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Priority Evidence-Practice Gaps in Aboriginal and Torres Strait Islander Maternal Health Care Final Report

Engaging stakeholders in identifying priority evidence-practice gaps and strategies for improvement in primary health care (ESP project)

July 2016

ABCD NATIONAL RESEARCH PARTNERSHIP | Improving practice through research

CRE-IQI

One21seventy
National Centre for Quality Improvement in Indigenous Primary Health Care

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Abbreviations

ABCD	Audit and Best Practice in Chronic Disease
ABCD NRP	Audit and Best Practice in Chronic Disease National Research Partnership (the Partnership)
CQI	Continuous Quality Improvement
EPGs	Evidence-practice gaps
ESP	Engaging Stakeholders in Identifying Priority Evidence-Practice Gaps and Strategies for Improvement
GP	General Practitioner
PHC	Primary Health Care
SAT	Systems Assessment Tools
SIDS	Sudden Infant Death Syndrome
SUDI	Sudden Unexpected Death in Infancy

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1 Guide to reading this report

This final report presents the findings from each of the phases of the Engaging Stakeholders in Identifying Priority Evidence-Practice Gaps and Strategies for Improvement in Primary Health Care (ESP) Project for maternal health care.

The final report is presented in the following format:

- A brief statement of **key messages.** These are the headline messages for policy makers and managers.
- An **executive summary**. This briefly describes the background, approach, findings and conclusions of the ESP maternal health care project. This executive summary is designed for people who want to know a little more about the project, beyond the key messages.
- The **main report.** This is a more complete description of the project, for people with a more specific and detailed interest.

The appendices contain further detail on specific aspects of the project.

This final report presents findings for all participating health centres from all jurisdictions together. It collates analysis of aggregated continuous quality improvement (CQI) data and stakeholder views on priority evidence-practice gaps, barriers and enablers to addressing the priority evidence-practice gaps, and strategies for improvement.

The report is for people with an interest in interpreting and using aggregated CQI data to drive decision making. This includes national and jurisdictional policy makers, managers, community-controlled organisations and government health authorities, peak bodies, clinical leaders, researchers, primary health care staff and CQI practitioners.

A Data Supplement accompanies the report. The Supplement contains the detailed analysis for the first two phases of the project, which were the basis of the higher level findings presented in this final report. The Data Supplement is available by clicking here or emailing abcd@menzies.edu.au.

The reports for the first two phases of the ESP Project are available on request.

2 Key messages

In 2015 - 2016, stakeholders in diverse roles and organisations provided input to interpret aggregated continuous quality improvement data on maternal health care for Aboriginal and Torres Strait Islander women from 91 health centres. Three key messages emerged from the process of:

- Identifying gaps in recommended care that are common across health centres
- Sharing knowledge on ways to improve Aboriginal and Torres Strait Islander maternal health care

The messages are relevant for developing multi-level policy and system refinements to overcome barriers experienced on a wide scale, and strengthen known enablers.

Key message 1: Focus on improving aspects of pregnancy and postnatal care in which there are system-wide 'evidence-to-practice gaps' in delivery. This means improving systems to support best-practice care in the following areas: smoking, drinking alcohol, social and emotional wellbeing, nutrition, and Sudden Unexpected Death in Infancy (SUDI) risk reduction.

The prioritised evidence-practice gaps affect the health of both women and babies. They relate to social and emotional wellbeing as well as physical health. Aspects of both pregnancy and postnatal care were prioritised. Prioritised evidence-practice gaps in pregnancy include asking women about smoking and drinking alcohol and providing brief counselling, assessing social risk factors and emotional wellbeing and taking the appropriate next steps. Agreed priorities for the post-natal visit include talking about how a smoking environment increases SUDI risk, how to protect babies from harm, and diet and nutrition for the mother and baby.

Key message 2: To achieve wide-scale improvement in maternal health care we need to strengthen systems for workforce support, retention and recruitment, patient-centred care, and community capacity, engagement and mobilisation.

Current knowledge highlights the importance of targeting specific barriers and enablers to improvement, and engaging a range of stakeholders in developing solutions. Stakeholders identified a need to strengthen systems to ensure adequate staffing and support staff, understand the needs of people living in Aboriginal and Torres Strait Islander communities, provide care that is responsive to individual patients, increase health literacy, increase community expectations of receiving best practice care, and to work in partnership with communities.

Key message 3: Develop system-wide strategies to strengthen health centre and health system attributes that support best-practice maternal health care. Often stakeholders identified the same or similar strategies to address different evidence-practice gaps. Some of the strategies can be implemented within health centres while others need partnerships with communities, external services and policy makers.

Strengthening systems and processes may improve delivery of multiple aspects of maternal health care. Stakeholders suggested upskilling staff to confidently provide best-practice care relating to sensitive issues, and advocating for increased local services to refer women to. Partnering with communities on health promotion projects and resource development, systems to promote continuity of care, and clear referral pathways were also suggested. The development of wide-scale strategies should take account of evidence about their effectiveness and appropriateness to different contexts.

From key messages to action: an opportunity for wide-scale improvement

Many of the barriers and enablers identified for maternal health care are similar to those identified in the ESP project on other aspects of PHC (e.g. chronic illness care and preventive healthcare). Therefore, taking action on the key messages for wide-scale improvement of maternal health care will strengthen other key areas of care.

Policy makers, funders, leaders, managers and staff across levels of the health system need to take a coordinated approach to supporting key strategies within their levels and areas of influence.

3 Executive summary

3.1 Purpose

The purpose of this project has been to engage key stakeholders in the use of aggregated continuous quality improvement (CQI) data to identify and address system-wide evidence-practice gaps in Aboriginal and Torres Strait Islander maternal health care. We aimed to engage stakeholders in different roles and across different levels of the primary health care (PHC) system. We wanted to bring together their knowledge about the barriers and enablers to addressing the evidence practice gaps that they identified and their suggestions on strategies for improvement.

System-wide evidence-practice gaps identified by stakeholders are likely to be due to deficiencies in the broader PHC system. This indicates that system-level action is required to improve performance. Such action should be developed with a deep understanding of the holistic nature of Aboriginal and Torres Strait Islander wellbeing beyond just physical health (including healthy connections to culture, community and country). It should take account of the impact of Australian colonial history on Aboriginal and Torres Strait Islander people, and how social systems – including the health system - should be shaped to meet the needs of Aboriginal and Torres Strait Islander people.

This project builds on the collective strengths within PHC services in order to continue improving the quality of care for Aboriginal and Torres Strait Islander communities.

3.2 Approach

This final report is the final phase of the Engaging Stakeholders in Identifying Priority Evidence-Practice Gaps and Strategies for Improvement (ESP) project for maternal health. We have used aggregated CQI audit data from 91 health centres participating in the Audit and Best Practice in Chronic Disease (ABCD) National Research Partnership from 2007 to 2014 (4,402 client records).

Through two phases of reporting and feedback, we engaged stakeholders in a theory-based process to identify:

1. priority evidence-practice gaps;
2. barriers and enablers to high quality care and system-wide strategies for achieving improvement.

Implementation research suggests that by using evidence to identify and link priority gaps to theoretical domains that are known to be system enablers or barriers, strategies can be developed that will most likely produce the desired change.

3.3 Summary of findings

Phase 1 – identifying the evidence-practice gaps

CQI data for 2012 - 2014 from 65 health centres (1091 patient records) and 58 system assessments were used to identify evidence-practice gaps. Approximately 110 stakeholders provided input (as an individual or part of a group) to prioritise eight evidence-practice gaps in maternal health care:

- Enquiry about smoking and giving advice about how to stop smoking in pregnancy
- Enquiry about drinking alcohol and delivering brief counselling early in pregnancy
- Social risk factor assessment in pregnancy and, if evidence of social risk, record of referral to appropriate services
- Screening all pregnant women for emotional wellbeing

- Following-up with women identified as 'at risk' based on emotional wellbeing assessment in pregnancy
- At the postnatal visit to discuss:
  - how to protect babies from Sudden Infant Death Syndrome (SIDS)[1], and how important it is to keep a safe environment to protect the baby from harm
  - diet and nutrition for the mother and baby
  - smoking, and how a smoking environment increases SIDS risk.

Although a proportion of health centres were doing well in many aspects of maternal health care, there was wide variation between health centres.

Phase 2- Barriers and enablers to addressing the evidence-practice gaps and system-wide strategies for improvement

In the second phase, we presented trends over time in CQI data (2007-2014: 4402 patient records and 216 system assessments from 91 health centres) relevant to the priority evidence-practice gaps. We also provided a brief summary of published evidence on improving the quality of Aboriginal and Torres Strait Islander PHC.

In general, overall delivery of pregnancy care is provided at higher levels than postnatal care.

There have been clear improvements in service delivery and reductions in variation for some of the identified priority evidence-practice gaps. Delivery is generally at high levels. However, delivery at some health centres continues to be much lower than at others.

For some of the priority evidence-practice gaps service delivery is still not high overall and variation between health centres remains large, although there have been improvements over time.

Health centre, system and staff attributes relevant to implementing change were provided to help stakeholders identify barriers and enablers. About sixty people (as an individual or part of a group) provided feedback on the relative importance of these attributes to addressing the priority evidence-practice gaps (Table 1).

[1] Sudden Unexpected Death in infancy (SUDI) is the term now used for infant deaths with no apparent cause and this includes Sudden Infant Death Syndrome (SIDS) and fatal sleeping accidents. SIDS is used in some places in this report to be consistent with the term used in the Maternal Health Clinical Audit Tool and Protocol.

Table 1. Key barriers and enablers to supporting best-practice maternal health care, particularly across the identified priority areas

HEALTH CENTRE AND SYSTEMS	**Finance, resources, facilities and equipment** In general health centres have adequate equipment to support best practice in maternal health care. There were mixed views on whether there is sufficient financial support and whether health centres are of adequate size, design and condition to support best practice in maternal health care.
	Staffing/workforce support, recruitment and retention In general there are adequate systems in place to ensure the appropriate numbers of medical specialists and administrative staff, and to recruit, retain and support GPs. There is a need to strengthen systems to: • Ensure appropriate numbers of Aboriginal and/or Torres Strait Islander Health Practitioners/Workers and midwives. • Recruit, retain and support Aboriginal and/or Torres Strait Islander Health Practitioners/Workers. • Ensure PHC staff have support from experienced staff, especially when health centres are affected by staff turnover and shortages.
	Training and development There are generally good systems in place to support staff development.
	Teamwork Generally PHC staff function effectively in teams and are clear about their roles in relation to other team members.
	Patient-centred care There is a need to strengthen systems that support all members of the PHC team to: • Understand the needs and aspirations of people living in Aboriginal and Torres Strait Islander communities for the purpose of providing best-practice maternal health care. • Provide care that is respectful of and responsive to individual patient preferences, needs and values and for patient values to guide all clinical decisions.
	Decision support In general best-practice guidelines and other decision support resources are available to PHC staff and staff are adequately trained to use these resources.
	Community capacity, engagement and mobilisation There is a need to strengthen systems to: • Increase the expectation of community members regarding best practice care. • Enhance the health literacy of community members. • Build the capability of PHC staff and to support them to develop effective links and to work in partnership with communities.
	Quality improvement systems There were mixed views about whether adequate training, tools, processes, managerial support and ownership are in place to support quality improvement.
STAFF	Staff attributes that support best practice in maternal health care and are generally in place are: • **Knowledge:** Knowing the content and objective of best practice care. • **Professional identity:** Recognising the professional responsibility to provide best practice maternal health care for Aboriginal and Torres Strait Islander women. • **Beliefs about consequences:** Believing that best practice maternal health care will have benefits at a population level. • **Intentions:** A very strong intention to provide best practice maternal health care every day. • **Social influences**: Most people of influence in health centres are seen to support provision of best practice maternal health care to Aboriginal and Torres Strait Islander people.
	Emotion There were mixed views about whether PHC staff providing maternal health care currently enjoy their day-to-day work activities or feel unhappy anxious or depressed about their work.

Strategies for improving maternal health care across all priority areas

Stakeholders were asked to identify new or refined strategies to address the most common barriers and enablers across all priority evidence-practice gaps. Many of the suggested strategies are relevant to a number of the identified barriers and enablers. Stakeholder feedback on strategies highlighted the following points:

- Prioritise, support and increase availability of regular training for PHC staff regarding how to provide best-practice care for sensitive issues such as alcohol use, smoking and psychosocial wellbeing.
- Identify and share evidence-based information about effective and sustainable interventions.
- Establish or enhance clear referral processes to support clinical decision making and to link women, either to PHC staff with the appropriate skills and training, or to external local services.
- Establish systems to promote continuity of care before, during and after pregnancy and involving midwives and Aboriginal and/or Torres Strait Islander Health Practitioners/Workers.
- Support consistent delivery of care related to these priority areas by making them core parts of pregnancy and post-natal checks. Include these priority areas in quality audits and activities.
- Incorporate prompts to remind staff to cover the identified priorities with women and to document delivery. Include links to resources for staff and clients to support delivery.
- Establish a service-wide women's and maternal health strategy that has the support of the health service leadership.
- Enhance systems to support comprehensive maternal health care, such as availability of specialist midwives, or midwifery coordinators in governance roles.
- Advocate for increased availability, accessibility and cultural appropriateness of local services to refer women to, particularly for social and emotional wellbeing.
- Advocate for increased availability and accessibility of healthy food and housing.
- Work with communities on health promotion projects relating to smoking, alcohol and foetal alcohol spectrum disorder and Sudden Unexpected Death in Infancy (SUDI) risk reduction to ensure they are community-led and co-developed.
- Co-develop or adapt locally relevant resources with community to support client education and provide training for PHC staff to use them.

There was a small increasing trend in overall delivery of pregnancy care for health centres who participated in three or more cycles of CQI. There was also a clear increasing trend for overall delivery of postnatal care. This suggests that a sustained commitment to CQI will see improvements in the delivery of care for those services.

Final review of the draft report

In the final phase we sent a draft final report to stakeholders and asked for feedback. This was to confirm that we accurately reflected the feedback about barriers, enablers and strategies for improvement, and to gather suggestions for how to disseminate the ESP findings. Five responses (as an individual or part of a group) were received, providing feedback from nine people in a variety of roles.

3.4 Next steps

System-wide change and targeted strategies are needed to address the priority evidence-practice gaps in Aboriginal and Torres Strait Islander maternal health care. The ESP process has enabled key people working within the Aboriginal and Torres Strait Islander health sector to reflect on aggregated CQI data. It has collated their views on priority system-wide evidence-practice gaps, barriers and enablers, and strategies for improvement.

Further work is needed to design detailed strategies. Strategies must be based on published evidence, and practical experience, of approaches that support improvements in health care for Aboriginal and Torres Strait Islander people and communities.

The main purpose of the ESP Project was to engage a variety of stakeholders to use aggregated CQI data, and to stimulate discussion on the key areas requiring system-wide improvement and how best to achieve this. The suggested strategies could provide the basis for continuing discussions. Through such dialogue, policy makers, managers, community-controlled organisations and government health authorities, peak bodies, clinical leaders, researchers, PHC staff and CQI practitioners can ensure that the detailed design of strategies address local contextual and organisational considerations. Stakeholders can also share knowledge and experiences as strategies are put into action and evaluated.

The final report will be disseminated to respondents and more broadly to stakeholders across all levels of the health system. We encourage stakeholders to utilise the report, along with the aggregated CQI data, to implement and advocate for change at local, organisational, regional and national levels.

4 Priority Evidence-Practice Gaps and Stakeholder Views on Barriers and Strategies for Improvement in Maternal Health Care

Best-practice pregnancy and postnatal care provides appropriate treatment, screening, or preventive strategies [1,2,3] to optimise physical, social and emotional wellbeing for mothers and babies. While many Aboriginal and Torres Strait Islander women experience good health and have healthy pregnancies and babies, adverse pregnancy outcomes (e.g. gestational diabetes, low birth weight, perinatal mortality) are more common among Aboriginal and Torres Strait Islander women than non-Indigenous women [4-6]. Most Aboriginal and Torres Strait Islander women attend PHC services regularly during their pregnancy and many attend within the first trimester [4,7]. These are important opportunities for preventive pregnancy care. The ability of health centres to provide all components of recommended maternal health care would be expected to contribute to reducing disparities in pregnancy outcomes, giving babies a healthy start to life and improving the health of Aboriginal and Torres Strait Islander women.

4.1 ABCD National Research Partnership/One21seventy

The ABCD National Research Partnership (the Partnership) and One21seventy, the National Centre for Quality Improvement on Indigenous Primary Health Care*, are founded on the premise that a holistic or comprehensive approach to PHC is fundamental to an effective health system. The One21seventy clinical audit and systems assessment tools are developed by expert reference groups and are based on widely accepted evidence-based guidelines that reflect best practice across the scope of primary health care. These tools have to date been used by more than 270 Aboriginal and Torres Strait Islander primary health care centres across the country. Automated reports are provided routinely to health centres and managers comprising their service level audit data as well as relevant regional or state comparison data to support local and regional level CQI efforts. Appendix A provides more information about the One21seventy data collection process and sources used to develop the audit tools.

One hundred and seventy five of these PHC centres allowed their data to be used to address the aims of the Partnership, including improving understanding of barriers and enablers to high quality care, and informing development of strategies for improvement. The ESP Project contributes to this process, increasing understanding and use of national aggregated CQI data for achieving wider system change. The establishment of this dataset has been made possible by the active contributions of health centre staff, CQI facilitators, managers, policy makers, community-controlled organisations and government health authorities, researchers and clinical leaders. Their ongoing contributions are vital to making the most effective use of data for improving the quality of care for Aboriginal and Torres Strait Islander people across Australia.

4.2 Large-scale health system strengthening

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

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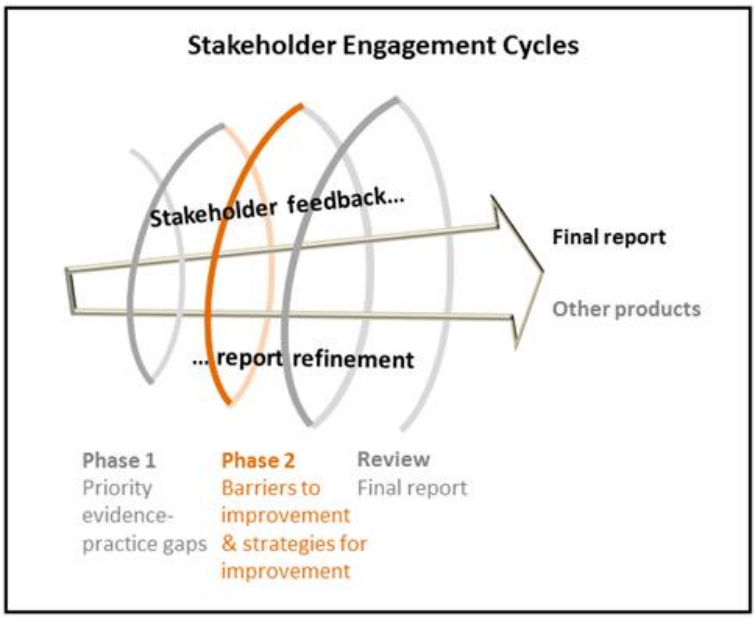
* For more information on the ABCD Partnership Project: <http://www.menzies.edu.au/abcd>.
For more information about One21seventy: <http://www.one21seventy.org.au/>.

4.3 Engaging stakeholders in identifying priority evidence-practice gaps and strategies for improvement

The ESP Project is a major initiative of the Partnership, and aims to support development of the health system to provide high quality comprehensive primary healthcare on a wide-scale. It explores how aggregated CQI data can be used across the broader health system in a series of action-research cycles to: 1) identify evidence-practice gaps; 2) identify barriers, enablers and system-wide strategies to addressing these evidence-practice gaps (Figure 1). This approach has been adapted from methods that link interventions to modifiable barriers to address evidence-practice gaps [8,9].

Figure 1. ESP Project phases

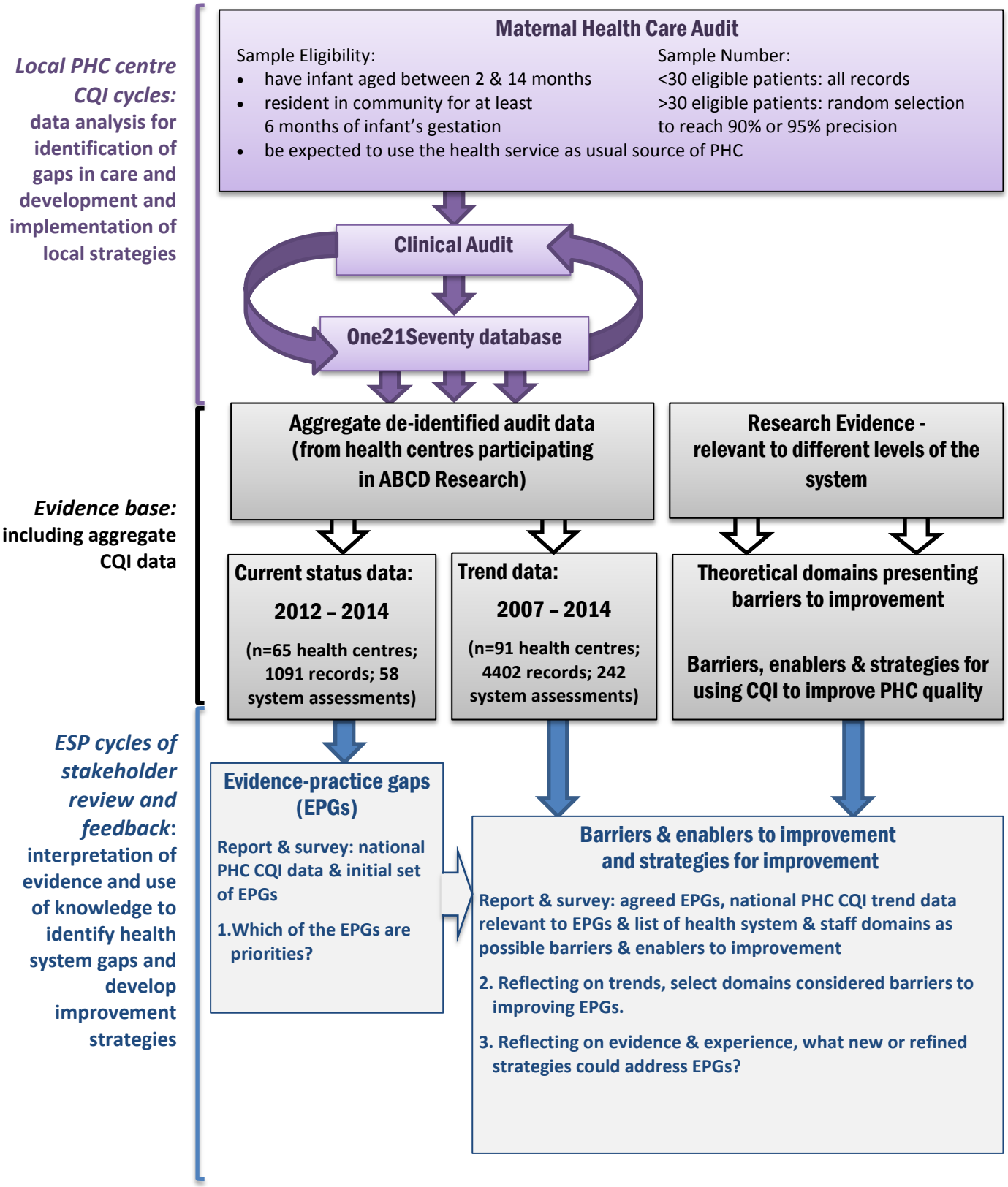


As part of their approach, French and colleagues utilised theoretical domains relevant to behaviour change to identify barriers to be addressed as part of intervention strategies [8,10,11]. Recognising that there are barriers at different levels of the health system, the ESP Project extended the theoretical domains to include broader system factors relevant to the Aboriginal and Torres Strait Islander PHC sector [9,12,13]. For more information about the ESP process, see Appendix B or Laycock et al (2016) [14].

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 PHC. These conversations can help inform system changes and to direct resources and efforts where they can most improve the health of Aboriginal and Torres Strait Islander communities.

Figure 2 illustrates the components of the ESP project cycle for maternal health care.

Figure 2. ***Use of aggregated CQI data for stakeholder identification of system wide evidence-practice gaps and strategies for improvement.***



5 Aboriginal and Torres Strait Islander Maternal Health Care

5.1 Stakeholder engagement

The ESP process for Aboriginal and Torres Strait Islander maternal health care began in February 2015. Our aim was to engage a variety of stakeholders in the use and interpretation of aggregated data on the quality of maternal health care. We adopted a snowballing distribution technique to circulate the reports as widely as possible. Stakeholders were requested to forward reports on to other interested people. Our purpose was to draw on stakeholder knowledge and experience to identify priority evidence-practice gaps, barriers and enablers to improvement and gather views on strategies to address the gaps.

Around 180 stakeholders provided feedback through online surveys (Table 2). Organisations represented included community controlled and government health services, support organisations, research organisations and policy makers. Respondents included practitioners, Aboriginal and/or Torres Strait Islander Health Practitioners or Workers, managers, policy-makers, CQI facilitators and researchers (Appendix C).

Table 2. Level of engagement in the maternal health care ESP Project.

		Phase 1 (n=112)		Phase 2 (n=60)		Final report review (n=9)	
		Individual	Group	Individual	Group	Individual	Group
Number of survey responses		**27**	**6**	**10**	**3**	**4**	**1**
Number of attendees per group:	Less than 5		1		-		1
	5 to 10		1		1		-
	11 to 20		1		-		-
	More than 20		3		2		-
Jurisdictions of interest for respondents#							
	National	3		1		-	
	NSW	1		-		-	
	Queensland	18		6		3	
	NT	8		7		-	
	SA	2		-		-	
	WA	2		2		1	
	Victoria	1		-		-	
	Tasmania	-		-		-	
	ACT	-		-		-	

Note: Some groups indicated large numbers – considerably more than 20 and in some instances more than 100. It was not clear how many individuals provided actual input. For the purpose of estimating the numbers who provided actual input we have used a figure of 20 individuals for groups that were reported to be larger than 20. The estimated number of people providing input may therefore be conservative.

Numbers may not tally with total number of respondents, as respondents were able to select multiple answers and groups may have selected a jurisdiction collectively.

5.2 Phase 1: Identifying priority evidence-practice gaps

During Phase 1 we presented national clinical audit and systems assessment data across maternal health care and asked stakeholders to identify priority evidence-practice gaps. A total of 1091 records and 58 systems assessments were included from 65 health centres.

To start the discussion, the ABCD Project team and a clinical expert identified a preliminary set of priorities using the following criteria:

a. important aspects of comprehensive PHC that were generally recorded at low levels;

b. aspects of care where there was wide variation in recorded delivery of care;

c. basic aspects of clinical care that were being delivered and recorded at a high level of performance by the majority of health centres, but that were being delivered at a much lower level by a proportion of health centres; and

d. components of PHC centre systems that were relatively poorly developed.

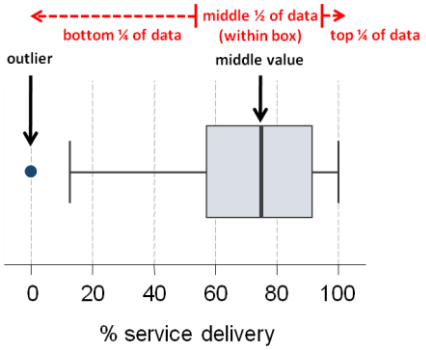
Although a proportion of health centres are doing well in many key aspects of maternal health care, there is wide variation between health centres in most aspects of maternal health care.

The data and preliminary priorities were circulated to key stakeholders. The data were presented as boxplots to show distribution of performance across health centres (Figure 3).

Figure 3. How to read boxplots representing service delivery in 2012-2014

Box and whisker plots show:

- 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);
- range of 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).



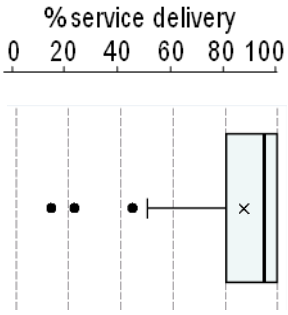
The report was accompanied by an online survey that asked respondents to comment on the importance of each of the preliminary priorities; whether the number of priorities was about right, too many or too few; whether they aligned with priorities they were already aware of; and whether other priorities should be included. Just over 110 people (27 individuals and 6 group responses on behalf of 85 people) provided input. The evidence-practice gaps identified as priorities for improvement in Phase 1 are listed below. More detail on these and other parameters are presented in the data supplement and in Appendix D.

Figure 4. ***Evidence Practice Gap priorities with a selection of representative indicators from Phase 1 report (n=health centres, patient records)***

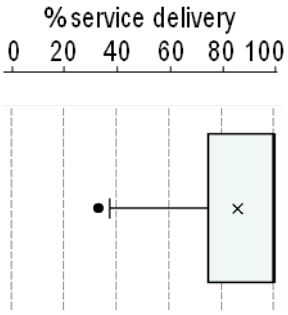
1. Enquiry about smoking and giving advice about how to stop smoking in pregnancy (97% of respondents regarded this as a priority area)

Smoking status recorded –

1st trimester
(n=65; 662)



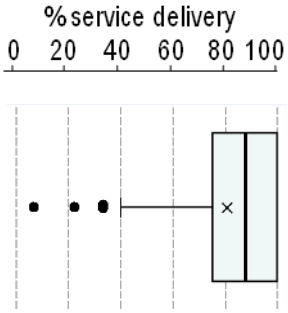
Record of brief intervention if documented as smoker
(n=64; 559)



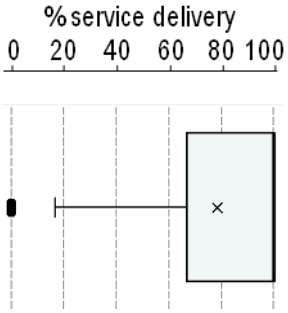
2. Enquiry about drinking alcohol and delivering brief counselling early in pregnancy (94% of respondents regarded this as a priority area)

Alcohol use status recorded –

1st trimester
(n=65; 662)



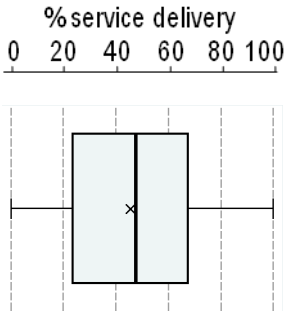
Record of brief intervention if documented as drinking alcohol during pregnancy
(n=53; 165)



3. Social risk factor assessment in pregnancy and, if evidence of social risk, record of referral to appropriate services (94% regarded this a priority area)

Record of social risk factor assessment
(n=65; 1091)

If evidence of social risk, record of any consultation and/or referral to medical practitioner
(n=57; 326)

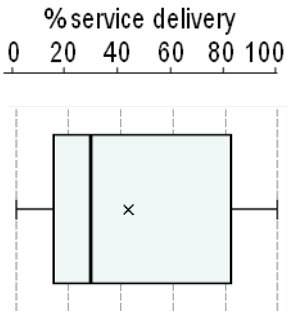


4. Emotional wellbeing support during pregnancy

Screening all pregnant women for emotional wellbeing (91% regarded this a priority area)

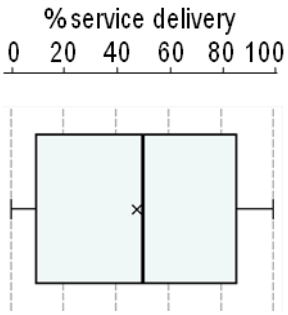
Following-up with women identified as 'at risk' based on emotional wellbeing assessment in pregnancy (94% regarded this a priority area)

Emotional wellbeing screening using a standard tool
(n=65; 1091)



If assessed 'at risk', is there a record within 3 months of:

a) referral to external service
(n=52; 235)

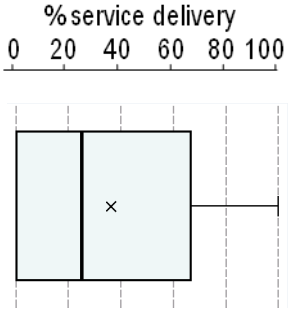


5. Discussing Sudden Unexpected Death in Infancy (SUDI)[2] prevention at the postnatal visit

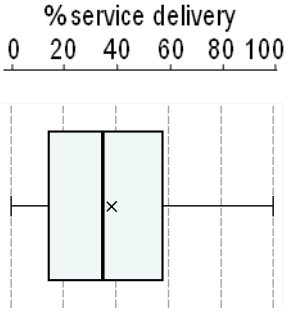
Discussing how to protect babies from Sudden Infant Death Syndrome (SIDS) and how important it is to keep a safe environment for the baby (94% regarded this a priority area)

Discussing smoking and how a smoking environment increases the risk of SIDS (91% regarded this a priority area)

Recorded discussion of SIDS prevention during postnatal visit
(n=65; 791)

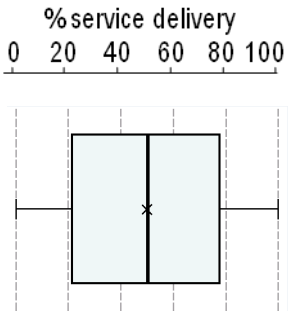


Recorded discussion of smoking during the postnatal visit
(n=65; 791)



6. Discussing diet and nutrition for the mother and baby at the postnatal visit (94% regarded this a priority area)

Recorded discussion of nutrition during the postnatal visit
(n=65; 791)



The majority of respondents stated that the evidence-practice gaps highlighted in Phase 1 were consistent with their views prior to reading the report. Most reflected that the priority evidence-practice gaps for their

[2] Sudden Unexpected Death in infancy (SUDI) is the term now used for infant deaths with no apparent cause and this includes Sudden Infant Death Syndrome (SIDS) and fatal sleeping accidents. SIDS is used in some places in this report to be consistent with the term used in the Maternal Health Clinical Audit Tool and Protocol.

State/Territory would be the same as those arising from the national data. A few respondents also highlighted other priorities that were not identified in the Phase 1 data: family wellbeing and family support during pregnancy and at the time of birth, preconception health, effective, practical and sustainable risk-factor interventions, and availability of appropriate local resources for emotional and social wellbeing support.

5.3 Phase 2: Identifying barriers and enablers to addressing the priority evidence–practice gaps and strategies for improvement

In the second phase, we presented trend audit data (2007-2014: 4402 audited records from 91 health centres) in boxplots. This examined variation over time in the priority evidence-practice gaps (Figure 5). We asked respondents to focus on the general trends and also whether the variation between health centres was getting less, and whether there was improvement for health centres at the lower end of the range. Table 3 summarises the trend data presented in the Phase 2 report (see Data Supplement).

Figure 5. Interpretation of boxplots

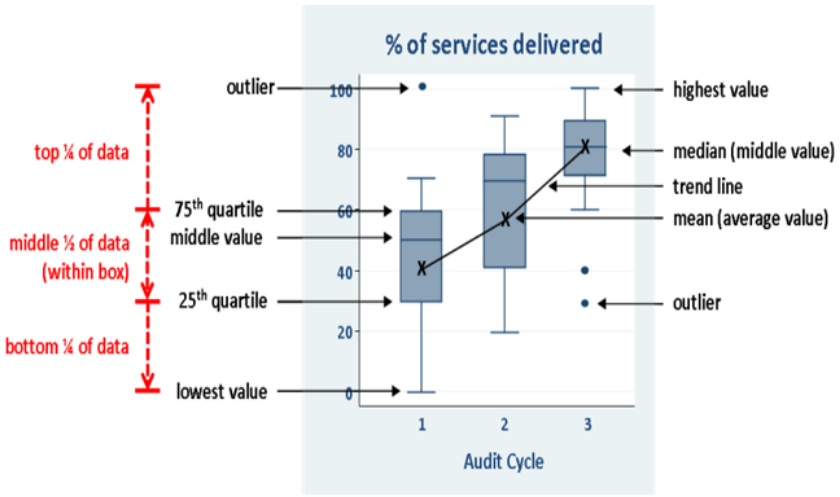
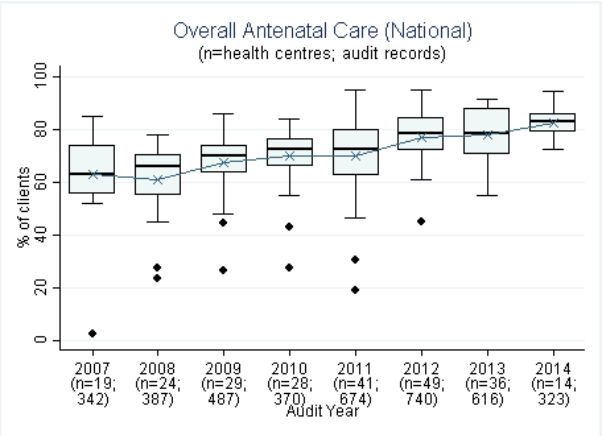


Table 3. Trends in key indicators of the priority evidence-practice gaps.

Over years 2007-2014

- There have been clear improvements in the overall service delivery of pregnancy care.
- There was no clear reduction in variation in pregnancy care between health centres.
- In general, pregnancy care is currently delivered at higher levels than postnatal care.

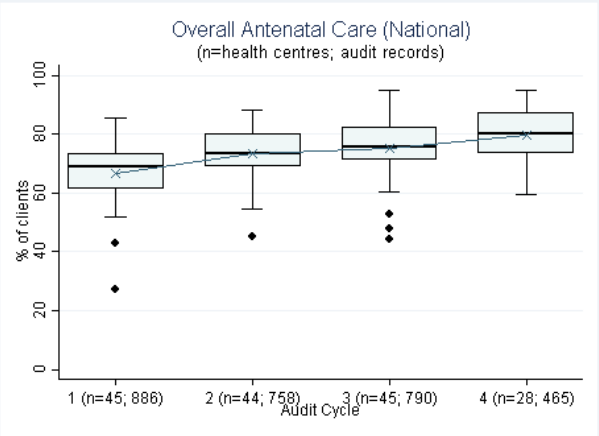
Example indicator from Phase 2 report
Overall pregnancy care*



*Antenatal composite indicator includes 26 best practice indicators present in the maternal health audit tool: ≥7 antenatal visits, estimated gestational age ≤13 weeks at first antenatal visit, blood pressure (1st, 2nd & 3rd trimester), urinalysis (1st & 2nd trimester), body mass index (1st trimester), fundal height (2nd & 3rd trimester), foetal movements (3rd trimester), blood glucose (2nd trimester), documentation of blood group, antibody status, rubella, Hepatitis B status, mid-stream urine test, full blood examination, Syphilis serology, HIV, PCR test, smoking status recorded (1st & 3rd trimester), drinking status recorded (1st & 3rd trimester), social risk assessment, emotional wellbeing assessment, discussion on plans for care and birthing, nutrition, breastfeeding, domestic and social environment and cultural considerations.

Over at least three audit cycles

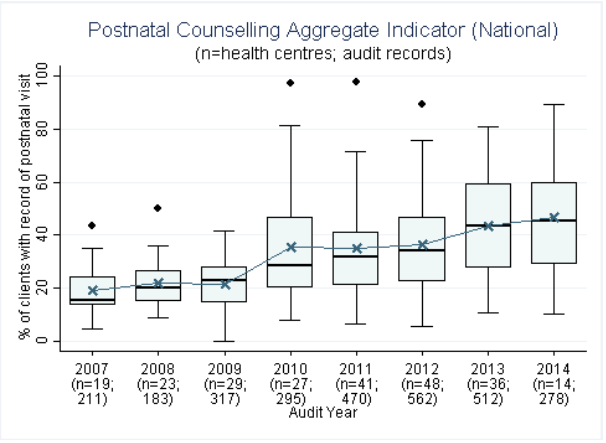
- For health centres that completed three or more maternal health audit cycles, there were improvements in the mean level of overall service delivery related to pregnancy care.
- There was no evidence of reduced variation between health centres over successive audit cycles.



Over years 2007-2014

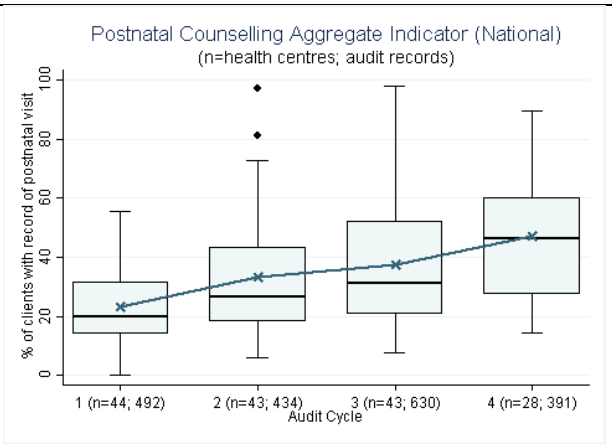
- There have been clear improvements in the overall service delivery of postnatal care.
- Variation in postnatal care increased between health centres over time. This suggests large improvements at some health centres and little or no improvement at some health centres.

Example indicator from Phase 2 report
Overall postnatal care*



Over at least three audit cycles

- There were improvements in the mean level of overall service delivery related to postnatal care.
- However there was no evidence of reduced variation between health centres over successive audit cycles.



We encouraged stakeholders to reflect on what may have influenced the trends, and on their experience in PHC, to identify barriers and enablers to improvement. To assist this process, we listed health centre, system and staff attributes drawn from international and national research [10,12,13] that could present potential obstacles to improvement. Respondents were asked to agree or disagree with whether attributes are in place to support best practice in maternal health care, with particular relevance to the priority evidence-

*Postnatal composite indicator includes 15 best practice indicators: brief interventions and counselling for smoking, nutrition, breastfeeding, infection prevention, injury prevention, SIDS prevention, alcohol & other substance abuse, physical activity, mood (depression), contraception, domestic and social environment, social and family support, financial situation, housing condition and food security.

practice gaps. Approximately 60 stakeholders (10 individuals and 3 group responses on behalf of approximately 50 people) provided input. They were from the community-controlled and government health sectors, Primary Health Care Networks or Medicare Locals, and research organisations. Their roles included nurses, midwives, doctors, middle and senior management, board members, researchers, Aboriginal and/or Torres Strait Islander Health Practitioners or Workers, CQI facilitators and community members. We also drew on the qualitative comments from several Phase 1 survey respondents who identified barriers and enablers to improvement and/or strategies to address gaps.

The attributes of health centres and the health system that are in place (as agreed or disagreed by two thirds or more of respondents) are listed below. Appendix E has all responses.

Finance, resources, facilities and equipment

Most respondents agreed that health centres generally have adequate equipment to support best practice in maternal health care. There were mixed views on whether there is sufficient financial support and PHC services are of adequate size, design and condition.

Staffing/workforce support, recruitment and retention

In terms of staff roles, most respondents agreed that health centres generally have the appropriate number of medical specialists and administrative staff, but strongly disagreed that there are appropriate numbers of Aboriginal and/or Torres Strait Islander Health Practitioners/Workers. Most respondents disagreed that there are good systems in place to ensure PHC staff have support from experienced staff, especially when health centres are affected by staff turnover or shortages. In terms of systems to recruit, retain and support specific roles, respondents felt that while there are generally adequate systems relating to GPs, there is more work to be done to recruit, retain and support Aboriginal and/or Torres Strait Islander Health Practitioners/Workers. Some respondents emphasised the importance of midwives in conducting and coordinating best practice maternal health care for both well women and women with complex care needs.

Training and development

The majority of respondents strongly agreed that there are generally good systems in place to support staff development, including development of knowledge and skills.

Teamwork

The majority of respondents felt that generally PHC staff function effectively in teams and are clear about their roles in relation to other team members.

Patient-centred care

The majority of respondents indicated there are not adequate systems in place to support all members of the PHC team to:

- understand the needs and aspirations of Aboriginal and Torres Strait Islander communities
- provide care that is respectful of and responsive to individual patient preferences, needs and values and that patient values guide all clinical decisions

Some respondents specifically noted the importance of understanding the socioeconomic determinants of health in the local region and the environment that the individual woman lives in. Examples included housing availability and conditions, food availability and accessibility, transport, and safety at home.

Decision support

Most respondents agreed that best-practice guidelines and other decision support resources are available to PHC staff and that staff are adequately trained to use these resources.

Quality improvement systems

There were mixed views about whether adequate training, tools, processes, managerial support and ownership are in place to support quality improvement. Some respondents highlighted the importance of CQI training for new PHC staff and protected time for CQI champions.

Community capacity, engagement and mobilisation

Most respondents disagreed that there are good systems in place to increase the expectation of community members regarding best practice care and to enhance the health literacy of community members. Most respondents disagreed that there are good systems in place to build the capability of PHC staff and to support them to develop effective links and work in partnership with communities.

Staff attributes

The majority of respondents strongly agreed that the following staff attributes are in place and support best practice in maternal health care:

- Knowing the content and objective of best practice care.
- Recognising their professional responsibility to provide best practice maternal health care for Aboriginal and Torres Strait Islander women.
- Believing that best practice maternal health care will have benefits at a population level.
- A very strong intention to provide best practice maternal health care every day.
- Most people of influence in PHC services are seen to support provision of best practice maternal health care to Aboriginal and Torres Strait Islander people.

There were mixed views about whether PHC staff who provide maternal health care for Aboriginal and Torres Strait Islander women currently enjoy their day-to-day work activities or feel unhappy anxious or depressed about their work.

Some respondents specifically noted a need for adequate systems to support the wellbeing of a largely passionate and committed workforce, particularly around workloads, time, backfill, annual leave, staff turnover and reflective practice.

There were mixed views about whether health centre and health system attributes or staff attributes are of greater relative importance for achieving improvements in the priority evidence-practice gaps, or whether they are of equal importance.

5.4 Strategies for addressing the priority evidence-practice gaps

We presented a brief synthesis of published evidence on improving the quality of Aboriginal and Torres Strait Islander PHC (Appendix F). The purpose of this 'evidence brief' was to stimulate feedback on strategies to overcome the identified barriers and enablers. Nine of the 13 respondents suggested strategies for addressing the priority evidence-practice gaps.

Respondents proposed the following strategies:

- Prioritise, support and increase availability of regular training/upskilling for all PHC staff in:

  - How to ask women about smoking, alcohol use, social risk factors, nutrition, emotional wellbeing and SUDI in culturally appropriate, non-judgemental ways.
  - How to provide brief psychosocial interventions (such as smoking cessation advice and motivational interviewing) to support self-management.
  - Social and emotional wellbeing screening, including the existing evidence base, the tools that exist for assessing psychosocial risk factors and symptoms of depression and anxiety in pregnancy, and how these can be applied or adapted to the local context (including community consultation).
- Identify and share evidence-based information about effective and sustainable interventions.
- Establish or enhance clear referral processes to support clinical decision making and to link women either to PHC staff with the appropriate skills and training (such as allied health or tobacco cessation workers) or to external local services.
- Work with communities on health promotion projects relating to smoking, alcohol and foetal alcohol spectrum disorder and SUDI risk reduction to ensure they are community-led and co-developed.
- Co-develop or adapt locally relevant resources with community to support client education, using different types of media and communication (pictures, posters, electronic or social media). Provide training for staff to use the resources.
- Support consistent application of care for these priority areas by embedding them as core parts of pregnancy and post-natal checks. Include in quality audits and activities.
- Incorporate prompts in electronic health records to remind staff to cover these areas with women and to document delivery. Include links to resources for staff and client to support delivery.
- Establish systems to promote continuity of care before, during and after pregnancy and involving midwives and Aboriginal and/or Torres Strait Islander Health Practitioners/Workers. Embed these priority areas in infant health programs as well.
- Establish or enhance systems to support comprehensive maternal health care, such as availability of specialist midwives, or midwifery coordinators in governance roles.
- Advocate for increased availability, accessibility and cultural appropriateness of local services to refer women to, particularly for social and emotional wellbeing.
- Advocate for increased availability and accessibility of healthy food and housing.
- Establish a specific women's and maternal health strategy for the health service that has the support of the health service leadership.

The ESP trend data shows that overall delivery of both pregnancy and postnatal care increased between 2007 and 2014. Overall delivery also increased over successive cycles at health centres that completed three or more cycles. Previous ABCD research [15,16] found that improvements in pregnancy care appeared to be sustained over successive audit cycles. There was also a trend for additional improvements with each additional cycle. This indicates the potential benefit of a sustained commitment to CQI. The previous research also found that higher average systems assessment scores were associated with higher delivery of pregnancy care indicators. This supports focussing on PHC systems and processes to strengthen delivery of maternal health care.

Often stakeholders suggested the same or similar strategies to address different evidence-practice gaps. One example is training and upskilling PHC staff to confidently provide best-practice care relating to psychosocial issues such as alcohol use, smoking or social and emotional wellbeing. Another example is to advocate for increased availability, accessibility and cultural appropriateness of local services to refer women to. Partnerships with communities on health promotion projects and resource development was also suggested for several of the priority areas, as were systems to promote continuity of care and clear referral pathways. These strategies are examples of how focussing on strengthening systems and processes may strengthen delivery of multiple aspects of maternal health care. Some of the strategies can be implemented within health centres while others require partnerships with communities, external services and policy makers.

5.5 Final review of the draft report

We sent the draft final report to stakeholders to confirm that we have accurately reflected their feedback about barriers and enablers and strategies for improvement. This final phase also gathered suggestions for how to disseminate the findings. Five responses were received (both individual and group responses), providing feedback from nine people in a variety of roles. Respondents indicated that the information in the report was well presented, though one respondent felt the wording of the report could be simplified. Taking a short-term funding approach to midwifery-led pregnancy care and Aboriginal and Torres Strait Islander women's health was identified as an additional barrier to supporting best-practice maternal health care. Supporting Aboriginal and/or Torres Strait Islander doctors and nurses with language skills and cultural knowledge was identified as an additional enabler. All respondents indicated that the ESP process had improved their understanding of how to use aggregated CQI data to inform decision-making.

6 ESP Project strengths and limitations

The dataset used for the ESP Project is the most comprehensive and broad scale dataset relating to health centre performance available for Aboriginal and Torres Strait Islander maternal health care. As stated, the aggregated CQI data are from 4402 clinical records of patients from multiple services across several jurisdictions, audited against best practice over multiple audit cycles. From this evidence base, stakeholders were able to identify current priority evidence-practice gaps.

An open process was used to engage stakeholders, consistent with the principle that 'CQI is everybody's business'. Stakeholders could choose to participate in any or all project phases. However, the ESP project has relied, in part, on stakeholders sending reports to others. This means it is not possible to accurately measure reach or response rates. Although the survey information from Phase 2 may be of limited generalisability, it is valuable because it reflects knowledge of front-line health workers and others working within the health system. In recognition that barriers exist across multiple levels of the health sector, we included questions on broader health centre and system attributes in the Phase 2 survey. These additional questions have not been validated like the other questions covering the theoretical domains framework.

Responses to surveys could be made as an individual or representing a group. We have actively encouraged the facilitation of group discussion and group responses.

It will be important that the detailed design of strategies is based on published evidence and expert knowledge. Strategies implemented in community settings need to be developed or adapted by people with local knowledge. It will also be important to evaluate the effectiveness of these strategies in a range of contexts. If intervention efforts are documented appropriately, using this theory-based process will assist to build the knowledge base of what works and in what contexts.

An iterative process was used to develop and refine reports through the project phases, with adjustments to content and presentation made in response to stakeholder feedback. A concurrent developmental evaluation is guiding ESP process improvements. This has led to refinements being incorporated into the ESP projects on other aspects of Aboriginal and Torres Strait Islander PHC.

7 Conclusions

Through the ESP process stakeholders identified eight priority evidence-practice gaps in maternal health care. These priorities affect the health of women and babies, physical and psychosocial wellbeing and are across both pregnancy and postnatal care.

Stakeholders identified health centre and health system attributes that could be strengthened to support best-practice maternal health care. These include systems to support workforce recruitment and retention, to provide patient-centred care, and to strengthen community capacity and, engagement.

Often stakeholders suggested the same or similar strategies to address different evidence-practice gaps.

The identified barriers and suggested strategies present opportunities to improve health care and health outcomes for Aboriginal and Torres Strait Islander women and their families. Our hope is that the suggested strategies will spark conversations and ideas on how to address the known barriers to care, and that these will lead to wide-scale action for improving care.

To our knowledge, this is the first use of a large-scale aggregated CQI dataset, beyond the regional level, to enable stakeholders to prioritise gaps in delivery of best practice maternal health care in Aboriginal and Torres Strait Islander communities. The main purpose of ESP was to use aggregated CQI data to stimulate conversation on priority areas for improvement and how best to achieve improvement. Implementation research suggests that interventions focussed on the key barriers and enablers of good performance are more likely to produce the desired change.

We encourage stakeholders to take on the key messages and utilise the report, along with the aggregated CQI data, to implement and advocate for change at the local, regional and national level.

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Appendix A: Data collection and reporting

Where do the data in this report come from? The report is based on analysis of audits of clinical records of new mothers who attend services that use One21seventy CQI tools AND participate in the ABCD National Research Partnership. The maternal health audit tool was developed by an expert working group, with participation of experts and health service staff. 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 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 maternal health care delivery. Copies of the One21seventy Maternal 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 CQI facilitators. The systems assessment is completed by health centre staff in a process that is facilitated by a CQI 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 processes. 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 CQI efforts. The ESP Project is intended to contribute to enhancing the quality of reporting and use of aggregated CQI 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 client 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 systems, 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. We have no way of collecting data or reporting on services that are not recorded. 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: To be eligible for inclusion in a maternal health clinical audit, a client must: have an infant between 2 and 14 months; have been resident in the community for 6 months of the infant's gestation; and be expected to use the health service as her usual source of primary health care. Where the eligible population is 30 clients 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.

Systems assessment data

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 tool and from the World Health Organization's Innovative Care for Chronic Conditions 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 (Table A1). These five components are incorporated into the SAT. Each component contains a number of items that health centre teams (managers and staff) discuss and come to a consensus about how well their systems are working. 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.

Table A1: 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.	• 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.	• 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.	• 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.	• 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.	• Organisational commitment • Quality improvement strategies • Integration of health system components.

Appendix B: ESP Project processes

Phase 1 – Evidence-practice gaps

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

Information provided to participants

1. aggregated continuous quality improvement data (2012-2014) about the delivery of care presented in national and State/Territory reports
2. preliminary priority areas for improvement, based on national data

Feedback/data collection

Online survey, workshop sessions and email responses.

Outputs

Draft report on preliminary priority evidence-practice gaps in best practice care. Refinements based on stakeholder feedback and survey data will be incorporated into Phase 2 report.

Phase 2 – Barriers and enablers to addressing gaps and strategies for improvement

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:

1. identify those factors that may be most important in addressing the identified priority evidence-practice gaps in best practice care identified in Phase 1.
2. identify new or existing strategies that could be introduced or strengthened to enable improvement in priority evidence-practice gaps.

Information provided to participants

- Report on trends over time for key indicators relevant to priority evidence-practice gaps in best practice care.
- An evidence brief synthesising findings from research about barriers, enablers and strategies for improvement in the delivery of PHC, with particular attention to research in the Australian Aboriginal and Torres Strait Islander health context.

Feedback/data collection

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

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

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.

Appendix C: Survey respondents

	Phase 1		Phase 2		Draft final report review	
	Individual responses	**Group responses**	**Individual responses**	**Group responses**	**Individual responses**	**Group responses**
Number of responses	27	6	10	3	4	1
Number of attendees per group (recorded attendees in group)						
Less than 5		1		-		1
5 to 10		1		1		-
11 to 20		1		-		-
More than 20		3		2		-
Jurisdictions of interest for respondents*						
National	3		1		0	
NSW	1		0		0	
SA	2		0		0	
Queensland	18		6		3	
WA	2		2		1	
NT	8		7		0	
Victoria	1		0		0	
Tasmania	0		0		0	
ACT	0		0		0	
Rurality of population group to which responses relate*						
Urban	10		3		2	
Regional	21		4		2	
Remote	19		9		2	
Number of group responses to question about Indigenous status						
All		1		0		0
Majority (more than half)		1		2		0
Minority (less than half)		4		1		1
None		0		0		0
Number of individual responses identified as Indigenous						
Indigenous	4		1		0	
Non Indigenous	23		9		3	
Not stated	0		0		0	
Position types						
Nurse	1	3	0	2	1	1
Midwife	11	3	4	2	1	1
Middle Manager	0	2	0	1	0	0
Doctor	5	3	4	1	1	0

Public Health Physician	0	2	0	0	0	0
Other Medical Specialist	0	2	0	0	0	0
Senior Management/executive	1	1	1	1	0	0
CQI facilitator	2	0	0	1	0	0
Board member	0	0	0	1	0	0
Policy officer	0	1	0	0	0	0
Aboriginal and/or Torres Strait Islander practitioner or worker	1	4	0	3	0	1
Research/Academic	3	4	1	1	0	1
Other	3	3	0	1		0
Organisation types						
Community controlled health centre	8	3	5	1	1	1
Community controlled peak body	0	0	0	0	0	0
Government health centre	4	2	3	3	0	0
Government health department	10	1	0	0	1	1
Medicare Local	3	2	1	1	0	0
General Practice	2	1	0	0	0	0
University/Research organisation	5	4	1	1	1	1
Other	0	1	0	1	0	0

*Numbers may not tally with total number of respondents as respondents were able to select multiple answers

Appendix D: Responses to phase 1 survey on relative importance of gaps

Respondents were asked to rank the relative importance of the identified evidence-practice gaps on a scale of 1-10, where 10 is the most important and 1 is least important.

Table D1: Ranking by respondents of the most important gaps to address, scored 8 – 10.

Priority evidence-practice gaps	% and n
Enquiry about smoking and delivery of smoking cessation advice in pregnancy	32/33 (97%)
Enquiry about alcohol use and delivery of brief counselling early in pregnancy	29/31 (94%)
Social risk factor assessment and, if evidence of social risk, record of referral to appropriate services (during pregnancy)	31/33 (94%)
Provision of appropriate follow-up for women identified as at-risk based on emotional wellbeing assessment	31/33 (94%)
Discussion of SIDS prevention and the importance of keeping a safe environment for the baby (postnatal care)	30/32 (94%)
Discussion of diet and nutrition for the mother and baby (postnatal care)	30/32 (94%)
Emotional wellbeing screening for all women during pregnancy	30/33 (91%)
Discussion of smoking and the increased risk of SIDS in babies in a smoking environment (postnatal care)	30/33 (91%)
Pregnancy care visits before 13 weeks gestation	28/33 (85%)
Discussion of domestic/social environment (including social/family support, domestic violence, substance abuse/misuse) and available support services (during pregnancy)	28/33 (85%)
Discussion of domestic/social environment (including social/family support, domestic violence, substance abuse/misuse) and available support services during pregnancy (postnatal)	28/33 (85%)
Provision of anti-D injection if client is Rh factor negative with no antibodies at 28 and 34 weeks	28/33 (85%)
Provision of Rubella immunisation post-birth if client has a low or negative Rubella titre during pregnancy	28/33 (85%)
Continuity of care within the 'Delivery system design' component	26/31 (84%)
Discussion of infection prevention (washing hands, washing baby, nappy hygiene) (Postnatal care)	27/33 (82%)
Discussion of mood, changes following birth and risk factors for postnatal depression	26/33 (79%)
Education and support, behavioural risk reduction and peer support within the 'Self-Management Support' component	26/33 (79%)
Performing cardiotocographs (CTG) in response to abnormal foetal movements	25/33 (76%)
'Links with the community' to inform service and regional planning (in particular 'communication and cooperation on regional health planning, development of health resources, governance and operation of health centre'.	24/33 (73%)
Inclusion of a complete delivery summary sheet/letter in every medical record	23/33 (70%)
Discussion of benefits and appropriate preparation for and practice of breastfeeding (during pregnancy)	23/33 (70%)
Discussion of financial situation, housing condition and food security, and available support services (postnatal)	23/33 (70%)
Specialist-generalist collaborations within the 'Information systems and decision support' component	23/33 (70%)

Mid-stream urine tests following abnormal urinalysis results	23/33 (70%)
Discussion of financial situation, housing condition and food security, and available support services (during pregnancy)	22/33 (67%)
Discussion of cultural considerations (social and cultural aspects of pregnancy and care: Women's Business)	20/32 (63%)
Discussion of injury prevention and the importance of keeping a safe environment for the new mother	20/32 (63%)
Initiating kick charts in response to abnormal foetal movements	20/33 (61%)
Physical infrastructure, supplies and equipment within the 'Delivery system design' component	20/33 (61%)
Discussing foetal anomaly screening available in the area with all women and their supports	19/32 (59%)
Calculating and recording Body Mass Index (BMI) in the first trimester	19/33 (58%)
Folate supplementation prior to conception	18/33 (54%)
BMI management plans for all women	16/33 (48%)

Appendix E: Responses to Phase 2 survey on barriers and enablers to addressing priority evidence-practice gaps in maternal health care

Table E1: Responses regarding attributes of the health centre or broader health system environment that support best practice in maternal health care as relevant to the priority evidence-practice gaps. *(Data shows percentage (number) of respondents in each response category)*

		Strongly Disagree	Partly Disagree	Partly Agree	Strongly Agree	Don't know	No. of respondents
Within the socio-political context, there is sufficient financial support (e.g., from local/regional health authorities, government) to support best practice in maternal health care as relevant to the priority evidence-practice gaps		4	3	4	2	0	13
PHC facilities are generally of adequate, size, design, and condition		4	2	6	1	0	13
PHC facilities generally have adequate equipment		2	2	6	2	0	12
PHC centres generally have adequate numbers of staff		5	2	5	1	0	13
PHC centres generally have appropriate numbers of each of the following categories of staff	Nurses	1	4	7	0	0	12
	Aboriginal and/or Torres Strait Islander Health Practitioners/Workers	7	4	1	1	0	13
	Doctors (GPs)	3	3	6	1	0	13
	Medical specialists	1	3	7	2	0	13
	Allied health workers	3	2	8	0	0	13
	Administrative staff	2	1	10	0	0	13
There are good systems in place to ensure PHC staff have support from experienced staff, especially when health centres are affected by turnover of staff and staff shortages		6	4	2	0	0	12
There are good systems in place to recruit, retain and support each of the following categories of staff (full time or visiting) as integral members of PHC teams.	Nurses	4	3	5	0	0	12
	Aboriginal and/or Torres Strait Islander Health Practitioners/Workers	7	3	2	1	0	13
	Doctors (GPs)	2	1	8	1	1	13
	Medical specialists	2	3	4	1	2	12
	Allied health workers	4	4	5	0	0	13
	Administrative staff	4	3	4	0	2	13
PHC staff function effectively in teams		1	3	5	4	0	13
PHC staff are generally clear about their roles in relation to other members of the PHC team		1	2	5	4	1	13

	Strongly Disagree	Partly Disagree	Partly Agree	Strongly Agree	Don't know	No. of respondents
PHC staff are trained to work effectively in teams	2	4	4	1	1	12
There are good systems in place to support staff development, including the development of knowledge and skills required	1	2	6	3	1	13
There are good systems in place to support inter-organisational and intra-organisational learning	2	3	6	2	0	13
Staff are well trained in the principles of client self-management as relevant to maternal health care	2	5	3	3	0	13
There are good self-management resources that are relevant to maternal health care available to PHC staff	4	1	4	4	0	13
There are good systems in place to support all members of PHC teams in understanding the needs and aspirations of people living in Aboriginal and Torres Strait Islander communities for the purpose of providing best practice maternal health care	3	5	2	1	0	11
There are good systems in place to support all members of PHC teams to provide care that is respectful of and responsive to individual patient preferences, needs, and values, and ensuring that patient values guide all clinical decisions	2	7	1	1	0	11
There are good systems in place to train all members of PHC teams in providing patient-centred care for people living in Aboriginal and Torres Strait Islander communities	4	2	4	0	1	11
There are good systems in place to ensure PHC teams have a clear understanding of the size, diversity and other key features of their service populations and to apply this knowledge	2	3	4	1	1	11
There are good systems in place to ensure PHC teams are able to apply the principles of population health	3	4	2	1	1	11
There are good systems in place to ensure PHC teams staff are well trained in the principles of population health	4	2	4	0	1	11
Best practice guidelines and other decision support resources are available to PHC staff	1	1	3	5	1	11
PHC staff are adequately trained to use the available best practice guidelines and other decision support resources	2	0	5	3	1	11
The clinical information systems and communication technology in place have the functionality to support provision of best practice care	4	2	2	2	1	11
PHC staff are trained and effectively supported to use clinical information systems and communication technology for supporting and providing best practice	2	2	6	0	1	11

	Strongly Disagree	Partly Disagree	Partly Agree	Strongly Agree	Don't know	No. of respondents
There are good quality improvement tools available in health centres for supporting and improving delivery of best practice care	3	0	6	1	1	11
There are good processes in place to support health centre staff to interpret quality improvement data, plan and implement strategies for improvement	4	1	4	1	1	11
PHC staff are adequately trained to use quality improvement tools and resources for supporting and improving delivery of best practice care	4	3	3	0	1	11
Managers are adequately trained to support effective use of quality improvement tools and resources for monitoring and enhancing delivery of best practice care	2	4	3	0	1	10
There is good local ownership by PHC staff of CQI data and CQI processes for supporting and improving delivery of best practice care	3	3	4	0	1	11
Managers provide clear and appropriate support for effective use of quality improvement tools and resources by PHC staff for monitoring and enhancing delivery of best practice care	5	2	3	0	1	11
PHC staff generally believe that CQI data and CQI processes can be used for supporting and improving delivery of best practice	0	3	5	1	1	10
There are good systems in place to increase the expectation of community members with regard to best practice care	5	2	2	0	1	10
There are good systems in place to strengthen community leadership for quality with regard to best practice	5	1	3	0	1	10
There are good systems in place to enhance the health literacy of community members with regard to best practice care	3	5	1	0	1	10
There are good systems in place to build the capability and to support PHC staff to develop effective links to work in partnership with the communities they serve in providing best practice care	1	7	2	0	0	10
There is good clinical and management leadership at the regional, state, national level for supporting and providing best practice	2	2	6	0	0	10
There are good networks and regional coordination between parties involved in supporting and providing best practice	2	2	4	1	0	9
Managers actively support the development of partnerships across the health sector for the purpose of enhancing delivery of best practice care	1	4	4	0	1	10

Note: Primary health care (PHC)

Table E2: Responses regarding attributes of health centre staff that support best practice in maternal health care *(Data show percentage (number) of respondents in each response category)*

	Strongly Disagree	Partly Disagree	Partly Agree	Strongly Agree	Don't know	No. of respondents
PHC staff know the content and objectives of best practice care	0	2	2	5	0	9
PHC staff are aware of how to provide best practice care in maternal health care for Aboriginal and Torres	0	3	3	3	0	9
PHC staff have the skills to provide best practice care in maternal health care for Aboriginal and Torres Strait Islander people	1	2	3	3	0	9
PHC staff recognise that it is their professional responsibility to provide best practice care in maternal health care for Aboriginal and Torres Strait Islander	0	2	2	5	0	9
PHC staff are confident in their ability to provide best practice care in maternal health care for Aboriginal and Torres Strait Islander people	0	1	5	3	0	9
With regard to providing best practice care in maternal health care for Aboriginal and Torres Strait Islander people, PHC staff are optimistic about the future	1	2	3	3	0	9
PHC staff believe that if they provide best practice care in maternal health care for Aboriginal and Torres Strait Islander people, it will have benefits for the health of Aboriginal and Torres Strait Islander people more generally at a population level	1	1	1	6	0	9
PHC staff believe that if they provide best practice care for Aboriginal and Torres Strait Islander people it will have disadvantages for their relationships with Aboriginal and Torres Strait Islander people	4	2	1	1	1	9
How strong is the intention of PHC staff to provide best practice care in maternal health care every day to Aboriginal and Torres Strait Islander people attending their services *Note response options: Not strong at all; Quite strong; Mostly strong; Always very strong; Don't know*	1	2	0	6	0	9
How often do PHC staff remember to provide best practice care in maternal health care for Aboriginal and Torres Strait Islander people *Note response options: Never; Occasionally; Often; Always; Don't know*	0	2	3	4	0	9
PHC staff believe that when they need to concentrate to provide best practice care in maternal health care for Aboriginal and Torres Strait Islander people, they have no trouble focusing their attention	1	1	5	2	0	9
Most people of influence in Aboriginal and Torres Strait Islander PHC services are seen by primary health care staff to support the provision of best practice care for Aboriginal and Torres Strait Islander people	0	1	1	5	2	9
Are PHC staff who provide maternal health care for Aboriginal and Torres Strait Islander people currently able to enjoy their normal day-to-day work activities? *Note response options: Never; Occasionally; Often; Always; Don't know*	0	5	2	2	0	9
Do PHC staff who currently provide maternal health care for Aboriginal and Torres Strait Islander people feel unhappy, anxious or depressed about their work? *Note response options: Never; Occasionally; Often; Always; Don't know*	0	4	3	1	1	9

Note: Primary health care (PHC)

Appendix F: Evidence Brief

Improving the quality of Aboriginal and Torres Strait Islander primary health care

What the research shows

This evidence brief has been prepared for the 'Engaging Stakeholders in Identifying Evidence-Practice Gaps and Strategies for Improvement in Primary Health Care (ESP)' project. You are invited to provide feedback to refine the brief, using the online project questionnaire**.**

The Aboriginal and Torres Strait Islander primary health care (PHC) sector has embraced continuous quality improvement (CQI) as a way of improving the overall quality of care delivered to Aboriginal and Torres Strait Islander Australians, in order to **improve health outcomes**. This evidence brief presents an overview of findings from local and international research about **barriers, enablers and strategies** for using CQI to make improvements in PHC quality.

Local research has reflected the diversity and complexity of Aboriginal and Torres Strait Islander PHC delivery – geographic diversity, remote-rural-urban health care settings and community-controlled, government, non-government or private providers. Data have been gathered in settings in which political, cultural, social, educational, technological, emotional and ideological factors interact in complex ways. Despite this diversity and complexity, there are some common messages from the research findings, which are supported by international literature about CQI.

Who is this evidence brief for?

Primary health care policy makers, managers, clinical governance groups. The information will also interest providers and practitioners.

Key messages

- Don't wait for perfect data before commencing CQI. Even where good quality data on care processes are not consistently available at the start, the use of data in CQI cycles can act as a catalyst for improved data quality. Meanwhile, invest in developing good health centre systems and staff skills in using data.
- Emphasise use of CQI data for improving care for patients and populations. Practical use of CQI data helps to motivate clinicians and managers to participate in CQI.
- Design improvement strategies to suit local conditions – or adapt strategies that are working successfully in similar settings.
- Build on staff skills and strengths to implement improvement strategies. Share success stories and information about CQI between health centres to enable learning between peers.
- Work on developing a common vision and culture for CQI. Address any underlying organisational leadership and management issues that may detract from implementing CQI.
- Empower Aboriginal and Torres Strait Islander staff and managers to lead, participate in and promote CQI, to ensure improvement strategies match local population and community needs.
- Invest in developing leadership for CQI at each level of the system.
- Use system-wide approaches to integrate CQI across the whole system. Use CQI processes to achieve large-scale change.

Don't wait for perfect data before commencing CQI. Even where good quality data on care processes are not consistently available at the start, the use of data in CQI cycles can act as a catalyst for improved data quality. Meanwhile, invest in developing good health centre systems and staff skills in using data.

In PHC generally, clinical information systems are often poor and fragmented. Policy makers may therefore find it difficult to access consistent and broad scale data on relative need, priorities, performance and quality of care. In addition, there is limited focus and capability at various levels of the system to manage, interpret and use data for the purpose of improving system performance[1], and skills in the use of data to inform improvements in service delivery appear highly variable across all levels of the health system[2,3].

The quality of data is important. Technical advancements (electronic patient information and recall systems, tools, guides, practice standards) can make CQI processes easier and quicker, but if CQI data are perceived to be inaccurate it will not be credible[4,5]. At the health centre level, there is evidence that the quality of health system data can be improved by staff carrying out audits of client records[4].

Competing pressures and perceptions about unreasonable workloads, poor resources and support are often seen as barriers to CQI in Aboriginal and Torres Strait Islander health centres. Staffing constraints influence capacity to deliver guideline-scheduled care – or to make improvements in care. Health centres able to sustain performance in the face of high staff turnover tend to have strong regional support systems together with commitment to good health centre systems[6].

Emphasise use of CQI data for improving care for patients and populations. Practical use of CQI data helps to motivate clinicians and managers to participate in CQI.

For CQI to work successfully, staff need to value the use of data for improvement purposes and believe they can influence change[6]. Local staff increase their support for CQI when they see demonstrated improvements in care and clinical outcomes for clients. Hands-on auditing and participation in feedback and planning sessions by nurses and Aboriginal and Torres Strait Islander practitioners also increases staff support[2,4].

Many staff in Aboriginal and Torres Strait Islander PHC have enthusiasm and a sense of urgency to improve health outcomes[4]. In remote areas in particular, staff may also have a sense of burden and hopelessness (due to long work hours and lack of apparent improvement in health and social determinants) that can lead to clinical inertia. Quality improvement initiatives have been demonstrated to boost morale in these contexts, because they can demonstrate that the hard work is producing results[4,6].

Design improvement strategies to suit local conditions – or adapt strategies that are working successfully in similar settings.

There is strong evidence that improving the quality of care requires a good match between the conditions or context for care delivery, and the strategies used to achieve improvement[7]. Decision makers need to consider **what works, for whom, under what conditions** when planning for improvement. A one-size-fits-all approach is unlikely to be successful. However, successful strategies for improvement may require taking on the core elements of a proven product or strategy and adapting the way it is presented or used locally[8].

Adaptability is important in large-scale application of strategies for improvement; however the underpinning logic of a new product or strategy should be made explicit, so implementers understand the core that should not be compromised. In addition, problem-solving suggestions may help implementers make adaptations for the local context[9]. This approach may help policy makers and program managers to meet the dual challenges of supporting large-scale

implementation of best practice, while also enabling local decision making and tailoring to specific needs.

Build on staff skills and strengths to implement improvement strategies. Share success stories and information about CQI between health centres to enable learning between peers.

Strategies for improvement need to build on the skills and attributes of the existing Aboriginal and Torres Strait Islander PHC workforce. Staff need to be involved in completing the latter steps of CQI cycles in order to strengthen the interpretation of data, but also to go beyond focusing only on data or specific indicators to define and act on systemic problems, including through group interpretation and community consultation[3]. The ability to work and communicate effectively in cross- and inter-cultural settings is a critical component of the skills and attributes needed to achieve improvements[10,11].

CQI networks and training events are important opportunities to build relationships, share CQI knowledge and learn practical information about 'what works' from others[2,3]. The remote location and geographic dispersion of many health centres serving Aboriginal and Torres Strait Islander populations mean that staff tend to value opportunities to connect through CQI and to form CQI networks[6].

How evidence was identified

We drew evidence from the ABCD program of work and other publications on CQI in Aboriginal and Torres Strait Islander PHC, then extended our search to include relevant national and international literature about implementation of CQI and innovations in PHC.

Work on developing a common vision and culture for CQI. Address any underlying organisational leadership and management issues that may detract from implementing CQI.

Effective and sustained quality improvement needs a shared understanding of the purpose of CQI and a common vision shared by multiple stakeholders. CQI needs to be embedded into the day to day work of front-line health workers, clinical leaders and managers through routines and relationships that function across and between organisations[4].

What helps to develop a culture of quality improvement?

- Top and middle managers aligned in their CQI vision and goals.
- Commitment to workforce development, with management and staff participation in CQI training at all levels of an organisation.
- Strong team orientation and 'no blame' culture.
- Active management of CQI (e.g., dedicated CQI facilitators, regular progress reviews)
- Use and promotion of small scale projects that demonstrate change is possible and which, if successful and appropriate, may be scaled up across the health system.
- Willingness to embrace change and initiative[4,5,12,13].

Organisations with a strong CQI culture treat barriers such as funding or staff shortages as motivators for CQI. Instead of being viewed as 'extra work', CQI is seen as 'a way of working smarter and making jobs easier'. Disruptions such as restructuring or disease outbreaks can slow CQI work, but can also be used as a platform to apply CQI approaches in responding to the issue[13].

Where there is a culture of CQI, staff values are more likely to align with best practice in Aboriginal and Torres Strait Islander PHC[1].

Where there is poor management, uncertainty and confusion over roles, staff are discouraged and place less value on their data. Interventions to tackle unfavourable service delivery conditions need to be developed alongside CQI implementation[6].

Poor support for collaboration for CQI can lead to competitiveness, fatigue, staff who feel disillusioned with CQI and lack of cooperation. Identifying health centres with similar conditions and working to build adequate trust for networking might help staff believe they can influence change[6].

Empower Aboriginal and Torres Strait Islander staff and managers to lead, participate in and promote CQI, to ensure improvement strategies match local population and community needs.

Aboriginal and Torres Strait Islander leadership in CQI is most important[4,5,14], for example, through active involvement of community health boards or Aboriginal and Torres Strait Islander staff and managers committed to CQI. This leadership for CQI can help ensure the 'cultural, linguistic and practical relevance of health care and population health services'[14].

When planning or implementing strategies for change, the risk of overlooking cultural and historical influences on Aboriginal and Torres Strait Islander health care contexts is reduced where Aboriginal and Torres Strait Islander health practitioners actively lead or are engaged in CQI initiatives. Aboriginal and Torres Strait Islander health practitioners' involvement in clinical care and CQI processes is important in influencing the extent to which CQI processes result in improvements in delivery of guideline-scheduled services[15].

In Aboriginal and Torres Strait Islander settings the credibility of a strategy for improvement is likely to be influenced by who makes the decision to adopt a particular strategy, and how that decision is made[10,16].

Invest in developing leadership for CQI at each level of the system.

Leadership for improving the quality of care is needed at all levels of the health system to guide, support and facilitate CQI efforts[4,5,7,13]. Leaders for CQI are not necessarily in management roles; 'distributed' leadership with leadership functions vested in 'a set of people who can collectively perform them' is effective[12]. Shared responsibility and control of CQI by local staff as well as area/regional and jurisdiction managers is important for successful and sustainable CQI in health systems[5,17].

The attitudes of leaders and managers within the health system towards CQI can influence how clinic staff respond[4,13]. If management or reporting requirements are focused more on using data for accountability than to drive improvements in care, other managers and staff are likely to be suspicious of CQI and perceive it as 'checking up'[3-5].

Use system-wide approaches to integrate CQI across the whole system. Use CQI processes to achieve large-scale change.

The Australian health system operates at three levels; the service and health centre level (individual organisations), the regional level (regional and state/territory health bodies, community-controlled peak bodies, general practice networks), and the national level (nationwide policies and programs, accreditation and regulatory regimes)[18]. At each level, multiple factors influence the context in which improvement might take place. What happens at each level is partly dependent on, and influences, what happens at other levels. So achieving large-scale improvement in the quality of care is likely to require specific attention at each level of the health system[7].

Mechanisms needed to support improvement at the upper levels of the system are often overlooked. Large-scale change may require a package of interventions and long term 'institution-building' for regional and national level organisations to adapt to new ways of functioning[19].

Building a system wide and sustainable approach to CQI across Aboriginal and Torres Strait Islander PHC centres requires certain and sustained funding[3,5]. Dedicated funding has resulted in measurable improvement outcomes in service delivery, often achieved by allocating responsibility for CQI processes to a particular staff member and/or establishing regional quality

systems[5,6,15]. Resources invested in CQI facilitator roles enable health centres to move to a higher level of capability and capacity in CQI[3].

Applied system-wide, integrated CQI uses multi-site, multi-faceted approaches that reflect the enablers described by the evidence and aim to achieve change at various levels of the system. In successfully integrated CQI models, CQI programs are: part of core business (rather than an add-on or one-off project); engage front-line workers, clinical leaders, and managers in CQI processes; distribute leadership for CQI across the whole

health system; use CQI processes and tools to address multiple enablers of good quality care, and; use data from different stakeholders at different levels of relevant organisations to understand and inform broader system level performance[17,20,21].

A **Partnership Learning Model**[20] illustrates how large-scale change can lead to improved Aboriginal and Torres Strait Islander population health outcomes, through the interaction of comprehensive PHC, integrated CQI, system-based research networks, and system-based participatory action research. In its development and application through the ABCD National Research Partnership (2010-2014), the model showed potential for achieving wide-scale engagement of researchers, practitioners, managers, and policy makers in efforts to scale-up and spread effective quality improvement programs. It provides mechanisms to build or strengthen the capacity of a health system to continually work towards improving its performance.

For more information

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