45 (0-100)	>10 years - VZV; HPV (females) (all states) + Hep B (NSW,Qld,SA,WA) + DTPa (NT,Qld,SA,WA)

Physical checks

Table A.5: Record of clinical measurements within the past 12 months for health centres during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited	Total 94 4011	Applicable age/ jurisdiction:
Weight	89 ± 1.57 (35-100)	
Length/height	73 ± 2.28 (11-100)	
Head circumference	90 ± 2.41 (0-100)	<12 months
BMI	34 ± 2.96 (0-100)	≥ 4 years NT; ≥ 2 years other states
Haemoglobin	51 ± 3.78 (0-100)	≥ 6 months, if indicated
Urinalysis	12 ± 2.33 (0-89)	≥ 10 years NT; QLD if indicated

Table A.6: Record of clinical examinations within the past 12 months for health centres during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres	Total	
94		
Records Audited	4011	Applicable age/ jurisdiction:
Testes check	72	<12 months
	± 4.03	
	(0-100)	
Hip examination	69	<12 months
	± 3.67	
	(0-100)	
Gait	45	≥ 12 months QLD; ≥ 18 months NSW
	± 3.59	
	(0-100)	
Skin check	80	
	± 2.1	
	(14-100)	
Oral hygiene	61	≥ 6 months
	± 2.37	
	(0-100)	
Cardiac auscultation	53	≥ 12 months NT; all ages other states
	± 2.94	
	(0-100)	
Respiratory examination	69	
	± 2.54	
	(0-100)	
Ear examination	78	
	± 2.27	
	(0-100)	
Eye examination	54	≥ 4 years NT; all ages other states
	± 2.82	
	(0-100)	
Trachoma	25	≥ 4 years NT; if indicated other states
	± 3.65	
	(0-100)	

Table A.7: Record of developmental checks within the past 12 months for health centres during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited	Total 94 4011	Applicable age/ jurisdiction:
Developmental milestones	72 ± 2.5 (0-100)	<4 years
Vision	55 ± 2.7 (0-100)	≥ 6 months NT & QLD; all ages NSW, WA
Hearing	64 ± 2.34 (7-100)	≥ 6 months NT; all ages other states
Parent-Child Interaction	71 ± 2.8 (0-100)	<4 years QLD & WA; <2 years NT; other states if indicated

Brief interventions

Table A.8: Record of discussion on nutrition and preventive factors within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited	Total 94 4011	Applicable age/jurisdiction:
Breastfeeding	72 ± 2.77 (0-100)	<2years
Nutrition	58 ± 2.62 (0-100)	
SIDS prevention	56 ± 4.45 (0-100)	<12 months
Passive smoking risk	40 ± 3.09 (0-100)	<2years NT; all ages other states
Infection prevention & hygiene	36 ± 2.64 (0-100)	<3years NT; all ages QLD, SA & WA
Oral health	51 ± 2.79 (0-100)	≥ 6 months NSW & QLD; ≥ 8 months WA; ≥ 6 months & <5years NT
Injury prevention	37 ± 2.9 (0-100)	≥ 18 months NSW; ≤ 4 years QLD; ≥ 6 months in SA; <3years NT

Table A.9: Record of discussion on domestic, social, environmental factors within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited	Total 94 4011	Applicable age/ jurisdiction:
Domestic/social environment	43 ± 2.36 (0-92)	<5years WA; <6years NT; all ages NSW, QLD & SA
Social or family support	54 ± 2.87 (0-100)	<4years QLD; <5years WA; <6years NT; all ages NSW & SA
Financial situation	18 ± 3.08 (0-80)	<5years WA & NT
Housing condition	28 ± 2.44 (0-94)	<5years WA; all ages other states
Food security	5 ± 1.31 (0-36)	<5years WA; all ages QLD

Table A.10: Record of discussion/delivery of brief intervention for developmental factors within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited	Total 94 4011	Applicable age/ jurisdiction:
Physical & mental stimulation	48 ± 3.16 (0-100)	≥ 6 months NSW; <5years QLD, WA & NT
Physical activity	34 ± 3.2 (0-100)	≥ 3 years NSW; >5years QLD; >3years WA; >2years NT
Education progress	18 ± 2.45 (0-81)	≥ 5 years
Social & emotional wellbeing	35 ± 3.32 (0-100)	>5years NSW, SA & NT; all ages QLD & WA
Sexual/reproductive health advice	4 ± 1.44 (0-33)	>3years WA; ≥ 5 years NT

Risk factors

TableA.11: Record of enquiry regarding use of cigarettes, alcohol and illicit drugs, and discussion and/or advice provided on their risks within the past 12 months: 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres	Total	
94		
Records Audited	4011	Applicable age/ jurisdiction:
Smoking	16 ± 2.74 (0-97)	≥ 5 years
Alcohol use	17 ± 3.37 (0-100)	>10years QLD; ≥ 5 years NT
Drug or substance use	15 ± 3 (0-100)	≥ 8 years QLD; ≥ 5 years others states

Follow-up of abnormal clinical findings

Failure to thrive

Table A.12: Record of follow-up actions if evidence of failure to thrive within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres		Total
Records Audited		94
		4011
<i>Total number of children with weight recorded</i>		3321
% Records with evidence of growth faltering/ failure to thrive		13
		± 2.01
		(0-86)
% Growth faltering with record of:	Clinical assessment	77
		± 3.42
		(0-100)
	Follow-up check	81
		± 3.25
		(0-100)
	Nutrition advice	74
		± 3.8
		(0-100)
	Family meeting	30
		± 4.58
		(0-100)
	Action plan made	53
		± 4.8
		(0-100)
	Referral to support services	39
		± 4.76
		(0-100)
	Other action	40
		± 5.31
		(0-100)

Overweight and obesity

Table A.13: Record of follow-up actions if overweight or obese within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011
<i>Total number of children with BMI recorded</i>		866
% Records with evidence of overweight/obesity		7
		± 1.73
		(0-100)
% Overweight/obese with record of:	Referral to dietician/MO	70
		± 7.69
		(0-100)
	BP assessment	68
		± 7.94
		(0-100)
	Blood glucose assessment	18
		± 6.34
		(0-100)
	Blood lipid assessment	10
		± 4.88
		(0-100)

Anaemia

Table A.14: Record of follow-up actions if evidence of anaemia within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

(NB: Haemoglobin tests only if indicated in each state/territory.)

Health Centres Records Audited		Total 94 4011
Total number of children with haemoglobin assessment recorded		1665
% Records with evidence of anaemia		22
		± 2.19
		(0-100)
% Anaemia with record of:	Dietary/nutrition advice	71
		± 4.15
		(0-100)
	Deworming	39
		± 4.43
		(0-100)
	Iron supplement prescription	48
		± 4.52
		(0-100)
	Follow-up Hb assessment	47
		± 4.54
		(0-100)

Recurrent or chronic ear infection

Table A.15: Record of follow-up actions if evidence of recurrent or chronic ear infection within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

		Total
		94
		Records Audited
		4011
Total number of children with ear/hearing checks recorded		2938
% Records with evidence of recurrent or chronic ear infection		13
		± 1.4
		(0-58)
% Recurrent or chronic ear infection with record of:	Follow-up exam	92
		± 2.1
		(0-100)
	Advice on ear care	77
		± 3.67
		(0-100)
	Antibiotics prescription	92
		± 2.32
		(0-100)
	Action plan made	57
		± 4.76
		(0-100)
	Referral to audiology	53
		± 4.55
		(0-100)
	Referral to ENT	50
		± 4.69
		(0-100)
	Other action	46
		± 4.62
		(0-100)

Recurrent or chronic respiratory disease

Table A.16: Record of follow-up actions if evidence of recurrent or chronic respiratory disease within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011
Total number of children with respiratory exam recorded		2610
% Records with chronic respiratory disease		2 ± 0.43 (0-25)
% Chronic respiratory disease with record of:	Referral to paediatrician	78 ± 7.95 (0-100)
	Paediatric respiratory assessment report	62 ± 10.12 (0-100)

Proteinuria

Table A.17: Record of follow-up actions if evidence of proteinuria within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011
Total number of children with urinalysis test recorded		176
% Records with evidence of proteinuria		25 ± 5.13 (0-100)
% Proteinuria with record of:	ACR	62 ± 9.87 (0-100)
	Follow-up by MO	84 ± 7.17 (0-100)

Infected skin sores and scabies

Table 4: Record of follow-up actions if infected skin sores or scabies within the past 12 months during 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011
Total number of children with skin check recorded		2976
% Records with evidence of infected skin sores		25
		± 1.65
		(0-67)
% Skin infections with record of:	Cleaning/antibiotic treatment	94
		± 1.59
		(0-100)
	Swabs taken	29
		± 3.13
		(0-100)
		Follow-up check
		66
		± 3.43
		(0-100)
% Records with evidence of scabies		15
		± 1.24
		(0-67)
% Scabies with record of:	Treatment	93
		± 2.24
		(0-100)
	Follow-up check	60
		± 4.12
		(0-100)

Developmental delay, social and environmental risk factors

Table A.19: Record of follow-up actions if concern regarding developmental, social or environmental factors within the past 12 months for 2012/2013 (mean %, \pm SE and range between health centres).

Health Centres Records Audited		Total 94 4011
% Records with evidence of developmental delay		4 ± 0.57 (0-27)
% Evidence of developmental delay with record of:	Referral	79 ± 4.54 (0-100)
	Follow-up	79 ± 4.5 (0-100)
% Records with evidence of concern over domestic environment		4 ± 0.74 (0-41)
% Concern over domestic environment with record of:	Referral	71 ± 5.25 (0-100)
	Follow-up	63 ± 5.86 (0-100)
% Records with evidence of concern over financial situation		2 ± 0.6 (0-47)
% Concern over financial situation with record of:	Referral	81 ± 6.01 (0-100)
	Follow-up	70 ± 6.86 (0-100)
% Records with evidence of concern over housing/food security		2 ± 0.44 (0-27)
% Concern over housing/food security with record of:	Referral	50 ± 8.75 (0-100)
	Follow-up	46 ± 8.5 (0-100)