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# EVALUATION OF THE NORTHERN TERRITORY CONTINUOUS QUALITY IMPROVEMENT (CQI) INVESTMENT STRATEGY

**FINAL REPORT**

**30 June 2013**

**Evaluation of the Northern Territory Continuous Quality Improvement (CQI) Investment Strategy: Final report**

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This report has been prepared for the Australian Government Department of Health by Allen and Clarke Policy and Regulatory Specialists Limited, trading as *Allen + Clarke*, and does not necessarily represent the views of the Australian Government.

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Allen and Clarke 2013, *Evaluation of the Northern Territory Continuous Quality Improvement (CQI) Investment Strategy: Final report,* Department of Health, Canberra.

**Note:**

A summary version of this full evaluation report is also available.

# CONTENTS

# EXECUTIVE SUMMARY

This report contains the findings and recommendation from an evaluation of the Northern Territory (NT) Continuous Quality Improvement Investment Strategy (CQI Strategy). The CQI Strategy is being developed and implemented in the NT Aboriginal primary health care (PHC) sector. The purpose of the evaluation is to determine the effectiveness, appropriateness and efficiency of the CQI Strategy. It is intended that the evaluation findings and recommendations will inform the ongoing implementation of the CQI Strategy, and national considerations relating to CQI in Indigenous health.

## The CQI Strategy

The overall goal of the CQI Strategy is to build a consistent approach to CQI across the NT Aboriginal PHC sector to support sustainable, long term service reform and improvement. It is part of a wider suite of PHC reforms occurring in the sector aimed at improving the quality of health service delivery and health outcomes in the Aboriginal population. The CQI Strategy includes four major components:

1. Establishment of a CQI planning and governance committee.
2. Engagement of two CQI Coordinators to provide leadership in implementing the CQI Strategy.
3. Funding to support regional CQI Facilitators.
4. A comprehensive evaluation of the CQI Strategy.

The NT AHF agreed to the proposed CQI Strategy in April 2009. It has received funding of $2.79 million per annum in each of the four years since then to support the implementation of the above components.

## Evaluation objectives

The evaluation includes four overarching objectives and a set of more detailed objectives for each. The overarching objectives and questions are:

| Objective | Question |
|---|---|
| Effectiveness | What are the key achievements and outcomes of the CQI Strategy? |
| Barriers and enablers | What barriers and enablers have contributed to the success or otherwise of the CQI Strategy to date? |
| Appropriateness | To what extent is the CQI Strategy an appropriate response to improve quality in Aboriginal PHC sector in the NT? |
| Efficiency | To what extent does the investment in CQI in the NT Aboriginal PHC sector represent good value for money? |

## Methods

The evaluation involved four key phases of activity: scoping; description of the CQI Strategy and analysis of available data; site visits and case study data collection; and analysis, reporting and dissemination. It involved multiple information sources and mixed methods, including:

- five case studies, involving site visits to six health services, interviews with health service staff, and administered surveys
- key informant interviews with CQI and PHC experts
- an evidence review of CQI theory and best practice
- a document review on the CQI Strategy
- a review and analysis of CQI data and other relevant datasets
- a sense making workshop.

The evaluation also involved working collaboratively with an Evaluation Steering Committee comprised of representatives of the three main partner organisations – Department of Health and Ageing (Office for Aboriginal and Torres Strait Islander Health), NT Department of Health, and the Aboriginal Medical Services Alliance of the Northern Territory (AMSANT) – as well as a CQI Coordinator and a Regional Manager of a health service.

## Key findings

### What are the key achievements and outcomes of the CQI Strategy?

The CQI Strategy has been successful in establishing the practice of quality improvement across the NT Aboriginal PHC sector. It has capitalised on the NT's rich history of PHC innovation in areas such as community control, chronic disease management and use of performance indicators to build the beginnings of a system wide culture of quality improvement.

There is a high level of participation in CQI across health service staff in the NT as a result of the CQI Strategy. Depth of engagement in CQI is more variable; many health service staff see CQI as a discrete task carried out in addition to clinical duties, rather than embedded as part of their core practice. Engagement is largely driven by CQI Facilitators.

Capability and capacity in CQI has increased as a result of the CQI Strategy with a number of staff demonstrating very high levels of competence. As with engagement in CQI, there has been differential growth in capability and capacity, and ability tends to sit more within individuals than within organisations. While those with higher CQI capability and capacity sat in various roles in different parts of the NT health system, there appeared to be greater capacity within centralised roles in the DoH and health centre manager and clinician roles in larger health services. Conversely, there appeared to be less capacity in middle management roles, and in management and clinical roles in smaller health centres. These centres were more reliant on the external capacity provided through the regional CQI Facilitators.

There has been a great deal and wide range of CQI activities supported under the Strategy. Many of these activities are based around tools and practices specifically developed for CQI, such as the One21seventy tools and plan-do-study-act (PDSA) cycles. Other activities supported under the CQI Strategy fit outside common definitions of 'CQI', such as preparing staff induction resources and monitoring progress against operational plans. While there is a high uptake of CQI tools and practices, there has been a tendency for activities to focus on the earlier stages of CQI cycles (e.g. data collection and auditing) with less emphasis on completing cycles (e.g. undertaking interpretive analysis and action planning).

The CQI Strategy has led to increased interpretation and use of clinical data at the health service level, and services are beginning to share, compare and benchmark data at a regional level. The quality of data collection has also improved as a result of participation in CQI processes. This is the result of formal training in data systems and tools (e.g. electronic patient information systems, ePIRS), CQI Facilitators and others playing an active role in validating NT Aboriginal Health Key Performance Indicator (AHKPI) reports, and staff realising the importance of accurate data collection during their participation in CQI audit processes. NT AHKPI data is not widely used for CQI on its own; however, the KPI reports are used to complement and validate findings of other CQI processes. Externally defined sets of indicators (e.g. such as data gathered through One21seventy) have a large impact on what issues or problems are identified and then addressed. Health centres also tend to implement programs or initiatives in response to these problems with limited exploration of the broader reasons behind the issues identified.

The goals and objectives for the CQI Strategy are not clearly defined. The CQI model – covering principles, framework and elements – focuses on describing processes associated with the CQI Strategy, and CQI Facilitators focus on providing a service rather than achieving outcomes. There would be value in developing a program logic that defines the short, medium and long term outcomes that the CQI Strategy is expected to achieve, and then aligning activities to these outcomes.

The CQI Strategy has led to numerous changes in health care processes and practices at a clinic level. There is evidence that service delivery outputs have increased over recent years (e.g. proportion of patients with a chronic disease management plan). Evidence of improved population health outcomes is less clear and it is difficult to attribute any changes in population health to health service outputs. Any impacts as a result of CQI processes are unlikely to be seen in the short term. There is a need to ensure the scope of the CQI Strategy is inclusive of aspects of 'quality' such as equity, efficiency, effectiveness, safety (including cultural safety), and patient-centredness in order to maximise potential impacts on individual and population health outcomes.

**What barriers and enablers have contributed to the success or otherwise of the CQI Strategy?**

The CQI Steering Committee has played an effective role in guiding and leading the implementation of the CQI Strategy. There is a gap in higher level strategic governance of the CQI Strategy, with the Primary Health Reform Group being disbanded in 2011 and infrequent meetings of the NT Aboriginal Health Forum. There is a need for more active higher level governance of the CQI Strategy that is able to look across the NT Aboriginal PHC system and guide decisions relating to the Strategy itself (e.g. whether to expand out from clinical practice into other areas of quality) and how the Strategy interacts with other reforms (e.g. regionalisation).

There were varying degrees of support for CQI from health service management, and this was often reflected in the engagement of staff in CQI. People in middle management roles (e.g. managers at a regional level) were often unclear about their role in CQI, particularly in comparison to managers at the executive/central level and local health centre managers. There is a need to engage middle management in CQI by making information more relevant to them.

There has been a significant amount of training provided under the CQI Strategy to increase staff capacity in CQI. Staff were generally very positive about this training. The main barriers to more effective training were a lack of time to attend, and a lack of backfill staff to provide cover for staff absences due to attendance at training.

The CQI Strategy supports a workforce of two CQI Coordinators, 17 CQI Facilitators and numerous other roles, either fully or partially, that include a CQI component. Not all health services that have received funding under the CQI Strategy have recruited a CQI Facilitator; some spread the CQI facilitation function across a number of existing health service positions. Where CQI Facilitators have been recruited to support a health service, the way they have implemented their role varies and this is often a result of how many health services they have to support. Some Facilitators support one large health service; while others support multiple services (currently up to a maximum of 11 services). The main barrier to recruitment and retention of the CQI workforce was the short term nature of CQI funding contracts.

There was evidence of practices to support change management at a health service level as a result of CQI activities (e.g. training with a focus on sharing ideas and challenges across health services). However, there was little evidence of change management strategies to support behavioural and organisational change as a result of CQI at other levels of the NT Aboriginal PHC system. Stronger articulation of the CQI program logic, as discussed above, would provide a good basis for developing an effective change management and communications plan.

The current ePIRS are adequate to support CQI processes which are largely led by a CQI Facilitator. Health service staff will require further training in ePIRS if they are expected to directly interrogate systems in the absence of support from a CQI Facilitator or other ePIRS champion/expert.

The high turnover of staff in the Aboriginal PHC sector, coupled with the high use of locum staff, were significant barriers to embedding CQI in the routine practice of PHC staff. There is, therefore, a need to embed CQI in systems, as well as in staff practice. Ensuring the participation of Aboriginal health practitioners, as the most stable part of the clinical workforce in the sector, is essential to embedding CQI within the health system. CQI practices also need to be included in training for locum staff.

**To what extent is the CQI Strategy an appropriate response to improve quality in Aboriginal PHC in the NT?**

The CQI Strategy is consistent with, or heading in the right direction on, many dimensions of quality improvement theory and practice, including strong leadership for CQI, participation of a range of staff at all levels, ability to adapt processes to local contexts, provision of training and technical support, and availability of data. There is less consistency with other dimensions, including clearly defined goals and consumer participation.

The design and implementation of the CQI Strategy enabled it to target a wide variety of local needs and priorities. This adaptability and the resultant momentum for CQI at a local level is a real strength. There was less evidence at this early stage of CQI being an appropriate response to regional or NT level needs relating to improving the quality of Aboriginal PHC, and its ability to deliver system level behavioural and organisational change, and ultimately service delivery and health outcomes, is less clear.

The CQI Strategy was intended to embed CQI in the NT Aboriginal PHC system and provide on the ground capacity to make this happen. As a result of the CQI Strategy, capacity in CQI has increased across the system, although not consistently. As noted, CQI capability tends to sit within individuals rather than organisations. Awareness, participation and engagement in CQI has increased as a result of the CQI Strategy; however, engagement is often driven by CQI Facilitators and the depth of engagement varies. There is a need to focus on building CQI capability and capacity at an organisational level in order to embed CQI at a system level.

The CQI Strategy builds naturally on other reforms and systems in the NT Aboriginal PHC sector, including other quality improvement initiatives, the implementation of the NT AHKPIs and recent investment in expanding services. The Strategy is also consistent with key principles of regional reform, particularly in the way the funding was distributed and its recognition of the need for consumer input and Aboriginal engagement. Where regional reform has progressed, there has been a positive interface between CQI and Clinical Public Health Advisory Groups (CPHAGs). There is the potential to align CQI with emerging CPHAG processes in other regions and for the CQI Strategy to further support the regional reform process alongside the development of more formalised arrangements.

**To what extent does the investment in CQI in the NT Aboriginal PHC sector represent good value for money?**

CQI Strategy resources for regional facilitation were distributed using a funding model designed to address PHC funding inequities, irrespective of a service or region's need to develop CQI. Representing only two per cent of the sector's funding, this is a weak instrument for addressing funding inequities and potentially weakens the incentives to carry out CQI in some services. There is agreement that the distribution was not targeted at poor quality services or priority problems. Nevertheless, at a local level, CQI activities supported under the Strategy were able to target priority problems, as noted above. There may be benefit in more closely matching funding and contracts to the degree of development of CQI capability and capacity within particular regions or services, in order to bring services up to a defined level of competency. Organisations which had achieved a defined level of CQI capability and capacity would be funded on an equitable basis and ultimately, when CQI became part of an organisation's core business, it would be embedded into every contract and not funded through a separate one. These suggestions for targeted funding should only be entertained if system wide equity issues are effectively addressed using other funding sources.

It is difficult to estimate how much funding has been spent on CQI as a result of the Strategy. In addition to the $2.79 million allocated under the Strategy per annum, not all of which was spent in each financial year, some regions and services have supplemented their allocation with other funds to enable them to recruit facilitator positions. There were other costs for services associated with undertaking CQI activities; most notably the time required to participate in audit processes. However, services considered that they got good value for money from this investment in time.

Delays in making funding allocations and continued uncertainty over long term funding are likely to be affecting the efficiency of the CQI Strategy. The most obvious inefficiency results from the need to continually renegotiate and extend short term contracts.

A number of health services already operated fairly sophisticated CQI processes prior to the CQI Strategy; however, the facilitation resources provided through the Strategy were needed to activate CQI in many services. Other factors contributed to making the NT 'fertile ground' for a CQI program, including previous engagement in CQI initiatives, the additional funding that had been received for expanding PHC services, the implementation of the NT AHKPIs, improvements in ePIRS, and the widespread use of treatment guidelines. Some services have yet to activate CQI anywhere beyond an ad hoc basis and it would seem that many of these have yet to receive significant or meaningful support under the Strategy.

The strong interaction between the CQI Strategy and existing initiatives at a clinic level suggests a degree of complementarity and efficiency. There are opportunities for a greater interface between the Strategy and systems level initiatives and issues, including regional reform and workforce initiatives.

# RECOMMENDATIONS

On the basis of the evaluation findings, we have identified areas at three levels where modifications and adjustments could bring improvements to the ongoing implementation of the CQI Strategy:

1. System wide characteristics relating to Aboriginal PHC in the NT which sit over and above the issue of CQI but, if addressed, would support the implementation for the CQI Strategy. We have not made specific recommendations on these issues, which are discussed in section 8.
2. A small number of focused recommendations specific to the overall design and to the implementation of the CQI Strategy. These are the evaluation's recommendations and are set out below.
3. Areas for potential improvement at a more practical level, many of which could be implemented relatively easily. These are identified at the start of each of the evaluation findings sections.

We have also made suggestions regarding future monitoring and evaluation of the CQI Strategy, which are set out in section 8.3.

The evaluation has identified three recommendations to support improvements to and the sustainability of the CQI Strategy. While these recommendations recognise the considerable achievements to date under the CQI Strategy, there are a number of changes which will be required over the medium term to move into a new, more sustainable phase of development, and to move it from a separate 'program' to the core way in which the sector operates. Two of the three recommendations are, therefore, deliberately aspirational. The intent of the three recommendations is to: define the desired outcomes of the CQI Strategy; align support to the defined outcomes and adapt the approach to the specific CQI needs of organisations; and ensure completion of CQI cycles.

**Recommendation 1: Develop, agree and communicate a plan or framework for the CQI Strategy which sets out the partners' (AMSANT, DoH and DoHA) expectations in terms of short and long term outcomes, timeframes, indicators for monitoring CQI activities and impacts, and that describes the context for CQI activities.**

**Recommendation 2: Consider developing and implementing a phased CQI implementation model that targets support for services based on whether they are at a growing or mature phase in terms of their CQI capability and capacity.** As part of this, we would recommend:

- defining the characteristics and standards expected of a CQI competent NT Aboriginal PHC service
- in the short term, using this definition as a tool for health organisations and CQI Facilitators to determine their current level of CQI capacity and capability, and tailor the CQI approach to best meet the organisations' needs
- in the longer term, moving towards separate contractual arrangements for CQI growing and mature services which reflect the different support required and outcomes expected, including aligning the CQI facilitation role with the proposed outcomes
- developing appropriate incentives and support for services in the growing phase to become CQI competent within a specific timeframe

- developing appropriate incentives and support for services in the mature phase to maintain internal capacity in, and ownership of, CQI and to increase the scope of quality to include referral systems and other dimensions of quality, especially systems for community engagement
- increasing the alignment of CQI activities and the operation of CPHAGs
- developing appropriate indicators and reporting arrangements
- considering targeting funding to support CQI growing services on the basis of need (or potential benefit), and CQI mature services on an equitable basis
- investigating alternative and sustainable ways to facilitate CQI in small, dispersed health service organisations, as necessary.

**Recommendation 3: Promote the uptake of CQI methods that bring greater interpretation and meaning to data to enable problems to be more clearly defined, including at a regional level, and therefore more appropriate, innovative and effective solutions to be developed and implemented.** As part of this, we would recommend:

- incentivising the completion of CQI cycles
- where problems are identified, ensuring that the problems and solutions are understood and communicated to different levels of the NT PHC system
- supporting mechanisms for exploring the effectiveness of different responses to identified system problems before corrective action is undertaken.

# PART A: CONTEXT

# 1 INTRODUCTION

The Department of Health and Ageing (DoHA) appointed Allen and Clarke Policy and Regulatory Specialists Ltd *(Allen + Clarke)* to evaluate the Northern Territory (NT) Continuous Quality Improvement Investment Strategy (CQI Strategy). In planning and managing the evaluation, the DoHA worked collaboratively with its NT partners, the Aboriginal Medical Services Alliance of the Northern Territory (AMSANT), and the NT Government Department of Health (DoH).

The three partner agencies are interested in learning from the development and implementation of the CQI Strategy to inform its ongoing implementation and national considerations relating to CQI in Indigenous health.

## 1.1 Purpose

The purpose of the evaluation is to determine the effectiveness, appropriateness and efficiency of the CQI Strategy, considering both the four major components of the CQI Strategy and the CQI model.

The evaluation is intended to support the sustainability and continuous improvement of the CQI Strategy. The evaluation needs to focus on the development and implementation of the CQI Strategy, but also be cognisant of the impacts or likely impacts on the quality of Aboriginal primary health care (PHC). The evaluation is intended to inform changes to the Strategy to better achieve the goals of system-wide CQI in Aboriginal PHC. The evaluation will also inform national considerations relating to CQI in Indigenous health.

As part of addressing this primary purpose, the evaluation will:

- provide evidence about the CQI Strategy's implementation, outputs and outcomes, including factors underpinning success and barriers to success
- provide an overall evaluative judgement about the effectiveness, appropriateness and efficiency of the Strategy
- provide actionable, evidence-based recommendations to enhance the sustainability and continuous improvement of the CQI Strategy.

## 1.2 Audience

In addition to the three partner organisations, the evaluation findings will be relevant to key stakeholders involved in the implementation of CQI in the NT, and other government and non-government organisations with an interest in improving quality in the health sector. This includes the NT Aboriginal Health Forum (NT AHF), the key governance body representing the three partner organisations, and the CQI Steering Committee, the group charged with guiding the implementation of the CQI Strategy.

We have prepared an accompanying summary report which will be used to disseminate findings and learnings of the evaluation to a wider audience.

## 1.3 The CQI Strategy

Prior to the development of the CQI Strategy the level of uptake and capacity for CQI was inconsistent across the NT Aboriginal PHC sector. While some health services had the expertise and capacity to address CQI, others had little or no exposure to formal CQI. Funding for CQI was also inconsistent and was generally program-specific.

The proposed CQI Strategy was agreed in April 2009. Its overall goal is to build a consistent approach to CQI across the NT Aboriginal PHC sector to support sustainable, long term service reform and improvement, with a focus on clinical CQI. The CQI Strategy is part of a wider suite of PHC reforms occurring in the NT Aboriginal PHC sector, including regionalisation and expansion of PHC services, and the introduction of the NT Aboriginal Health Key Performance Indicators (AHKPIs).

The CQI Strategy includes four major components, each of which supports the development and implementation of the CQI model:

1. Establishment of the CQI Steering Committee to guide the development of a sustainable and integrated CQI model, and to guide the implementation of that model within Health Service Delivery Areas (HSDAs).
2. Engagement of two CQI Coordinators to provide expert leadership in implementing the CQI model through training and support to CQI Facilitators in the HSDAs, as well as advice to the CQI Steering Committee on further development of the CQI model.
3. Funding to support CQI Facilitators within HSDAs.
4. Conducting a comprehensive quantitative and qualitative evaluation of the CQI Strategy.

## 1.4 Structure of this report

- The remainder of this report is structured as follows:
- **Section 2** sets out the evaluation methodology, including the overall design, the evaluation objectives and questions, and specific methods.
- **Section 3** provides key health performance statistics relevant to the NT Aboriginal PHC sector that illustrate the need to improve the quality of services. It describes the CQI Strategy, including how it came about and how it fits within the broader context of reforms in the sector. It also includes a brief review of evidence relating to CQI.
- **Sections 4–7** set out the main evaluation findings organised under the headings of each of the four overarching evaluation questions relating to effectiveness, barriers and enablers, appropriateness, and efficiency.
- **Section 8** includes concluding comments on the evaluation findings, and our recommendations on the design and investment of the CQI Strategy, its implementation, and monitoring and evaluation considerations.

# 2 METHODOLOGY

This section sets out our approach to the evaluation, the evaluation objectives and questions, and a summary of the information sources, methods and analyses.

DoHA established a CQI Evaluation Steering Committee (ESC) to work collaboratively with the evaluation team to facilitate a robust and high quality evaluation. The ESC comprised of representatives from the three main partner organisations – DoHA (Office for Aboriginal and Torres Strait Islander Health (OATSIH)), DoH and AMSANT – as well as a CQI Coordinator and a Regional Manager of a health service currently receiving support under the CQI Strategy. The proposed evaluation methodology was set out in an evaluation plan at the beginning of the evaluation, and was agreed with the ESC. The key components of the evaluation plan are summarised in Appendix B.

## 2.1 Evaluation approach

The evaluation took a formative approach to examining the effectiveness, efficiency and appropriateness of the CQI Strategy. The Strategy is in the early stages of its implementation, and formative evaluation recognises that the intervention is still developing and evolving. The evaluation aimed to document the current experience and identify key lessons that can be used to improve the ongoing implementation of the CQI Strategy.

In line with this formative approach, the evaluation interacted with the Strategy through regular engagement with key decision makers and those responsible for implementing the program. The evaluation team met with these stakeholders at regular intervals, including an initial meeting with the ESC to discuss and agree evaluation questions and principles, and a 'sense making' workshop to share interim evaluation results and encourage participatory interpretation of the findings. The purpose of such engagement was to come to a shared understanding between the key stakeholders to inform future modifications and adjustments to the CQI Strategy.

The evaluation considered both processes related to the implementation of the CQI Strategy, and initial or emerging outcomes and impacts. The process evaluation documented and analysed what happened during the development and implementation of the Strategy, and is intended to provide understanding of how the Strategy operates and what factors influence outcomes or impacts. The evaluative information generated has informed our recommended changes to the Strategy so that it better meets its goals, and enhances the sustainability of CQI in the NT Aboriginal PHC sector.

Where feasible, we have also analysed the outcomes and impacts of the CQI Strategy, with the aim of identifying the changes and results the Strategy has contributed to. However, as the intervention has only been operational for a short time most of the evaluation questions are focused on analysis of implementation processes and the potential for the CQI Strategy to impact on health outcomes in the future.

## 2.2 Evaluation objectives and questions

DoHA and its partners set three overarching evaluation objectives, or criteria, of effectiveness, appropriateness, and efficiency, a fourth objective relating to barriers and enablers, and a set of more detailed objectives for each. These are shown in Figure 1, with the objectives summarised so that they read more like focus areas.

**Figure 1: Evaluation objectives**

| |
|---|
| **Effectiveness** |
| Engagement of health services with CQI at all levels |
| CQI activity and capacity |
| Number and range of CQI activities in the NT Aboriginal PHC sector |
| Collection, analysis and use of clinical data and the NT AHKPIs for CQI purposes |
| Assessment of implementation against the original CQI Strategy |
| Quality of Aboriginal PHC services |
| **Appropriateness** |
| Consistency with quality improvement theory and practice |
| Alignment with the priorities and needs of stakeholders |
| Fit with the problem(s) it is intended to solve |
| Fit with the broader context of Aboriginal PHC reform in the NT |
| **Efficiency** |
| Targeting of activities and strategies to high priority problems |
| Similar outputs, activities or outcomes for fewer resources |
| Duplication or synergy arising from overlap or interaction with other programs |
| Change management strategies |
| **Barriers and enablers** |
| Governance of the CQI Strategy |
| Support by health service management and capacity in related areas (such as Clinical Information Systems) |
| CQI training for PHC staff |
| CQI workforce |

Based on these objectives, *Allen + Clarke* developed four overarching evaluation questions and a set of specific questions for each objective. The overarching evaluation questions are:

1. What are the key achievements and outcomes of the CQI Strategy?
2. What barriers and enablers have contributed to the success or otherwise of the CQI Strategy to date?
3. To what extent is the CQI Strategy an appropriate response to improve quality in Aboriginal PHC sector in the NT?
4. To what extent does the investment in CQI in the NT Aboriginal PHC sector represent good value for money?

The more detailed questions, aligned to each evaluation objective, are included in Appendix C.

The evaluation findings in Part B (sections 4–7) of this report are organised by the four overarching evaluation objectives addressed by these four questions.

## 2.3 Information sources and methods

The information and evidence required to answer the evaluation questions was gathered from multiple sources and through multiple methods. These included:

- case studies
- site visits to engage with health service staff
- administered surveys
- mapping of data analysis and use
- key informant interviews
- interviews with CQI and PHC experts
- an evidence review of CQI theory and best practice
- a document review on the CQI Strategy
- a review and analysis of CQI data and other relevant datasets
- a sense making workshop.

Further details of the methods are provided below.

### 2.3.1 Case studies

We undertook five case studies; four based on specific health services and one regional level case study which included visits to two health services.

The case studies were selected to reflect a range of regions and communities in population size, location (regions in the Top End and Central Australia), the type of health service (government or community controlled), remoteness (towns/centres and remote communities), CQI funding, and perceived engagement in CQI. There were three case studies in the Top End and two in Central Australia. One case study involved an urban community, while the other four were remote. Two case studies involved community controlled health services and two government controlled services. The regional case study involved visits to both a community controlled and a government controlled health service.

The evaluation team met with a range of people in each case study site, including health centre managers, administration staff, clinicians (including Aboriginal health practitioners), and community health service board members (in community controlled services).

We also undertook a number of interviews with those developing and implementing the CQI Strategy at a regional level including CQI Facilitators, Clinical Public Health Advisory Group (CPHAG) members, area health services or boards, DoH Area Service Managers, and regional administrative, clinical, and support staff.

We interviewed a total of 54 people as part of the case studies. The interviews collected detailed information on people's experiences and views of the CQI Strategy. Interviews took 30–90 minutes and were mainly face to face, although some were completed by telephone.

As part of the case studies, the evaluation team conducted a data mapping exercise to examine how data is being collected, analysed, and used for CQI purposes. This included the identification of what CQI tools were used at each site, and how data is interpreted and used by the health service and by health staff at the regional level.

We also used a short administered survey to collect data from each health centre on inputs and outputs related to CQI, including the resources invested in CQI, the number and type of CQI activities undertaken by the health centre, and the uptake of CQI training. The survey was based on the questions used in the 2009 CQI Needs Analysis questionnaire.

### 2.3.2 Interviews with CQI and PHC experts

We interviewed informants with experience or expertise in Aboriginal PHC and/or CQI, including those from the government and community controlled sectors, as well as individuals who have been involved in developing CQI tools or undertaking research on CQI in remote NT communities. This included staff of DoHA, NT DoH, and AMSANT as well as data experts, academics, and representatives of national organisations with an interest in CQI or Aboriginal health. The interviews collected qualitative information on approaches to CQI, perspectives on quality in the NT Aboriginal health sector, and good practice in the collection and use of health data.

### 2.3.3 Evidence review of CQI theory and practice

The evaluation team sourced and reviewed a number of documents related to CQI and quality improvement in PHC settings, and literature on Aboriginal health and PHC in remote communities. We also reviewed reports from recent evaluations related to quality improvement in Aboriginal PHC.

Documents were sourced from the evaluation partner organisations, informants spoken to during the evaluation, published peer review journals, and through the internet. References are cited in this report and a full reference list is included.

### 2.3.4 Document review on the CQI Strategy

Throughout the evaluation we reviewed a number of documents relating to the CQI Strategy including:

- policy documents related to the development of the CQI Strategy and detailing the activities to be implemented
- status reports to the NT AHF on the progress of implementing the CQI Strategy
- documentation from CQI Steering Committee meetings
- job descriptions for the CQI workforce
- information on funding allocation

- funding agreements and contractual requirements between OATSIH and providers
- CQI tools used by the NT Aboriginal PHC sector.

This review was used to understand the context in which the CQI Strategy has been funded and developed, and to address evaluation questions on the distribution of resources and process related to the implementation of the Strategy. We also used the document review to validate the qualitative data collected through interviews.

### 2.3.5 Review and analysis of CQI data and other relevant datasets

The evaluation examined health datasets including NT AHKPI data and Council of Australian Governments' (COAG) monitoring reports.

In order to understand the context in which the CQI Strategy is operating we examined data on key Indigenous health indicators in the NT, with a focus on indicators relating to the two COAG health targets, agreed in December 2007: (i) closing the life expectancy gap within a generation; and (ii) halving the gap in mortality rates for Indigenous children under five within a decade.

We also examined NT AHKPI data relating to health outputs and population health indicators. This analysis includes data from all DoH sites between January 2010 and June 2012. While it is too early to observe any significant changes in Aboriginal health, the evaluation team used this analysis to provide an initial sense of the trajectory of the selected indicators, and to provide a baseline for measuring future change.

### 2.3.6 Sense making workshop

As part of the formative evaluation process we held a sense making workshop in November 2012, which was attended by members of the ESC, members of the CQI Steering Committee, a number of CQI facilitators and experts, clinical staff from NT Aboriginal primary health care centres and government policy, planning and evaluation staff. In total there were 15 participants and three members of the evaluation team.

Participants were provided with a pre-workshop discussion paper which summarised some of the emerging findings and key themes from the evaluation, and listed a number of questions to prompt discussion at the workshop. The workshop aimed to achieve joint analysis of key issues, including what success in CQI looks like, how to embed CQI in all levels of the PHC system, how the CQI Strategy can better respond to local contexts, and how indicators can be used to better understand the nature of 'problems' that need addressing.

The issues and ideas identified in the workshops were reported back to the workshop participants. The information has also contributed to the analysis in this final report.

## 2.4 Analysis

Analysis focused on synthesising and triangulating information from the various data sources and evaluation methods. We took an iterative approach based on grounded theory that allows themes and findings to emerge from the data.

Evidence to address each of the evaluation objectives was built up from a variety of data sources. We analysed qualitative information from interviews, workshop discussions, and literature, and corroborated key findings with quantitative information such as program data and analysis of health data sets. We continually revisited our findings to check whether and how the supporting and relevant evidence fitted with the emerging findings.

In general, we considered data or evidence to be more valid, and therefore gave it more weight, when the analysis identified convergence in opinions and experiences across multiple sources. However, we recognise that the implementation of CQI will vary in different contexts and therefore have also reflected opinions and experiences that are not widely shared, but are illustrative of a particular situation or consideration.

## 2.5 Strengths and limitations

The main strengths of the evaluation approach and methodology are that it considers the CQI Strategy within the context in which it is being implemented by collecting context-rich information through case studies, its emphasis on considering impact at all levels of the system, and assessing the Strategy's interaction with the wider processes of reform within NT Aboriginal PHC. The formative design of the evaluation supports the continuous improvement of the Strategy.

The limitations of the evaluation methodology include that the case studies provide views and experiences based on a specific context and are therefore limited in their ability to provide generalisable data. The timing of the evaluation (approximately three years since the NT AHF endorsed the CQI Strategy) meant that conclusions about emerging impacts can be tentative at best, particularly related to the evaluation objectives concerning effectiveness and efficiency. It is difficult to isolate the impact of the CQI Strategy investment from other existing CQI approaches (such as Audit and Best Practice for Chronic Disease (ABCD) and Healthy for Life) and from the impacts of the wider Expanding Health Service Delivery Initiative (EHSDI) investment. Finally, the design of the evaluation meant that we did not speak to health service users, and therefore the findings do not include consideration of consumer perspectives on the quality of health services.

# 3 BACKGROUND

This section examines the background to the CQI Strategy, including a brief analysis of key health indicators that suggest a need to improve quality in Aboriginal PHC, the development and current status of the Strategy's implementation, as well as a brief review of evidence related to CQI theory.

## 3.1 The need to improve quality in Aboriginal PHC in the NT

Section 4.7 presents data from the NT AHKPIs showing recent trends in several indicators relating to health outputs or service delivered, and population health indicators. This section provides some baseline data on key Indigenous health indicators in the NT. It shows that there remains a significant need to improve health outcomes for the Indigenous population, and that improving the quality of Aboriginal PHC has the potential to contribute to closing the gap in health outcomes between Indigenous and non-Indigenous Australians.

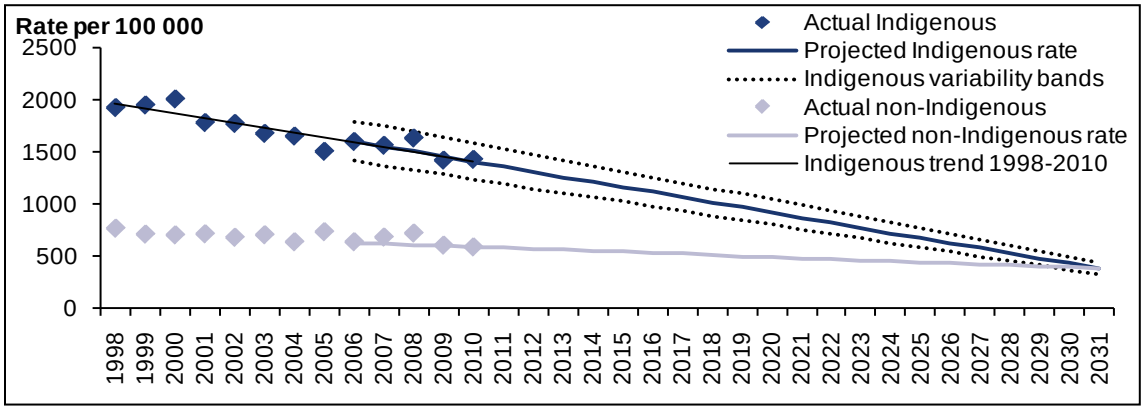
### 3.1.1 Life expectancy and mortality

Over 2005–2007 life expectancy at birth in the NT was 69.2 years for Indigenous females and 61.5 years for Indigenous males (AHMAC 2012). This compares with 81.2 years and 75.7 years for the NT non-Indigenous female/male population respectively, and 82.6 years and 78.7 years for the Australian non-Indigenous female/male population respectively.

The NT Indigenous age-standardised mortality rate shows a significant decrease from 1,933.2 (per 100,000) in 1998 to 1,432.6 (per 100,000) in 2010 (COAG Reform Council 2012) (see Figure 2). COAG concludes that the 2010 mortality rate within the NT was within the projected range and that across the three states and one territory with available data 'only the Northern Territory is on track to close the gap in death rates by 2031 if the trend from 1998 to 2010 continues'.

So the NT has been demonstrating encouraging improvement in this indicator over the past decade. We might expect that the service response issues will get harder to achieve as the mortality rate drops, so a linear drop from 1,933 to 1,432 (per 100,000) does not imply reduction will remain linear. The experience of other states (New South Wales, Queensland and South Australia), which had much lower mortality rates to start with (between 1,000 and 1,400 (per 100,000) in 1998) would suggest that a plateau of the NT performance is likely unless the system response intensifies. Therefore, the need remains for increased focus on quality improvement.

**Figure 2: Age-standardised mortality rate, actual and projected rates, by Indigenous status, NT, 1998–2031**




Source: COAG Reform Council 2012

### 3.1.2 Hospitalisations

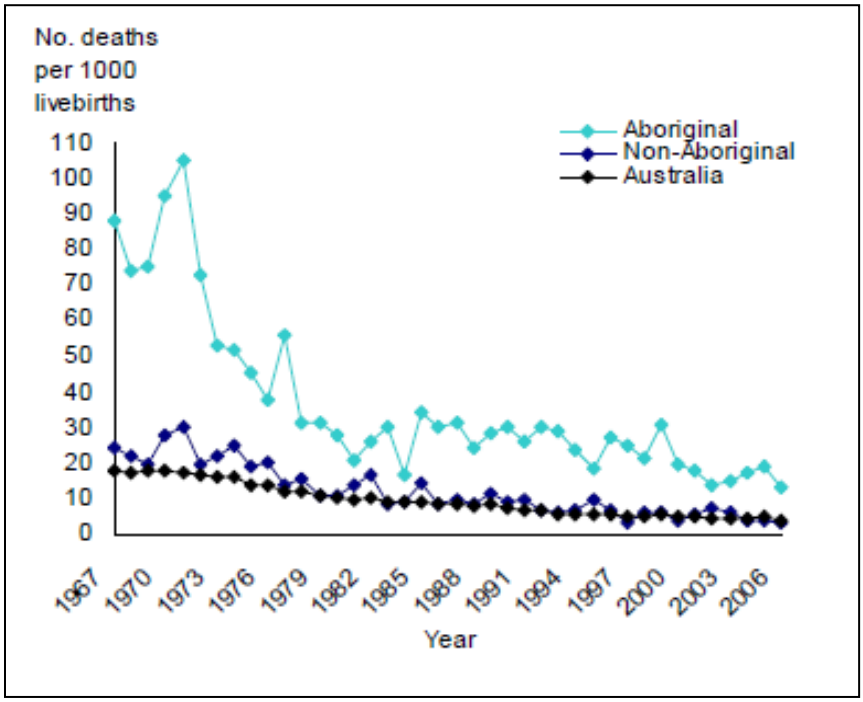
In 2009-10 the age-standardised hospital separation rate (per 1,000) in the NT was 1,549.0 for the Indigenous population and 210.9 for 'other'[1] (COAG Reform Council 2012), giving a rate ratio of 7.3. Excluding care involving dialysis, which had a rate ratio of 47.3, the hospital separations rate ratio was 2.5. The significance of this is that although the focus of the CQI Strategy is on PHC, the interface with the hospital system is a critical component of primary care, and has previously been identified as a major bottleneck in the NT Aboriginal PHC system (Allen and Clarke 2011).

### 3.1.3 Child mortality and low birth weight babies

Figure 3 shows that NT infant mortality has improved significantly for both Aboriginal and non-Aboriginal populations over the 40 year period between 1967 and 2006. Most prominent is the 81 per cent fall in NT Aboriginal infant mortality rate from 83.6 deaths per 1,000 live births in the period 1967–1970 to 15.7 deaths per 1,000 live births in 2006. The fall in the Aboriginal infant mortality rate has not been linear through this period, with the rapid decline up until the mid 1980s followed by much slower improvement in the past 20 years. As suggested in section 3.1.1, as mortality reduces, maintaining the rate of reduction is difficult. In addition, the small total number of deaths means there can be high statistical year-to-year variations.

[1] 'Other' includes non-Indigenous people and those for whom Indigenous status was not stated.

**Figure 3: Infant mortality rate by Indigenous status, NT and Australia, 1967–2007**




Source: Northern Territory Department of Health (2011) Mortality in the Northern Territory 1967–2006 Fact Sheet, (http://hdl.handle.net/10137/480)

Table 1 shows that Indigenous infant and child mortality rates in the NT were 3–4 times as high as the non-Indigenous rate over 2006–2010.

**Table 1: Infant and child mortality rates, all causes, NT, 2006–2010**

| | Indigenous | Non-Indigenous |
|---|---|---|
| All causes infant (<1 year) mortality rate[(a)] | 13.1 | 3.6 |
| All causes child (1–4 years) mortality rate[(b)] | 69.4 | 17.2 |
| All causes child (0–4 years) mortality rate[(b)] | 322.2 | 95.9 |

Source: COAG Reform Council 2012
[(a)] Per 1,000 live births
[(b)] Per 100,000 live births

High quality PHC is considered essential to achieving sustained improvements in the health of the Indigenous population (AMA 2012). In addition to the CQI Strategy, there are numerous other reforms and programs operating in the NT that share the aim of improving the quality of Aboriginal PHC services, including the EHSDI funding for service expansion and regional reform (including investment in community controlled health services).

## 3.2 The development of the CQI Investment Strategy

On 5 December 2008 the NT AHF considered a paper on 'systematic investment in CQI as a critical platform for PHC reform and service improvement'.[2] During this meeting the NT AHF agreed:

1. The need for a strong and effective CQI process in PHC in the NT.
2. The need to urgently assess the effectiveness and coverage of CQI across the NT, prior to NT AHF consideration of strategies to fill identified gaps.

Subsequent to this meeting, the Primary Health Reform Group (PHRG) CQI working group (made up of the partner representatives AMSANT, OATSIH, and DoH) further developed the CQI approach and provided it to the NT AHF for consideration on 24 February 2009. At this time the NT AHF agreed that further work was required around the details of the proposed investment in CQI and that no future paper would be considered by the NT AHF until all partners had agreed the proposed approach to a strategy.

Following this decision, the CQI working group met to discuss a number of issues on the proposed approach including consideration of the range of existing CQI activities in the NT, separate from the already funded accreditation activities. It was found that there was a varying level of engagement by both DoH clinics and ACCHOs in CQI activities, with some health services having little or no engagement.

The CQI working group also considered the need for the proposed approach to include a framework and model for implementing CQI across the PHC sector, to streamline governance structures for the development and implementation of CQI and to establish recruitment and training processes to ensure consistency in the implementation of the CQI Strategy.

A final paper titled 'Proposed EHSDI Investment in Continual Quality Improvement' was presented to the NT AHF for their consideration on 8 April 2009. The paper included a detailed description of the proposed CQI Investment Strategy. The CQI Strategy was described as encompassing four main components:

- a CQI program planning and governance structure
- central CQI Facilitators[3] to be based at AMSANT
- a CQI Coordinator for each HSDA
- robust evaluation of the CQI program.

The paper also noted the proposed budget requirements for the first two years of implementation, and details on the current effectiveness and coverage of the CQI activities across the NT Aboriginal PHC system at the time. Based on this paper the NT AHF agreed to the CQI Strategy, 'to fill identified gaps and to build an effective, sustainable and coordinated approach to CQI across the NT Aboriginal PHC service system'.[4]

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[2] Noted in *Proposed EHSDI Investment in Continual Quality Improvement (CQI).* Briefing Paper for NT AHF, 8 April 2009. Prepared on 27 March 2009.

[3] The Facilitator and Coordinator positions subsequently swapped titles following the initial development of the Strategy.

[4] Noted in *Proposed EHSDI Investment in Continual Quality Improvement (CQI).* Briefing Paper for NT Aboriginal Health Forum, 8 April 2009. Prepared on 27 March 2009.

### 3.2.1 Needs analysis

A CQI needs analysis was undertaken of all PHC services in late 2009 to help identify the readiness of the NT PHC sector in CQI, as well as identify gaps in knowledge and expertise. Feedback from this fed into the development of the CQI approach that was endorsed by the NT AHF in December 2009. The needs analysis considered:

- attitudes and readiness of health service staff to engage in CQI
- health service accreditation status and accreditation body
- identification of CQI tools and activities, and clinical policies and procedures used by the health service
- details on the type and use of health services' Patient Information Recall System (PIRS)
- data collection and reporting including the NT AHKPIs.

Both government and community controlled health services were invited to participate. The needs analysis was completed on-line, manually and faxed, or by interview (either face-to-face or over the telephone with a CQI Coordinator).

A total of 52 responses were received with some clinics responding more than once, resulting in 44 individual health centre responses. Responses were received from both Aboriginal community controlled health organisations (ACCHOs) (38 per cent), and DoH clinics (59 per cent), and from health centres in both Top End (57 per cent) and Central Australia (43 per cent).

The broad findings of the needs analysis were that most health services treated CQI as a priority, and that additional resources would be required to support CQI activities and outcomes.[5] It was evident that there was uncertainty around the nature of CQI processes and activities, with some respondents unaware of whether they were participating in CQI practices. However, most acknowledged the importance of data in driving quality improvement of health care. Health services expressed a desire for a consistent approach to CQI, but believed that it would still need to be flexible to allow for the different sizes and needs of communities. They also felt that CQI requires the involvement of the whole health service team. Funding was identified as a key driver for building capacity in health services to engage in CQI activities.

In terms of involvement in specific activities and programs, 50 per cent of services were involved in accreditation with Australian General Practice Accreditation Limited (AGPAL) , 41 per cent were involved in the Quality Assurance for Aboriginal and Torres Strait Islander Medical Services (QAAMS) program for diabetes management, 39 per cent in the ABCD project, 34 per cent in Healthy for Life, and 26 per cent in the Australian Primary Care Collaboratives (APCC).

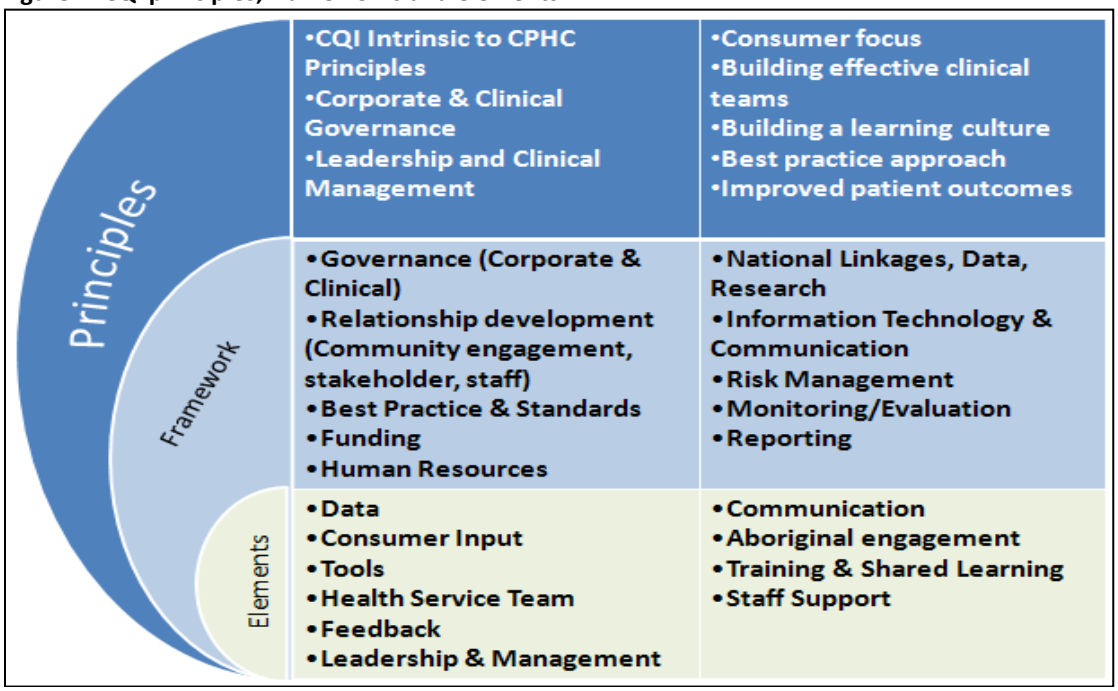
### 3.2.2 The CQI approach

The CQI approach continued to be developed over 2009 and was presented to the PHRG in late 2009. The approach was endorsed by the PHRG and sent, unchanged, to the NT AHF in November 2009. In November 2010 the CQI Planning Committee developed a diagram to depict the CQI approach (see

[5] Needs Analysis Report to the PHRG. November 16, 2009.

Figure 4). The elements are considered to be the building blocks for implementing CQI. The framework sets out how CQI should be supported in PHC, while recognising the key principles that underpin CQI in PHC. The approach was intended to be further developed and refined over time.

**Figure 4: CQI principles, frameworks and elements**




### 3.2.3 Implementation of the CQI Investment Strategy

The four main components of the CQI Strategy, noted in the original paper and agreed by the NT AHF in April 2009, are described below:

**i. CQI program planning and governance structure**

The CQI Planning Committee was established to guide the development of the CQI approach, and to guide its implementation within HSDAs. As at December 2012, the CQI Planning Committee (now known as the CQI Steering Committee), includes 15 representatives from OATSIH, AMSANT, DoH, and staff members of ACCHOs. Committee members formed a sub-group, called the CQI program working group, to provide functional support to progress the business of the Committee between its meetings.

Decisions that are made by the Committee aim to direct a sustainable and integrated approach to the ongoing development and implementation of the CQI Strategy.[6] The Committee meets face-to-face biannually and holds teleconference meetings as required. Originally the Committee was to report to the PHRG on the implementation of the CQI approach every two months. However, since the PHRG's disbandment in September 2011, the Committee now reports to the NT AHF. Reporting

[6] NT CQI Program Steering Committee Terms of Reference.

includes updates on the status of recruitment and retention of CQI Facilitators, details on training and workshops, and the upcoming priorities of the Committee.

**ii. Two CQI Coordinator positions based in AMSANT**

Two new CQI Coordinator positions were recruited to in the first half of 2009 and are located in each of the Top End and Central Australia. These AMSANT based positions were established to provide expert leadership in the development of the sector-wide CQI approach, and to provide training and support to CQI Facilitators across DoH and ACCHO services. It was originally proposed that these positions would require experienced clinicians. However, when the vacancies opened it was decided this was unnecessary, and one clinician and one non-clinician currently fill these roles.

Placing these roles within AMSANT was thought to be consistent with the regionalisation process occurring in NT PHC, and required a shift for the organisation from advocacy for its member organisations to supporting service delivery. AMSANT already provided support in related areas including accreditation and ehealth. However, these CQI Coordinator positions are the first time that AMSANT has provided support to DoH clinics as well as ACCHOs – previously positions spanning the community controlled and government sector were placed within the DoH.

**iii. CQI Facilitator positions based in each HSDA**

The role of the CQI Facilitator is to work with communities, boards, and health practitioners to undertake CQI activities. The Committee and CQI Coordinators worked together with health services to reach agreement on placement and employment of the Facilitators.

The original paper proposed that up to 16 Facilitators would be employed; 6 to work in DoH clinics, and 10 in ACCHOs. The placement of Facilitators, in terms of within government or community controlled services, was intended to align with the transition to community control. Where relevant positions would be placed in ACCHOs that were emerging as regional service providers in HSDAs. There are currently 17 CQI Facilitators, including 10 in the Top End and 7 in Central Australia. Further details on the CQI workforce are included in section 5.5.

**iv. Robust evaluation of the CQI program**

At the outset of the CQI Strategy, it was indicated that a comprehensive and independent evaluation would be an important component of informing future service development and CQI investment. This report provides the findings from the first evaluation activity.

***Implementation timeframes***

The implementation of the CQI Strategy was to take place over three stages, commencing in April 2009 and finishing in June 2010. Parts of the implementation were delayed due to a range of issues including recruitment problems and the delayed release of funding for the CQI Facilitator positions.

Following NT AHF agreement to the proposed CQI Strategy in April 2009, the CQI Coordinators were appointed, and the needs analysis undertaken in September 2009. In 2010, recruitment of the CQI Facilitators commenced, and by September 2010, 3.5 CQI Facilitators had been recruited. This process took longer than anticipated due to a lack of clarity around the funding allocations and a delay in the release of funding from OATSIH. In addition, recruiting appropriately skilled people for the Facilitator roles proved to be a challenge; although this was not unexpected. This initial delay reportedly placed additional pressure on the CQI Coordinators to support those HSDAs without a Facilitator. It was

acknowledged at this time that strengthening of the overarching governance processes was important for implementing the CQI Strategy, and opportunities to present to ACCHO Boards and management teams were welcomed by the Committee.

Tables 2–4 provide a brief summary of the planned activities, according to the original paper presented to the NT AHF in April 2009, against the key activities that were undertaken in three stages. Please refer to Appendix D for a timeline of events detailing the development and implementation of the CQI Strategy.

**Table 2: Key activities undertaken against proposed activities, stage one (April–June 2009)**

| Proposed activity (outlined in proposal document) | Key activities undertaken |
|---|---|
| • Approval of funding agreements<br>• Establishment of the CQI Planning Committee<br>• Recruitment of the two CQI Coordinator positions at AMSANT<br>• Recruitment of CQI Facilitators | • CQI proposal agreed (April 2009)<br>• CQI Planning Committee established<br>• CQI Coordinators appointed |

**Table 3: Key activities undertaken against proposed activities, stage two (June 2009–June 2010)**

| Proposed activity (outlined in proposal document) | Key activities undertaken |
|---|---|
| Development of a sustainable sector-wide CQI model, in anticipation of endorsement by the NT AHF in December 2009 | • Needs analysis undertaken (September 2009)<br>• CQI approach endorsed (December 2009)<br>• Funding for 2009-10 released in June 2010 for most services<br>• Recruitment of CQI Facilitators commenced (mid-2010)<br>• Training through 2010 included CQI Facilitator orientation and One21seventy training for 55 clinicians |

**Table 4: Key activities undertaken against proposed activities, stage three (concurrent with stage two, June 2009–June 2010)**

| Proposed activity (outlined in proposal document) | Key activities undertaken |
|---|---|
| The evaluation of the CQI approach planned to commence in January 2010 and conclude with a final report at the end of May 2010 | • Evaluation proposal prepared by CQI Coordinators and accepted by the Committee in August 2011<br>• External evaluator appointed in August 2012 |

### 3.2.4 CQI Strategy funding

In April 2009, the proposed budget for the first two years of implementation (2008–2010) was up to $3.1 million. Funding for the 2008-09 year was allocated for the production and dissemination of the CQI approach, support for the CQI Committee, and recruitment costs of two CQI Coordinators. Funding for the 2009-10 year was allocated for training, employment of up to 17 Facilitators, employment of two CQI Coordinators, support for the CQI Committee, and an external evaluation.

Table 5 shows the budget and actual funding since the development and implementation of the CQI Strategy in 2008-09. The actual funding in 2009-10 was $2.79 million and has remained at this level for the following three financial years (funding for the 2012-13 financial year is adjusted for inflation). Approximately $557,000 of the actual funding in each year has been provided to AMSANT for NT-wide CQI activities, including employment of the CQI Coordinators and training (including travel and accommodation for staff to attend training).

**Table 5: CQI Strategy budget and actual funding**

| Year | Budget | Actual |
|---|---|---|
| 2008-09 | $400,000 | $0 |
| 2009-10 | $2,700,000 | $2,788,838 |
| 2010-11 | $2,700,000 | $2,788,838 |
| 2011-12 | $2,700,000 | $2,788,838 |
| 2012-13 | $2,700,000 | $2,841,826 |

Funding for CQI was allocated based on the EHSDI model under which a per capita benchmark was developed for each HSDA to determine which regions were prioritised for funding. This reflects the 'intention of the CQI Strategy that CQI is a core PHC service and not an "add on" and that the funding was not intended to implement CQI but to augment it'.[7] All funding allocations for the CQI Strategy until June 2012 were from EHSDI funding for PHC service expansion. Allocations since 1 July 2012 were from funding agreed as part of the *Stronger Futures in the Northern Territory National Partnership Agreement.*

The funding split has meant that some HSDAs received little or no CQI funding, and others received larger amounts with the aim of reducing funding disparities. Amounts vary between the HSDAs from no funding up to around $380,000 per year. Table 6 provides a breakdown of funding per HSDA for 2012-13.

Funding for the East Arnhem HSDA was divided into three sub-regions and was agreed to by DoH and ACCHOs. Central Australia has recently been officially divided into three HSDAs: Westside, Alyawarra, and Arrente/Anmatjere. However, the CQI funding for Central Australia was split three ways from the outset of the CQI Strategy on the basis of negotiations between ACCHOs and DoH, rather than on the regionalisation boundaries which were not confirmed at the time.

Throughout the implementation of the CQI Strategy, funding has been provided in short term cycles. In some cases the funds have been released at the end of the financial year.

[7] Interview with government official, October 2012, Darwin.

**Table 6: CQI Strategy funding by HSDA and funded organisation, 2012-13**

| HSDA or region | Funded organisation | Funding |
|---|---|---|
| Katherine Urban | Wurli-Wurlinjang | $0 |
| Tiwi | Department of Health | $3,850 |
| Top End West | Department of Health | $23,497 |
| West Arnhem | Department of Health | $60,098 |
| Maningrida | Department of Health | $95,229 |
| East Arnhem | Department of Health | $383,574 |
| Central Australia | Department of Health | $173,199 |
| Borroloola | Department of Health | $81,116 |
| Central Australia | Central Australian Aboriginal Congress | $346,399 |
| Alice Springs Urban | Central Australian Aboriginal Congress | $104,483 |
| Katherine West | Katherine West Health Board | $152,394 |
| Katherine East | Sunrise | $204,470 |
| Barkly | Anyinginyi | $210,072 |
| East Arnhem | Miwatj | $191,788 |
| Northern Territory wide | AMSANT | $567,093 |
| Darwin Urban/Rural | Danila Dilba | $244,560 |
| **Total** | | **$2,841,825** |

### 3.2.5 CQI workforce and training

Staff support was considered a key element for successful implementation of the CQI Strategy. Support delivered through orientation and ongoing training for PHC staff at all levels (including management), was provided in the form of CQI Coordinators and CQI Facilitators. As noted above, the role of the CQI Facilitator is to work with communities, boards, and health practitioners to undertake CQI activities, who are in turn supported by the two CQI Coordinators. In addition to these core CQI roles, a DoH CQI project manager was employed in mid-2010. This role, established at the same time as the CQI Steering Committee, was developed to assist in recruitment of the CQI Facilitators and to help implement the roll out of the CQI Strategy. The role has subsequently been broadened to oversee other quality and accreditation programs, as well as to continue to line-manage the DoH-based CQI Facilitators.

Two CQI Coordinators were recruited in mid-2009, one based in the Top End and one in Central Australia. Throughout the early stages of implementation of the CQI Strategy, the role of the Coordinators was to recruit and support the Facilitators and assist in building their knowledge and expertise in CQI. They were also responsible for promoting the CQI program whilst orientating CQI Facilitators to their HSDA.

The CQI Coordinators have an ongoing role of supporting CQI Facilitators. This includes training the Facilitators in CQI skills and tools, assisting with planning and support for undertaking clinical audits and systems assessments, and supporting a peer to peer learning network.

As of December 2012, there were 15 CQI Facilitator positions, including 8 in the Top End and 7 in Central Australia (not all of these positions are funded under the CQI Strategy). Recruitment levels for the CQI Facilitators have varied since the implementation of the Strategy. In early 2011, 10 Facilitators had been recruited and 3 positions remained vacant. All vacancies were filled by 31 January 2013. As at April 2013, there are three vacancies, all within ACCHOs.

The CQI Facilitators provide ongoing support to health service staff and management in utilising tools to undertake CQI processes, including audits, analysis, planning and implementation.

Since the implementation of the CQI Strategy in 2009, there has been extensive CQI related training rolled out across the NT. Training has been provided for clinicians, other health services staff, and CQI Facilitators, often in a collaborative form to allow knowledge and expertise to be shared about the CQI activities that had been undertaken in response to NT AHKPI reports.

During 2010, various training in the One21seventy tools took place in Darwin, Alice Springs, and Tenant Creek. This training was targeted at clinicians and health services staff. Also during 2010, the CQI Facilitator orientation took place in Darwin for the 10 CQI Facilitators employed at the time. This training covered details about the CQI model, CQI skills and tools, background on the NT AHKPIs, and shared learning. In 2011, training for CQI Facilitators was provided in Alice Springs and Darwin, along with orientation sessions and two-day One21seventy workshops. CQI training continued throughout 2012 and specifically focused on the use of One21seventy for clinicians and health service staff who participate in clinical audits of their health services. The CQI Steering Committee reported significant engagement across the Aboriginal PHC sector in 2011, with 120 people trained to use the One21seventy audit and system assessment tools. Less formalised training occurs when CQI Facilitators and Coordinators visit health services.

In addition, between August 2010 and November 2012 five NT AHKPI Collaborative Workshops were held. These workshops each received around 70 participants and involved shared learning around how health services utilise the NT AHKPIs for CQI. Over time the focus of these workshops has broadened beyond the NT AHKPIs to discussing other initiatives on improving quality of health care.

## 3.3 Review of evidence on CQI

We undertook a brief review of evidence relating to CQI theory and practice to inform our assessment of the CQI Strategy. This included reviewing international literature on good practice in CQI, as well as evidence from the Australian Indigenous PHC context. This section summarises the main findings from this review.

### 3.3.1 Strong leadership for CQI

A study by Gardner et al. (2010) on audit and best practice for chronic disease, reported that factors for successful CQI include the identification and involvement of leaders and champions, in both clinical and management networks. This is reinforced in a subsequent report by Gardner et al. (2011) which reviewed evidence on use of quality improvement systems to address chronic conditions in remote Australia and the South Pacific. The report noted that it is important to ensure that CQI processes are prioritised at the health service board level.

A 2007 report on organisational factors associated with quality in medical centres (Keroack et al. 2007) described the CEO's involvement and passion about service delivery, quality, and safety, and having an authentic, hands-on style as being a key feature of a medical centre performing well in CQI. Similarly, standard 1.2 of the Australian Commission on Safety and Quality in Health Care's 2011 *National Safety and Quality Health Service Standards* highlights the importance of the board, chief executive officer

and/or other higher level of governance within a health service organisation taking responsibility for patient safety and quality of care.

Baker (2011) emphasises that leadership from health service management is critical for creating a 'constancy of purpose' and maintaining an unwavering focus on improving care systems and outcomes. A number of commentators (Baker 2011; Gardner et al. 2011; Marley et al. 2012) point out that few quality initiatives yield results in short timeframes and that progress tends to be incremental over time. Senior management staff tend to be more stable than clinic level staff and are therefore well placed to navigate the CQI process through staff changes (Marley et al. 2012).

### 3.3.2 Participation in CQI of range of staff at all levels

In a multi-site case study of the Audit and Best Practice for Chronic Disease project for Indigenous PHC, Gardner et al. 2010 found that a key factor for successful CQI was participation of all staff in the collection of clinical audit data and systems assessments, both to support individual learning and to achieve a shared understanding of required changes. This is echoed by Bailie (2012) who encourages making the implementation of CQI 'everybody's business', Gardner et al. (2011) who note that strong engagement be sought from a range of health centre staff in the CQI cycle, and Powell et al. (2008) who state that active involvement should be sought from a range of health staff at all levels in a team wide effort.

Davies et al. (2000) argue that, while senior level engagement is important, quality improvement cannot easily be achieved from the top down and successful strategies need to involve staff at all levels. An evaluation of the Continuous Improvement Projects (CIP) for chronic disease management found that key factors attributed to CIP success included the sharing of responsibilities of CQI activities among a number of people rather than by one individual (Urbis Consulting Group 2006).

### 3.3.3 Ability to adapt CQI processes to local contexts

Gardner et al. (2010) report that uptake of CQI can be increased by allowing services to adapt the processes in the CQI cycle to suit their own environment and needs. This is supported by evidence from the CIP evaluation which concluded that a critical success factor of the pilot project was the flexibility provided to services to develop and prioritise their own activities (Urbis Consulting Group 2006). Powell et al. (2008) also highlight the importance of empowering health services to tailor the selected CQI methods to local circumstances.

### 3.3.4 Clearly defined goals for CQI

To ensure that CQI is not a series of quality activities heading in different directions, it is essential to set clear goals for CQI activities and provide a map for navigating the quality of care issues (i.e. an intervention logic) (Balding 2012). In their assessment of the relationship between organisational culture and quality of health care Davies et al. (2009) point out that in order to implement effective quality improvement initiatives it is essential to 'know where you are going'. There is a need to elucidate aspects of the desired change: articulate the vision, and then assess and communicate what this means for day to day practice.

### 3.3.5 Provision of training and technical support to implement CQI

The literature highlights the importance of providing adequate training and development to assist services with CQI implementation (Gardner et al. 2010). This may include attending formal training sessions and/or on the job mentoring and support (Powell et al. 2011).

In their evaluation of the CIP pilot project Urbis Consulting Group note the critical role played by facilitators in providing assistance and support to services. The 2006 evaluation report lists a number of skills required for the CQI Facilitator role, including a background in Aboriginal and Torres Strait Islander health and an understanding of the cultural and organisational context in which it operates, knowledge and experience in CQI and an ability to be 'change agents' without imposing views on an organisation.

### 3.3.6 Consumer participation in CQI

A 2012 presentation to the Lowitja Institute National Conference on CQI in Aboriginal and Torres Strait Islander PHC, noted the importance of consumer participation in CQI. Consumers should be empowered and invited to participate in their care, consumers can provide feedback on clinical care and service delivery which can be used to inform service improvement (Balding 2012).

Section 2 of the ACSQHC's 2011 *National Safety and Quality Health Service Standards* relates to partnering with patients, carers and other consumers to improve the safety and quality of care. The document specifies several standards of good practice relating to consumer participation in health care, including partnering with consumers to design the way care is delivered to better meet patient needs (standard 2.5); informing consumers about the organisation's quality performance in a format that can be understood and interpreted independently (standard 2.7); and supporting consumer participation in the analysis of performance information and the development and implementation of action plans (standard 2.8).

### 3.3.7 Availability of high quality and timely data

Applying CQI in the health system context requires using good quality data on systems, processes and outcomes (Bailie 2012). As well as being accurate, data used for CQI must be timely (Powell et al. 2008) and available for use as close to real time as possible (Baker 2011).

To support the quality of data for CQI purposes, well-established administrative and information systems are critical. As reported in the Gardner et al. (2010) study, if good systems are not in place, it can be unclear whether the results of CQI audit cycles reflect omissions in documentation or in delivery of the care itself.

According to Donaldson and Darzi (2012), successful CQI needs the correct level of appropriate data to draw reliable and valid conclusions, but the resulting analysis cannot be too technically challenging to avoid overwhelming its users, as well as the potential consumers. At the same time a balance needs to be achieved to ensure that the less complex data and messages are not too simplistic and misleading. It is also noted that the quality of data is essential and that poor quality data can lead to lack of confidence in the data, and ultimately rejection of the findings derived from it.

Donaldson and Darzi further note that it is important that there are system wide indicators that provide insight into the quality of care being provided, but that it is equally important that front-line clinical teams have data that they use in response to their own, local needs. Local control over interpretation of the data and the development of actions to address these are seen as critical for stimulating improvement (Gardner et al. 2010).

### 3.3.8 Alternative approaches to increasing quality in Aboriginal PHC

There are many and varied approaches that could potentially be used as an alternative means to improve quality in Aboriginal PHC in the NT. Quality assurance is an approach based on the demonstration of public accountability (Busari 2012). It focuses on guaranteeing and maintaining a high standard of service through the external evaluation of a health service against an external set of standards.

Accreditation follows a similar process: external assessors, representing licensed agencies, systematically review healthcare entities' performance against a defined set of criteria and certify that the organisation meets the required standard. Evidence suggests that there is a positive correlation between accreditation and clinical performance (Braithwaite et al. 2010).

Clinical governance is an approach to quality improvement that addresses structures, systems and processes that assure the quality, accountability and proper management of an organisation's operation and delivery of service. The authors of a 2010 study on the evidence base for clinical governance as an approach to delivering quality improvement found that the evidence base is 'fragmented, and focused mainly on process rather than outcomes' (Philips et al. 2010).

Many of the above include aspects which overlap with CQI and evidence suggests that, rather than being viewed as alternatives to CQI, they should be seen as part of the broader quality improvement landscape (Franco et al. 2002).

# PART B: EVALUATION FINDINGS

# 4 EFFECTIVENESS

This section addresses the overarching evaluation question relating to effectiveness: *what are the key achievements and outcomes of the CQI Strategy?* In assessing the effectiveness of the CQI Strategy, the evaluation examined:

- whether there is increased engagement of health services at all levels (board, management, and clinicians) with CQI
- whether the level of CQI activity and capacity at the service level has increased, including whether there is greater uptake of CQI tools
- whether there is an increase in the number and range of CQI activities in the NT Aboriginal PHC sector
- whether there is increased capacity to collect, analyse, and use clinical data and the NT AHKPIs for CQI purposes
- whether the implementation process has met the measures of success identified in the original CQI Investment Strategy
- whether the quality of Aboriginal PHC has improved or is likely to improve in the next 1–3 years.

## 4.1 Summary of findings and areas for improvement

The key evaluation findings relating to effectiveness are:

- the CQI Strategy has been successful in creating a greater awareness of CQI in NT Aboriginal PHC services. Health service board, management, and clinician buy-in to CQI is variable
- health service personnel participate in CQI activities, but engagement is largely driven by the CQI Facilitators and is often intermittent rather than continuous
- CQI has different meanings to the various actors in the NT Aboriginal health system. In some cases CQI has become a de facto mechanism for what needs strengthening in the health system
- CQI tends to empower those who have the required 'cultural capital' (i.e. those that understand CQI terminology, are familiar with CQI approaches and tools, and are proficient in using the information technology)
- overall, CQI capacity and capability in the NT has increased as a result of the CQI Strategy, but there is differential growth between those that drive CQI, and that of front line health staff
- there is a tendency to view data as defining problems, rather than as an indicator of what the problem might be and the starting point for exploring responses to address it
- decisions over CQI processes largely sit at the regional and NT level, with little control in the hands of local clinic staff
- a wide range of activities are being implemented as part of the CQI approach in the NT, some of which are outside of the common definition of 'CQI'
- the most commonly used CQI tool in the NT Aboriginal health sector is One21seventy, which is seen as a useful tool and fit for purpose

- there is a high uptake of tools, but their use is driven by CQI Facilitators
- the CQI Strategy has facilitated increased use of clinical data at the service level
- use of clinical data is bounded by externally defined indicator sets
- NT health services are beginning to share, compare, and benchmark data
- the quality of clinical data has improved due to staff participation in CQI
- NT AHKPI data is used to cross check clinical data gathered through CQI processes
- structures to support better use of NT AHKPI data at the regional and NT level are being developed
- the indicator set currently focuses on clinical data, but does not consider broader aspects of PHC
- there is a need for more clearly defined goals and objectives for the CQI Strategy
- developing an overall 'logic' for the CQI Strategy should include a focus on articulating the expected outcomes of the Strategy
- there is evidence that service delivery outputs are increasing, but it is not possible to attribute this to CQI.

On the basis of these findings, the evaluation team suggests some areas where modifications and adjustments could bring improvements to the ongoing implementation of the CQI Strategy. These are provided in Box 1 below. These are intended to sit under our main recommendations, which are outlined in section 8.

**Box 1: Potential areas for improvement**

1. Provide PHC management and clinicians with greater decision making autonomy, which may involve presenting a range of CQI options from which health staff can chose and adapt to local circumstances with support from the CQI Facilitator.
2. Retain the CQI Facilitators as part of the CQI Strategy, but reframe the role to involve supporting rather than leading CQI, and focus more explicitly on tailoring that support to each health service's capability and capacity in CQI.
3. Place emphasis on the completion of CQI cycles, with a focus on data interpretation, goal setting, planning, and implementation, in addition to the data collection and analysis stages. A greater focus could be given to the latter steps of the cycle at the CQI Collaboratives.
4. Investigate alternative training methods to complement the CQI Collaboratives, such as web based training and developing a 'buddy' system under which those who are more experienced in CQI, and familiar with the NT Aboriginal health context, are paired with those who are less competent.
5. Provide more support for Aboriginal staff to engage with CQI. The training workshop for Aboriginal staff at the November 2012 CQI Collaborative was a good start and could be built on. Aboriginal health practitioners (AHPs) are a valuable source of community information and need to be empowered to lead dialogue with community members on CQI results.
6. Promote mechanisms for regional collaboration where data is shared and regional ideas and solutions are developed. This should include articulating goals for the use of data at a regional/Territory level and developing data sharing protocols which emphasise a 'no blame' approach to system level learning.

## 4.2 Engagement of health services in CQI

The evaluation questions under this objective focused on the extent to which health service boards, management, and clinicians are engaged in CQI, and the impact the CQI Strategy has had on this engagement. This section also examines what CQI means to different actors in the system (staff, management, boards, NT Government, Australian Government) and to what extent CQI empowers different stakeholders.

### 4.2.1 The CQI Strategy has been successful in creating a greater awareness of CQI in NT Aboriginal PHC services; health service board, management, and clinician buy-in to CQI is variable

The evaluation found that awareness of CQI has increased amongst health service boards, management, and staff, and that this is largely attributable to the CQI Strategy. While understanding of what 'CQI' is varied, nearly all health service managers and clinicians interviewed were aware of the concept, could articulate what they saw as 'CQI', and were able to provide examples of CQI activities that they had participated in. A number of informants attributed this increased awareness to activities that they had been exposed to under the CQI Strategy, for example attending CQI training, their interaction with the CQI Facilitator, or participation in a clinical audit as part of a CQI cycle.

Health service board members' views ranged from being largely unaware of the concept of CQI, to enthusiasm about its potential as a tool to provide information on clinic performance. There are a number of examples, particularly in large well-established ACCHOs, in which CQI data is regularly reported to the board. However, several board members in smaller ACCHOs stated that they were not familiar with CQI or that it was not a priority. CQI Facilitators and Coordinators spoken to as part of the evaluation noted that it can be difficult to increase the board members' knowledge of, and engagement in, CQI as gaining access to board meetings is challenging.

Buy-in to the concept is mixed. Health service staff expressed a range of views from enthusiastic advocacy of CQI, to cautious acknowledgement of its potential benefits, to active resistance. We found that in case study locations where the health service manager was enthusiastic, this enthusiasm was reflected in the views of the staff, and vice versa. This illustrates the key role of health centre management in facilitating the uptake of CQI.

Those who were most positive tended to have had involvement in CQI that pre-dated the CQI Strategy, such as participation in ABCD, Healthy for Life, or the CIP. These informants articulated a number of benefits of CQI:

> CQI is useful to help overcome 'clinical inertia' as it highlights the importance of continued awareness of issues and action. It provides a reminder for clinicians to ensure they follow best practice (health centre manager).
>
> Undertaking CQI gives us the motivation to do better. I can see areas where we are not doing well and this is something to strive to (clinician).
>
> I can now get objective data about how the clinic is doing and what we need to work on (board member).

A small group of health centre personnel felt that CQI was negatively impacting on their practices. One manager described CQI as 'death by data' and felt that after two cycles of CQI no benefits had been realised at her clinic. Others expressed doubt that the benefits of CQI were worth the time away from 'on the ground' activities:

> I'm cautious about CQI as I cannot see how it will have a direct influence on the health of the people. It would be better to use our time providing care rather than looking at data (health centre manager).

The majority of health service personnel sat somewhere between these two views, acknowledging that CQI had the potential to improve service delivery and patient outcomes, but also raising a number of perceived challenges in implementing CQI, such as a lack of time due to the day to day clinic focus on provision of acute care, a lack of confidence in how to use data, and the high turnover of clinic staff.

It appears that resistance to CQI has lessened since the implementation of the CQI Strategy. CQI Facilitators noted that many health centre staff have now participated in at least one cycle of CQI, and have seen benefits in terms of the improvements to the service their health centres provide. This has helped to create a degree of enthusiasm among health workers for quality improvement.

> The first time I stood in front of a group and said you have to do CQI there was uproar. People said 'it's not my job'. Now, I've tried a couple of times to postpone the auditing and people will say that they've already organized everything and I have to come. The resistance has definitely lessened (CQI Facilitator).

### 4.2.2 Health service personnel participate in CQI activities, but engagement is largely driven by the CQI Facilitators and is often intermittent rather than continuous

There is a high level of participation in CQI across health service staff in the NT. The majority of managers and clinicians interviewed had participated in CQI activities such as One21seventy audits and systems assessments, viewing indicator data on clinic performance (such as the NT AHKPIs), and contributing to data interpretation and action planning. Most health service informants were able to provide examples of changes to practices they had made as a result of recent engagement in CQI processes. One clinic has developed a portfolio system under which each staff member was assigned responsibility for leading the health centre's approach to a specific area of work, such as child health or rheumatic heart disease. This was seen as an effective way to focus on service gaps and ensure that someone takes responsibility for them. Other examples of changes to practice are provided below.

> Through our [One21seventy] audit we recognised that men were not accessing the health service at the same rates as women, and that the clinic was not doing enough STI screening in men. We now have a men's health day every Wednesday at the clinic where the men can come and not feel shame (AHP).

> As part of the planning day last year we decided to focus on diabetes management, and making sure that all our patients are on care plans. This has been successful and the community have fed back how much improvement they have seen. They feel more energetic and are playing football again (health centre manager).

> We saw that we weren't doing very well in the area of maternal mental health, so have changed our practice and now use a psycho-social depression screening tool with pregnant women (remote area nurse).

Despite greater acceptance of, and participation in, CQI it is perceived by many health staff as a discrete task to be carried out in addition to their clinical duties, rather than embedded as part of their core practice. As discussed in section 4.3.3 below, decisions regarding which CQI tools and approaches are used are generally made by management (either health service, regional, or NT level management). Implementation of the tools and approaches is largely driven by CQI Facilitators, who lead staff during clinical auditing, data interpretation, and planning sessions.

This has been beneficial in the early years of the program as a mechanism for getting CQI 'off the ground', supporting health staff to become familiar with CQI concepts and tools, and increasing awareness and buy-in to CQI. However, as yet there is little staff ownership of the program; some PHC centre staff see CQI as the Facilitator's role, and therefore not a significant part of their own role. There is a perception among some health centre staff that they are 'helping' the Facilitators to do CQI, rather than that the CQI Facilitator is there to help them. However, this is likely to change as health centres move into their second and subsequent cycles of CQI.

This approach also carries the risk that if the CQI Facilitator role was disestablished or is unfilled, there may be little CQI activity. This was illustrated in one of the case study communities in which the CQI Facilitator position was vacant for a number of months. Health service staff did not continue to undertake CQI activities and the momentum that had been built up was lost. An important consideration for the ongoing implementation of the Strategy will be to ensure that health service staff not only participate in Facilitator-led CQI activities, but also gain the skills, confidence, and motivation to lead CQI activities themselves. The increasing awareness and buy-in of staff provides a good platform for beginning this process, and will also be important for shifting the CQI Facilitator role to *facilitating* CQI (i.e. introducing concepts and ideas, providing support to staff as they undertake CQI and acting as a champion), as opposed to *driving* CQI (i.e. leading the process themselves).

A related issue is the need to ensure that health services' engagement in CQI is ongoing; at present engagement is often intermittent. There is a perception amongst some staff that if they have taken part in the audit, the work is complete, and the 'box has been ticked'; the on-going nature of CQI is not considered. This is particularly true when one CQI Facilitator supports many health centres. For example, in a 12 month period staff may be involved in a one week audit, a feedback and planning day 4–6 weeks later, and a review day 6 months later, with little CQI activity in between. As one manager noted:

> After we do it [planning activities], it gets filed. I think I lost the last one after three weeks. We sometimes talk about it, but we don't really pull it out until [CQI Facilitator] visits next.

While we were not able to speak to a large number of health service board members, those that were interviewed often viewed CQI data as akin to a management tool. Boards did not generally engage in CQI activities themselves, or use CQI tools or techniques to assess practice and identify areas for improvement. This is perhaps to be expected as to date health service boards have received limited support to understand and use CQI tools and processes; at most they could recall receiving a presentation from the CQI Facilitator or Coordinator as part of a board meeting. Some board members were not familiar with the concept of CQI, but had seen data from KPI reports or audit results. Typically, boards receive periodic reports outlining data on health service performance, often in conjunction with business plans or budget reporting. This data is used to identify areas that are perceived as needing improvement and health service personnel are then tasked with planning and implementing actions in these areas.

The above findings suggest that currently CQI is a 'bolt on' rather than an embedded health service practice. Over time, there is a need to move from viewing CQI as a program to viewing it as a core part of good management and clinical practice. Participants at the sense making workshop suggested several modifications to the CQI Strategy to better achieve this aim. More emphasis needs to be placed on the completion of CQI cycles, in addition to the data collection and analysis. The lengthy CQI cycles (generally annual) could be more tightly focused, for example, by undertaking monthly CQI mini-cycles. This would mean that health centre managers need to have a greater role in leading CQI at their centres, for example, they would need to be empowered to directly interrogate ePIRS and, for DoH centre managers, interface with One21seventy. We note that all ACCHO services are using the PEN Clinical Audit Tool (PENCAT) system and that an electronic One21seventy audit tool is currently being developed, which will make this easier. The findings of this evaluation suggest that there may be initial resistance from some managers and consideration would need to be given to how health centre managers could be supported in terms of dedicated time for CQI.

### 4.2.3 CQI has different meanings to the various actors in the NT Aboriginal health system. In some cases CQI has become a de facto mechanism for what needs strengthening in the health system

The evaluation has found that there is no clear, agreed definition of CQI and its purpose amongst staff, management, boards, and the NT and Australian governments.

At the clinic level, stakeholders tended to view CQI in terms of its processes. When asked about CQI most health staff described the specific CQI activities that they undertook, such as participating in audits and planning sessions, or reviewing data against indicators. On the whole, health service staff struggled to see the 'bigger picture' of CQI in terms of improving health service delivery and health outcomes of the population serviced by the clinic, other than in terms of improving performance against the indicators on which their CQI audits were based.

The evaluation found a variety of interpretations of 'CQI' amongst the case study sites. In one case study site, in addition to undertaking One21seventy audit cycles, the activities undertaken by the CQI Facilitator included activities that might commonly fall under business administration practices, including file standardisation, the development of staff induction resources, and training and support to use the electronic patient management system. As illustrated in Box 2 below, in another case study site CQI appears to be used as a performance management tool.

**Box 2: CQI as a performance management tool**

In one case study site CQI is seen as a means to track progress against each branch's operational plans. The CQI Facilitator extracts data from the ePIRS and compares it against outcome indicators listed in the plans, which are discussed with branch managers on a three monthly basis. Managers are expected to identify areas to be addressed over the next quarter and direct their management activities towards 'improving the data'.

The trend data is also provided to board members twice annually at meetings that are specifically devoted to CQI. The board uses this data to focus on a number of areas that they want the organisation to work on. The CEO then works with management to plan and implement actions in these areas.

At the regional, Territory, and national levels, CQI is viewed in terms of the role it could play in strengthening the health system. The aims of CQI were variously articulated as a way to provide stability in a sector that is often in crisis mode, a vehicle through which ACCHO and government clinics could

work together, a means of gathering information on the health of NT Aboriginal people, and a way to monitor the performance of health services. For example, one NT Government official noted that there was a lack of health data available, and that through participation in One21seventy they had been able to gain a picture of the health status of Indigenous people in various regions of the NT.

It appears that CQI has in some cases become a de facto mechanism for what needs strengthening in the health system, and has evolved to fill different roles depending on where the gap in the system is. For example, where there is a weakness in the ability of a health service to manage staff performance, CQI may evolve to fill this role. The variety of interpretations of what CQI is, and what role it can play in the NT health system, suggests that there is a need to better clarify the aims of the CQI program. This is discussed further in section 8.1.1.

### 4.2.4 CQI tends to empower those who have the required 'cultural capital'

The groups that are most empowered by CQI tend to be those in central NT DoH roles and the CQI Facilitators, as well as certain individuals within health services who are highly engaged in CQI and act a 'champions' within their organisations. These people tend to have the requisite 'cultural capital', or knowledge to participate fully in CQI processes: they understand CQI terminology, are familiar with CQI approaches and tools, and are proficient in using the information technology that supports data extraction for CQI purposes. In many cases these people have experience in CQI prior to the implementation of the Strategy.

CQI is empowering for these people in a number of ways. An AHP noted that participation in CQI planning cycles offered a mechanism for ensuring the health service team were all 'on the same track'. This informant described his frustration at the constant change that AHPs experience as new staff come to the clinic and implement new ideas. This created a disruptive environment for AHPs, who have little ability to challenge a new manager's decisions despite seeing themselves as having relevant local knowledge. Developing an agreed annual plan through One21seventy meant that the health service is now more resilient to staff turnover because the plan can be used to inform new clinic staff and ensure shared understanding of the organisation's direction.

The manager of a large clinic found CQI empowering because it enabled him to move from an ad hoc approach to service planning based on 'a sense of what might be needed', to planning based on what needs are revealed through the audit process. This manager noted that the team approach to CQI meant that staff buy-in to clinic decisions had increased and it was 'less of a battle' to implement new initiatives. CQI had enabled his clinic to move from a top down management model to a shared decision making process.

While some managers and clinicians are empowered by CQI, others in the system felt that they have little control over, or responsibility for, CQI and are 'along for the ride', rather than being active participants in the CQI process. Under the current arrangements of the CQI Strategy, the bulk of decision making sits at the regional and Territory level. Decisions on what approaches and tools to use are made by health service boards, managers of regional ACCHOs or NT DoH officials, sometimes in negotiation with CQI Facilitators. Decisions on implementation (e.g. which One21seventy modules will be used, when audits will take place, and how staff will be involved) sit with the CQI Facilitators, sometimes in negotiation with local health centre staff. The data extraction and interpretation process also tends to

be led by CQI Facilitators and most health staff do not directly interrogate ePIRS or interface with One21seventy. This approach can be disempowering for health centre managers and staff.

The capacity and empowerment of local managers and clinicians could be enhanced by a number of changes to the current CQI approach. PHC staff need to be provided with greater decision making space. This may mean moving towards a CQI model in which Facilitators determine the level of CQI capability and capacity within the organisation and then present a range of CQI options for health staff to choose from based on their specific needs and context. This is discussed in more detail in section 4.3.3.

AHPs were identified as the key to effective and ongoing CQI at the local level and need to be empowered to lead CQI activities. To date, AHP engagement in CQI has been limited and while AHPs participate in CQI processes, many felt that the language of CQI and the reliance on largely numerical data disenfranchised people who do not have specialist knowledge in this area. A number of evaluation participants felt that AHPs were underutilised in many communities, particularly as they tend to be the most stable element of the health centre workforce.

It appears that there is awareness of the need to better engage with Aboriginal people and steps are being taken to address this; a training workshop that was arranged specifically for Aboriginal staff at the November 2012 CQI Collaborative is a good start and could be further built on. It is also noted that a senior Aboriginal staff member within the DoH has recently been asked to participate in the CQI Steering Committee.

Health service consumers and Indigenous communities have not significantly featured in the CQI dialogue to date. The specifically articulated focus on clinical CQI (i.e. the clinical services provided by the health centre) has meant that there has not been a strong consumer focus. There is some evidence that CQI in the NT may in some instances be discouraging consumers from engaging with the health service. The current approach incentivises the delivery of service items as listed in the various indicator sets and audit models used for CQI. A number of clinicians interviewed for this evaluation recounted how they would capitalise on any available opportunity to ensure the client received all the services that they were entitled to. While the motivation for this may be commendable, it has created a situation where a community member may come into the clinic with a health problem and be ‘dragged off and subjected to all kinds of checks and poking and prodding’ (interview, Aboriginal health practitioner). Anecdotal evidence suggests that this may in some circumstances discourage consumers from accessing health services; the focus on ‘clinic needs’, rather than ‘consumers’ needs’, may be perceived by consumers as disempowering.

Some health centres have attempted to engage with consumers to gain feedback on the quality of services and to share CQI data, but this was described as challenging due to the lack of an appropriate mechanism though which to engage with the community. Community health councils or advisory groups are generally no longer in existence, meaning that there are limited ways to provide feedback to communities. Some of the larger ACCHOs have formalised processes to report CQI data to board members (as representatives of their communities) and CPHAGs are beginning to emerge in some areas. However, AHPs interviewed as part of this evaluation stated that providing large volumes of numerical data is not an appropriate means for engaging with Aboriginal people. Indicator data needs to be translated into relevant information explaining what the indicators mean and practical steps that the community can take to address any issues. The evaluators observed an example of a women’s evening held in response to NT AHKPI data, which indicated high rates of chronic disease. Female AHPs took a group of women shopping at the community store, demonstrated cooking techniques, and discussed

how the women can support their families to become healthier. AHPs are a valuable source of information on their communities and need to be further empowered to lead this kind of dialogue with community members.

## 4.3 CQI activity and capacity

This section addresses the evaluation questions concerning the impact of the CQI Strategy on the capacity of the NT Aboriginal PHC system to undertake CQI, and how much responsibility, control, and capacity for CQI sits at the health service level. It also identifies changes in health practice that have occurred since the implementation of the CQI Strategy and considers the extent to which participation in CQI processes influenced this change.

### 4.3.1 Overall, CQI capacity and capability in the NT has increased as a result of the CQI Strategy, but there is differential growth between those that drive CQI, and that of front line health staff

As noted in the previous section, the CQI Strategy has been successful in increasing participation in CQI activities. The potential benefits of CQI are widely acknowledged by personnel at all levels of the system including health service staff, management and boards, regional and NT level managers, and government officials. On the whole, capacity to undertake CQI is increasing; prior to their interaction with the CQI Facilitators, many health staff did not feel confident in their ability to undertake CQI, but now reported that they have a good understanding of CQI concepts and were able to undertake audit processes, interpret basic data, and participate in planning processes.

While capability and capacity is increasing throughout the sector, it seems to be higher in some parts of the health system, particularly in central DoH roles and in individual clinicians across the sector. On the whole, we found that there was lower capability and capacity in front line PHC staff and middle management.

The evaluation team analysed qualitative data collected during discussions with clinical staff and other stakeholders in the NT health sector, to identify specific patterns in their capacity to undertake CQI. It was found that NT health sector personnel generally fall into one of three typology groups:[8]

- those who have high capability and capacity to undertake CQI;
- those who periodically engage with CQI; and
- those who are actively resistant to CQI.

The key characteristics of these groups are outlined in Table 7 below.

[8] Typology is a way to describe different sub-groups of people who have similar knowledge, attitudes, and/or behaviours. While these typologies provide a useful way to distinguish groups of stakeholders, they should be treated with a level of caution as their identification is based on qualitative data collection and there will be variation within the typology groups regarding CQI capability and capacity.

**Table 7: Typology of capability and capacity of health sector personnel to undertake CQI**

| High capability and capacity in CQI | Periodic engagers | Active resisters |
|---|---|---|
| • a small number of health centre managers and clinicians, particularly those working at large health centres<br>• centralised roles in the NT DoH and large ACCHOs<br>• CQI Facilitators<br>• regularly attend CQI training and networking opportunities<br>• confident in their ability to undertake CQI<br>• use a range of CQI techniques and processes<br>• act as advocates and 'champions' of CQI<br>• able to give clear examples of changes to practice as a result of undertaking CQI<br>• relatively small group | • majority of health centre managers and clinicians, particularly those in small/remote clinics<br>• may have attended training but more likely to have been exposed to CQI 'on the job'<br>• able to articulate theoretical benefits of CQI<br>• have participated in basic CQI processes such as PDSA cycles or One21seventy audit cycles<br>• see CQI as a 'program' to which time needs to be periodically assigned<br>• majority of health sector personnel are in this group | • a small number of health centre managers and clinicians<br>• unfamiliar with CQI concepts, tools, and techniques<br>• limited participation in CQI activities or have not participated at all<br>• view CQI as an accountability tool and a 'report card' on performance<br>• see CQI as taking time away from other, more important work<br>• small and decreasing group |

Those in the 'high capability and capacity' typology group are becoming increasingly sophisticated in their CQI techniques, often picking and choosing from a range of tools to suit their information needs. While One21seventy remains important, a number of informants in this group felt that the annual cycle was not responsive enough to their information needs. Some health centre managers are becoming more skilled in manipulating the data in their ePIRS and are moving to monthly CQI mini-cycles. There is also increasing interest in the PENCAT software, which provides a means of directly interrogating the clinic's data base (Primary Care Information System (PCIS) or Communicare) to gain information on specific issues or queries. Others spoke highly of a tool developed by a NT DoH data specialist that offered immediate access to up-to-date data from which they were able to track trends and benchmark the data against other services.

The enthusiasm and skill of this group is encouraging, and bodes well for the future of CQI in the NT health sector. However, there is a risk that as some in the sector move towards more sophisticated CQI activities the process may move beyond the understanding of ordinary health workers, and become confined to CQI specialists. Future consideration will need to be given to how the personnel in the 'periodic engagement' and 'active resistance' typology groups can be supported to increase their skills and knowledge in CQI. While it is recognised that NT workforce issues, such as the high turnover of clinic staff and the short term nature of many placements, make it challenging to build capability and capacity in CQI, there are some practical steps that can be taken to increase skills and engagement.

As noted in Table 7, the training provided as part of the CQI Strategy (mainly CQI Collaborative sessions and workshops run in Alice Springs and Darwin) is often taken up by those who are already engaged in CQI. Health staff from small and/or remote clinics, who tend to have less capability and capacity in CQI, often struggle to attend training in this format due to need to travel significant distances and a lack of staff to backfill their position during their absence. Alternative training methods, such as web based

training, could be explored to address this issue. Other means of transferring skills could include developing a 'buddy' system where those who are more experienced in CQI are paired with less capable personnel. Reframing the CQI Facilitator role to provide more tailored support and training, as discussed in section 4.3.3, should also be considered.

### 4.3.2 There is a tendency to view data as defining problems, rather than as an indicator of what the problem might be and the starting point for exploring responses to address it

Data is often seen as a method of defining a problem, as opposed to being an indicator of what the symptoms and causes of a problem might be. There appears to be a focus on implementing programs or interventions as solutions to these specific 'problems' and a feeling that quality will only improve if an intervention is implemented to address performance in that area. For example, in one of the case study sites the CQI audit process identified that the clinic was not performing well in managing rheumatic heart disease prevention. The clinic then implemented a health promotion campaign to encourage awareness of rheumatic fever and rheumatic heart disease, without deeper analysis as to the reasons behind the poor performance. Concerns were expressed by several health centre managers about the lack of funding to implement programs in response to issues identified through the CQI process. Others noted that the focus on one aspect of care can mean that other areas are neglected and 'drop off the agenda' only to be identified as problems in a subsequent CQI cycle.

The focus on immediately accessible 'solutions' is perhaps to be expected at this stage in the NT CQI journey and has delivered some quick wins for the program. There is evidence of an impact in terms of improvements to services, for example, by increasing the number of patients on chronic disease management plans or increasing the proportion of immunised children. However, interventions are often implemented before CQI cycles are completed, i.e. without discussion on the wider nature of the problem, exploring alternative approaches to addressing it, setting broader service goals, or considering the data in the context of the community in which the health centre is located. Greater focus needs to be placed on interpreting what the indicators mean (e.g. is it that services are not available, that they are not being provided in an appropriate way, or that consumers are not accessing them for another reason?), and what different options exist to address identified problems.

There is a need to incentivise completion of the entire CQI cycle and prioritisation of system review and goal setting before undertaking planning based on the clinic or organisation's articulated goals. The CQI Facilitators would play a key role in supporting this, and a greater focus could be given at CQI Collaboratives on strategies and learning at the latter steps of the cycle.

Promoting mechanisms for regional collaboration, where data is shared and regional ideas and solutions are developed, would help overcome challenges for smaller clinics in completing cycles, and also provide a regional lens for problem definition and the development of solutions. The process of regionalisation of health services should support this.

### 4.3.3 Decisions over CQI largely sit at the regional and NT level, with little control in the hands of local clinic staff

The CQI approach in the NT is largely a top down model. As noted in section 4.2.4, decisions regarding approaches and tools are generally made by boards, CEOs or senior managers of ACCHOs, and regional or territory managers within the DoH. Sometimes these decisions are made in consultation with CQI

Facilitators. In the case of DoH services, the use of One21seventy was mandated by the Department. These decisions are then implemented by the CQI Facilitators, who are largely responsible for driving CQI at the clinic level. This includes deciding on how and when CQI activities will be implemented, and identifying priority issues on which to focus. Sometimes these decisions are based on negotiation with local PHC centre staff. Local staff participate in audit and systems assessment processes, but generally do not lead CQI themselves.

In the early stages of the CQI Strategy, this approach has had some advantages in terms of facilitating early CQI action. Interviews with health centre managers suggested that without participation in CQI being mandated by management, and driven by the CQI Facilitators, it is unlikely that CQI activity would have been prioritised. Health service personnel largely agreed that having been through at least one cycle of CQI they could now see the benefits and had greater buy-in to the process.

However, a risk of the current arrangement is that taking control for CQI out of the hands of PHC staff reinforces the idea that CQI is the responsibility of others (particularly the CQI Facilitators), which to some degree absolves health staff of taking ownership. This also enforces the idea of CQI as a program to be engaged with periodically, rather than an overarching system to be embedded in practice.

Shared responsibility and control for CQI is vital for successful and sustainable quality improvement in health systems (Powell et al. 2008). It may be necessary to make adjustments to the current CQI model to provide for greater decision making at the local level. A standardised approach to CQI in the NT is not considered feasible or appropriate, and it may be necessary to provide scope for clinicians and managers to pick and choose from a range of CQI tools, which they can adapt to local circumstances. The CQI Facilitator would play a key role in this new model and we recommend that the CQI Facilitator role is retained as part of the CQI Strategy, but reframed to focus more explicitly on tailored support based on each health service's capability and capacity in CQI and contextual factors such as staff numbers and population served. This is discussed in further detail in section 5.5.1.

It should also be noted that while decision making sits at the regional and NT level, the focus of implementing CQI has been on individual practices and services. This focus on individual practices and services is not a bad thing. However, CQI needs to take a system level approach; effective systems cannot be built by only addressing the problems of individual practices or services. The current focus on local level CQI may mean that systemic, Territory-wide issues that may not be apparent at the individual service level are overlooked. While the establishment of mechanisms for sharing data has begun (see section 4.5.3), there does not appear to be a defined process by which the principles and approaches of CQI are applied at the regional or Territory levels. This will require collaboration across OATSIH, DoH, and AMSANT, which can best be achieved through reviving the NT AHF.

## 4.4 Number and range of CQI activities

The evaluation questions under this objective examine the impact of the CQI Strategy on the number and range of CQI activities in the NT PHC sector, and the impact of the CQI Strategy on the uptake and use of CQI tools. The questions also consider which CQI activities and tools are seen as effective and appropriate.

### 4.4.1 A wide range of activities are being implemented as part of the CQI approach in the NT

A number of different activities are being implemented by health services under the CQI Strategy. While each of the case study communities we visited had implemented CQI activities, the model in each site was different, with some including elements of related concepts such as quality assurance, data cleansing, clinical audit, and performance monitoring. An overview of the different models is provided in Table 8.

**Table 8: CQI models in the case study communities**

| Case study | CQI model |
|---|---|
| 1 | Annual audit cycles based on ABCD, but using own audit tools; data cleansing and integrity; ePIRS training and induction |
| 2 | Monitoring progress against operational plans; PDSA cycles; individual file audits; accreditation; quality assurance |
| 3 | One21seventy audit cycles; file standardisation; staff induction resources; ePIRS support and guidance; quality assurance |
| 4 | One21seventy audit cycles; interpretation of KPI reports |
| 5 | One21seventy audit cycles; manager-led CQI mini-cycles[9]; data cleansing; quality assurance |

The literature provides a variety of definitions for 'continuous quality improvement' and its characteristics, including that CQI:

- involves the regular and cyclic collection of data (Kritchevsky and Simmons 1991)
- measures performance against quality indicators to initiate and drive change (ibid.)
- facilitates decision making based on the analysis of data (Shortell et al. 1998)
- prioritises the identification, evaluation, and improvement of processes and problems (Kahan and Goodstadt 1999)
- involves organisation-wide participation (Shortell et al. 1995)
- is used to review and compare performance with a standard that may be an internal baseline or an external standard or guideline (Wise et al. 2012).

What is, is or not, considered 'CQI' is debated in the literature, and this diversity is reflected in the variety of activities being implemented as part of the CQI model in the NT. This includes One21Seventy and similar tools developed by health services, plan-do-study-act (PDSA) cycles, and mini CQI cycles based on direct interrogation of the ePIRS. Other activities support the use of data for CQI purposes, including data cleansing and training staff to ensure correct data entry into patient management systems.

There are a number of other activities being undertaken by CQI Facilitators or being implemented by health services as part of their CQI approach that fit within a broader quality improvement agenda. Quality assurance (i.e. preparing the service for assessment against clinical standards) was part of the

[9] Mini-cycles involve health service personnel directly interrogating their ePIRS to gather data on a specific issue, rather than undertaking a comprehensive audit process.

CQI model in two of the five case study communities, and achievement of the Royal Australian College of General Practitioners' accreditation was part of the CQI role in one of these. In another case study site, the CQI Facilitator undertook activities such as developing staff induction resources and standardising files. This broader CQI approach tended to be found in sites in which the CQI Facilitator was situated within a single large organisation; CQI Facilitators that supported several health centres had little time to do more than One21seventy.

The implementation of a variety of CQI tools and processes in the NT is in line with evidence that tailoring the CQI approach to respond to local needs and contexts is a key factor for successful CQI (Gardner et al. 2010; Urbis Consulting Group 2006; Powell et al. 2008). A key challenge is to ensure that the activities implemented are contributing to the improvement of quality in Aboriginal health services and support the basic tenets of CQI as outlined above. Consideration needs to be given to how the CQI Strategy can continue to support local interpretations of CQI, while also ensuring that the activities implemented fit with the overall aims and goals of the Strategy. Developing a clear program logic would assist with this (see section 8.1.1).

### 4.4.2 The most commonly used CQI tool in the NT Aboriginal PHC sector is One21seventy, which is seen as useful and fit for purpose

While the CQI model in the NT Aboriginal health sector comprises many and varied activities, in terms of formal tools, One21seventy is the most commonly used. One21seventy is used by all DoH health services and many ACCHOs. One21seventy is seen as 'providing a smooth pathway to CQI' (DoH official) by offering a complete package that guides the health centre through training on CQI, undertaking an audit and system assessment, then using data for planning. Evaluation participants saw a number of benefits in One21seventy including the history of NT health involvement in ABCD, its compliance with Central Australian Rural Practitioners Association (CARPA) guidelines, its relevance to various clinical settings, and the regular updating and development of additional tools (such as the recent youth health audit tool). The ability for comparison with other services was highlighted as a benefit by DoH and OATSIH informants, but this was not commonly articulated as a benefit by health service staff.

One21seventy grew out of the ABCD research project, and the high uptake of the system is likely to be due to ABCD's history in the NT health sector. It has been specifically designed for use in Aboriginal PHC settings and provides a solid technical basis from which to audit health service performance. One21seventy appears to be providing much of the technical rigour behind the CQI approach of many health services in the NT and, while it is not considered that its use should be mandated, we recommend that it continues to be supported as a key tool under the NT CQI Strategy.

Some organisations have created their own tools. For example, when the ABCD research project ended, one of the case study sites choose not to proceed with One21seventy and instead developed their own audit tools, which were adapted from ABCD. The audit tools are reviewed regularly by a committee made up of all medical staff, and new audit tools are developed in response to identified needs; a sexual health audit tool was recently implemented.

Other informants spoke highly of a tool developed by a NT DoH data specialist that offered immediate access to up-to-date data from which they were able to track trends and benchmark the data against other services. This tool uses KPI data and data pulled from the DoH ePIRS to produce real time reports on performance against a number of indicator targets, displayed in a 'traffic light' format. The tool

enables analysis of DoH clinic information at community, HSDA, Top End/Central Australia, and NT wide levels. The future intent is to measure and produce reports in three month cycles, which will be discussed with health centre managers at quarterly meetings. This is not intended to be a substitute for the CQI process, but rather to support and complement it.

### 4.4.3 There is a high uptake of tools, but their use is driven by CQI Facilitators

As noted in sections 4.2.2 and 4.3.3, decisions around CQI tools are made centrally by the DoH or by ACCHO boards, CEOs, or senior managers. Buy-in from clinicians and other health centre staff varies, but in the majority of the case study sites the use of CQI tools was driven by the CQI Facilitator. PHC staff are involved in audit and systems assessment processes, which are led by the CQI Facilitators, but most health centre staff do not directly interface with CQI systems such as One21seventy, or interrogate their own data systems. Typically, the CQI Facilitator will work with the audit data and feed the results back to staff. Some Facilitators have developed their own templates and tools for analysis and feedback (e.g. templates which integrate NT AHKPI data and the data from One21seventy).

Most resources (i.e. staff and CQI Facilitator time and effort) are concentrated on the data collection stage of the CQI cycle, including audits and systems assessments. There is considerably less investment in the other stages: data analysis is commonly completed by the CQI Facilitator; interpretation and action planning may involve attendance at a meeting led by the Facilitator; and implementation of the planned actions tends to be largely left to the discretion of the clinic manager. There is a need to up-skill clinic staff and managers to become competent to lead CQI themselves, rather than simply participate in the process. This is discussed in section 8.2.1.

## 4.5 Collection, analysis, and use of clinical data and the NT AHKPIs

The evaluation questions under this objective were designed to examine how clinical data and NT AHKPI data is being used at different levels, whether the CQI system is based on good quality information, and the extent to which the NT AHKPI indicator set is appropriate for CQI purposes. The questions also examine the impact of the CQI Strategy on the capacity to analyse and use clinical data and the NT AHKPIs for CQI purposes.

### 4.5.1 The CQI Strategy has facilitated increased use of clinical data at the service level

There is evidence that the implementation of the CQI Strategy has led to an increased interest in data at the health centre level, and that health centre managers, clinicians, and board members are becoming better able to interpret and use clinical data. Clinical data, gathered through the NT AHKPI reports and CQI tools, is being used in service planning and to identify training needs. In one instance, an audit revealed that the clinic had low immunisations rates and it was found that many of the clinic staff had not been recently trained in immunisation. The clinic then sent several staff members to be trained in this area. An AHP stated that clinical data provided 'objective' evidence to support calls for change in health centre practice:

> The CQI data can be used as a tool to show that there is a need to implement initiatives or change practice. We [AHPs] often know there is a need for change but it is difficult to convince the health centre manager without data.

Clinical data is also used by health service boards to plan, support decision making, and in some cases, provide feedback to the community. Boards tend to receive reports of data outlining clinic performance (for example, the results of One21severty audits), often twice yearly in conjunction with the NT AHKPI reports. In some cases the board meeting is devoted to CQI; in others it is an agenda item. As noted in section 4.2.2, CQI tends to fill different roles in the health system; at board level it appears to be widely used as a management tool, with clinical data being used to identify areas for the organisation to improve performance, allocate resources, and in some cases set service goals (generally focused on clinic outputs and service provision).

### 4.5.2 Use of clinical data is bounded by externally defined indicator sets

The clinical data that is used for CQI is gathered through tools such as One21seventy and the NT AHKPIs. These instruments provide a set of externally defined parameters against which the health service performance is measured. Measurement against a limited number of external indicators can mean that a local clinic is not deciding for itself what issues or problems it wants to address, then looking for an appropriate tool for this purpose.

The analysis of data against set indicators, and the implicit judgement of clinic performance against these indicators, tends to incentivise a focus on service provision rather than consumer needs. A number of health staff described responding to identified service gaps by increasing the clinic's delivery of certain services. While this may increase clinic performance against the indicators measured, it is questionable whether this reflects improved service quality.

This suggests that health services are viewing data gathered through CQI processes as a blue print for action, rather than seeing the data is an indicator of overall clinic or health system performance. Data from One21seventy and the NT AHKPIs provides information on the impact, outcomes and/or activities of selected aspects of the system, but should not *directly* inform what needs to be done to improve the system performance. As discussed in section 4.3.2, health centres tend to implement programs or initiatives in response to the 'problem', with limited exploration of the broader reasons behind the issues identified. For example, when data analysis identifies health service gaps such as low completion rates for adult health checks, clinics often respond with an intervention to encourage uptake of the checks rather than seeking to understand why health check coverage is low (this could involve, for example, discussion with the community about why they did/did not uptake health checks and analysis of whether it was a demand or supply problem).

This issue was discussed with sense making workshop participants, who felt that adopting the following measures would help to address this issue:

- promote mechanisms for greater community engagement/involvement in interpretation of health service indicators, and consider making such engagement a formal part of the CQI cycle
- further promote shorter, simpler, mini-cycles which can be reviewed and shared
- promote regional collaboration where data is shared and regional ideas and solutions are developed. This would help overcome challenges for smaller clinics in completing cycles, and also bring new regional ideas/solutions. The process of regionalisation of health services should support this.

### 4.5.3 NT health services are beginning to share, compare, and benchmark data

The focus of data analysis to date has been on individual health services, but there is recognition of a need to implement a process by which regional or NT wide issues can be identified and added to the CQI agenda. The literature notes a number of benefits associated with data sharing:

- more transparency and greater accountability can increase health care providers' motivation to improve their services (Fung, Lim et al. 2008)
- comparison with other services can be used to identify good practices to emulate and enables the sharing of resources and expertise (Kahan and Goodstadt 1999)
- benchmarking can provide targets or goals reflecting excellent yet achievable performance (Hermann and Provost 2003)
- sharing data can also facilitate a regional response to problems that lie beyond the capacity of individual services to solve (Gardner et al. 2011).

The evaluation found that there is recognition of the value of data sharing and active efforts to encourage this. This is most prevalent in NT government services, with data being extracted from the ePIRS and analysed centrally. Analysis includes the benchmarking of health services against 'clusters' of health centres, as well as HSDA and NT level analysis and comparison.

The community controlled sector is also moving to develop data sharing mechanisms, although this is slightly more challenging due to the use of different ePIRS and some remaining sensitivities around making 'performance information' widely available. At the local level, some of the larger organisations with multiple health centres are sharing data between clinics and there is now a 'healthy competition' between clinics and their data.

In regions where CPHAGs have been established, they have been used as a means of facilitating data sharing across government and ACCHO services. In addition, the CQI Steering Committee is forming a data working group which is intended to be a vehicle through which clinical data can be shared. This group currently focuses on DoH data, but will also look at ACCHO data as organisations gain their board's approval to share the information. Once the group is fully operational this will enhance regional collaboration between health services.

Greater sharing of data does not necessarily mean implementing a standardised approach to data collection and analysis. Instead, it is intended to facilitate the identification of issues or successes at a regional or NT level, and facilitating a collaborative approach to addressing or building on these.

The NT will need to prioritise growing a culture in which data is shared and used, while balancing concerns around accountability, fairness, and confidentiality. Doing so will require fostering trust that the data will be used for quality improvement purposes and not for punitive reasons. This may involve:

- clearly articulating goals for the use of data at a regional/Territory level
- considering what data should be shared. NT AHKPI data would be a good starting point, as all NT Aboriginal health services contribute to this dataset
- identifying how the data will be used for CQI purposes (e.g. developing mechanisms to promote shared learning between health services)

- developing data sharing protocols which emphasise a 'no blame' approach to system level learning
- considering how to account for contextual factors when comparing and benchmarking services, including the size of the organisation, and staffing arrangements (e.g. whether services have permanent or 'fly in fly out' staff)
- articulating strategies for when a service is not performing and what action would be taken to support this service to improve.

Increased sharing of data will be useful for identifying common issues at a regional and/or NT level and should help inform system-wide planning for quality improvement. The role of data in the CQI Strategy should be captured as part of the development of program logic.

#### 4.5.4 The quality of clinical data has improved due to staff participation in CQI

The quality of clinical data has improved markedly over the past two years, and was generally seen as suitable to support CQI processes. The fact that all clinics in the NT now use computerised patient management systems, rather than paper based filing systems, has increased confidence in the quality of the data.

The quality of clinical audit data depends on how staff use the ePIRS. PHC staff participation in file audits as part of the CQI process has been a key reason behind the increase in data quality. Several clinicians spoke of a 'light bulb moment' when they realised the importance of accurate data entry. Going through audit processes was also seen as supporting improved patient care, for example, by increasing understanding of how to use the recall system correctly, meaning patients are being more actively followed up.

Some of the CQI Facilitators provide training in ePIRS as part of their role, in recognition that accurate data entry is a key factor for successful CQI. In one of the case study sites, the CQI team provide a half day training workshop that is compulsory for all new staff, as well as a refresher course for returning staff.

While a few issues remain around the completeness of data entry, evaluation participants were largely confident that the quality of data on which CQI is based has improved and would continue to do so.

#### 4.5.5 NT AHKPI data is used to cross-check clinical data gathered through CQI processes

The capacity of health service clinical and management staff to understand and use NT AHKPI data has increased since the implementation of the CQI Strategy. This is largely due to the support provided by the CQI Facilitators directly to health centre staff, and the training provided to management and boards by the CQI Facilitators and Coordinators. After health centres submit their NT AHKPI data twice annually, a draft report is released to the health service, with the intention that the health centre manager will review the document and provide comment on data quality, contextual factors related to the data, and any further interpretive commentary. The CQI Facilitators appear to be playing a key role in helping health centre managers to understand the data, and will typically provide assistance to review and respond to the draft NT AHKPI reports. Several health centre managers noted that through this process

they had gained a clearer understanding of the NT AHKPI data, what the indicators meant, and how the data could be used.

The NT AHKPIs were not widely used as a primary CQI tool in the case study sites visited as part of this evaluation. This is mainly due to the fact that the reports provide data on a limited number of headline measures, as opposed to tools such as One21seventy that enable the clinic to audit their practice in key areas (such as child health) against a range of parameters. The NT AHKPI reports were, however, commonly used by health centre managers to complement and validate the findings of other CQI processes, for example, to cross-check clinical data that had been extracted through CQI audits.

The NT AHKPIs are seen as a useful means of benchmarking against other health services and to track trends over time. Several health centre managers found it useful to be able to compare their clinic's data against regional and NT performance, but recognised that results were not directly comparable due to contextual factors such as the size of the community, staffing arrangements at the clinic, and the population served by the health centre. At the Territory level, the fact that the NT AHKPIs presented data from both DoH clinics and ACCHOs was seen as a useful to gain an NT-wide view of trends in processes and activities in Aboriginal PHC.

#### 4.5.6 Structures to support better use of NT AHKPI data at the regional and NT level are being developed

There is increased confidence in the quality of NT AHKPI data amongst those in management positions in the DoH and OATSIH, and this is translating to a desire to increase the use of KPI data at the regional and NT level. While initial NT AHKPI reporting rounds had some issues with data quality, most informants felt that the system had now 'bedded in' and was an accurate reflection of what was happening in the NT Aboriginal health system.

Use of data currently tends to be on an ad hoc basis by individuals. Informants noted that there was three years of data available and that it was now possible to track trends and identify patterns in the data and compare information across the NT. For example, one official stated that the NT AHKPI data was useful to present information on the NT Aboriginal health system at national and international conferences and other fora. Another informant, who had management responsibility for a number of health centres, used the data to prepare for meetings with clinic managers and to direct discussion about the clinic's progress and plans.

As yet the NT AHKPI data does not appear to have directly influenced planning decisions or resource allocation at a regional or NT level, but informants were optimistic about the potential to use the data more formally in sector planning. Structures for use of the NT AHKPI information are being developed. CPHAGs were seen as a particularly useful vehicle for this. CPHAG meetings include a focus on looking at KPI data across government and ACCHO services to identify issues at a regional level and develop plans to support all services in this region.

#### 4.5.7 The NT AHKPI indicator set currently focuses on clinical data, but does not consider broader aspects of PHC

The NT AHKPI indicator set was generally perceived to be appropriate and fit for purpose. As one NT government official noted, the indicator set does not necessarily provide a comprehensive picture of

Aboriginal health status in the NT, but rather represents a compromise between data that is available, collectable, and likely to provide useful information.

The NT AHKPIs largely report data related to the provision of clinical services which, implicitly, will lead to improved population health. Data is currently collected against the 12 quantitative indicators related to health service outputs and processes, which are listed in Table 9.

**Table 9: NT AHKPIs by domain**

| Health services |
|---|
| 1.1 Episodes of health care and client contacts |
| 1.2 First antenatal visit |
| 1.3 Birth weight |
| 1.4 Fully immunised children |
| 1.5 Underweight children |
| 1.6 Anaemic children |
| 1.7 Chronic disease management plan |
| 1.8 HbA1c tests |
| 1.9 ACE inhibitor and/or ARB |
| 1.10 Adult aged 15–54 health check |
| 1.11 Adult aged 55 and over health check |
| 1.12 PAP smear tests |

The indicators against which data is currently being reported focus on clinical data. This was highlighted by some informants as a concern as it was perceived to suggest that 'quality' is only related to clinical services, and that this incentivises a focus on increasing the amount of service provision (e.g. performing health checks or implementing a program to encourage immunisation). While these activities are undoubtedly important, other aspects of quality service provision are not reported on and may, therefore, be seen as being of less importance.

The originally agreed NT AHKPI indicator set included a further seven qualitative indicators related to issues such as unplanned staff turnover, recruits completing orientation training, overtime workload, and community involvement in determining health priorities. While NT AHF documentation suggests that draft definitions were developed for the seven qualitative KPIs (NT AHF 2010), it appears that no further action was taken to implement these. We have been informed that new indicators are under development, with three additional indicators likely to be implemented in 2013.

It is recognised that qualitative data collection is likely to be more burdensome on health centres than current NT AHKPI reporting, which can be extracted relatively easily from ePIRS. Consideration would need to be given to how frequently the data would be collected (an annual basis is likely to be appropriate) and clear guidance (such as a reporting template) on how much and what kind of data would be collected.

## 4.6 Implementation against the CQI Strategy

This section answers evaluation questions on the extent to which the measures of success identified in the original CQI Strategy have been met, and whether the measures of success identified in the original CQI Strategy are still relevant.

### 4.6.1 There is a need for more clearly defined goals and objectives for the CQI Strategy

The evaluation team could find little articulation of success in the original strategy documentation, which is largely a description of the CQI processes and how the Strategy will be implemented (i.e. outlining the components of the Strategy such as governance structures and the employment of Coordinators and Facilitators). The subsequently developed framework developed by the CQI Planning Committee in November 2010 outlines the ten key elements of the Strategy and includes greater detail of the *processes* associated with the CQI Strategy, such as that CQI will be 'incorporated into strategic and operational plans', health service staff will be 'orientated to CQI protocols and practice', and the CQI Facilitators will provide 'training in the principles of CQI as well as providing technical support to staff'.

Clear articulation of processes is important and provides guidance on what outputs might be expected from the Strategy. However, the evaluation found little evidence of what *outcomes* are expected to be achieved through the implementation of the CQI Strategy and a variety of views on what it is expected to achieve. This is reflected in what is happening on the ground, with the CQI Facilitators largely focused on providing a service (for example, working with health centres to undertake CQI audit cycles) rather than achieving outcomes (such as focusing on the transfer of skills to increase health centres' capability and capacity in CQI). Funding contracts reviewed by the evaluation team also do not list any expected outcomes.

At the sense making workshop, participants were asked what a successful program would look like. As outlined in Table 10 below, success in CQI was largely viewed in terms of processes such as engaging and empowering staff, and embedding CQI into routine practice.

**Table 10: Sense making workshop participants' views of success**

| Theme | Perspectives of success |
|---|---|
| Staff | • engaged and empowered staff, particularly AHPs<br>• staff lead decision making<br>• staff/local ownership of CQI<br>• leadership from the health centre manager (as key change agent)<br>• CQI is demystified and accessible to all in the health system<br>• CQI is a core competency of health staff, is part of training, and contributes to staff retention |
| Use of data | • NT and national AHKPIs are a key part of CQI<br>• data and statistics for CQI purposes are translated into appropriate action<br>• information is disseminated meaningfully |
| Health system strengthening | • CQI interacts with and informs all aspects of the NT health system<br>• CQI is a mechanism to strengthen system dynamics<br>• CQI supports a strengths-based health system<br>• CQI functions effectively in the specific context of the NT<br>• CQI should not only have a clinical focus, but also a focus on staffing and systems |
| Engagement and empowerment | • CQI is a means to identify, celebrate and build on success<br>• communities are engaged in their own health care and communities and boards are empowered through CQI<br>• responsive to community needs and dynamics |

| Theme | Perspectives of success |
|---|---|
| Sustainability | • CQI embedded as business as usual across the sector, so does not rely on CQI Facilitators<br>• participation in CQI is sustained<br>• policy and funding environments are supportive and enabling of CQI |

When outcomes for CQI were mentioned, success was seen in terms of improved health equity and population health outcomes. Perhaps reflecting the NT health sector's history of involvement with ABCD, the focus appears to be largely on chronic disease outcomes. As of yet there has been little discussion of other aspects of quality, such as safety, efficiency, accessibility, or patient-centred care, and what the CQI Strategy is working toward in each of these areas.

### 4.6.2 Articulating the overall 'logic' of the CQI Strategy could include a short-term outcome of organisations becoming CQI competent and longer-term population health outcomes

The focus on processes, both in the documentation and in the implementation of the Strategy, has been useful in getting CQI activity happening in the NT Aboriginal health sector. To guide the Strategy over the next few years as it moves past the initial implementation phase, there would be value in developing a program logic which defines what outcomes are anticipated from the CQI Strategy and their priority (i.e. what is expected to be achieved in the short, medium, and long terms).

As discussed elsewhere in this report, health services within the NT are at varying levels of capability and capacity, and are implementing different activities as part of their CQI models. The focus on population health outcomes as a longer-term objective is appropriate. As a short-term outcome, we suggest that an objective is set for NT health organisations to become 'CQI competent'.[10] This could involve defining and describing the level of CQI capability and capacity expected of a service, appropriate in the context of NT Aboriginal PHC, and articulating it in terms of outcomes (e.g. data is used effectively) rather than processes or outputs. Aspects of quality such as safety and patient-centeredness also need to be considered when defining a CQI competent organisation. The articulation of the expected outcomes of the CQI Strategy, and the definition of CQI competence, need to include input from all levels of the system so that it is not seen as a top down program being imposed on health services.

While the definition of CQI competence may eventually be formalised and used to provide guidance on issues such as how funding is distributed and the level of autonomy in how the funding can be used (see sections 7.2.4 and 8.2.1), its more immediate aim is to provide direction for health services regarding what capability and capacity in CQI 'looks like'. This could then be used to guide health services to articulate their own aims and goals related to CQI. Individual organisations would have the flexibility to set their own CQI goals and implement the CQI approach as they see fit, and that best suits their current level of capacity and needs. The goal is to support health services to reach a level of CQI capability and capacity; the specific means by which they get there is up to them.

There is a need to consider who would determine whether an organisation is CQI competent or not. In the interim, this assessment could be undertaken by the health service itself with support from the CQI Facilitator. This may involve, for example, conducting a needs assessment in conjunction with the health

[10] In this report, we have sometimes shortened 'capability and capacity' to 'competency'. Where we talk of a 'CQI competent' service or organisation, we are referring to it holding a defined level of capability and capacity in CQI.

service to identify the overall level of CQI capability and capacity, and specific areas related to CQI in which the organisation is doing well or which require improvement.

The key aim is to ensure that the organisation receives appropriately tailored support for CQI. The type of support required may vary over time, and it is recognised that the organisation may move along the continuum of CQI capability and capacity, in either direction, depending on contextual factors such as staff turnover. The support currently provided as part of the Strategy, particularly the CQI Facilitator role, tends to focus on supporting organisations to 'do CQI' (i.e. participate in the process) and should be reframed to support increased CQI capability and capacity within the services. This may include assistance in setting service goals, developing staff engagement plans for CQI, and selecting from a range of CQI approaches and tools. This refocused role would assist in embedding CQI into common practice, rather than CQI simply being undertaken as a separate and discrete activity.

## 4.7 Quality of Aboriginal PHC services

The evaluation questions under this objective are intended to identify dimensions of quality that the CQI Strategy aims to improve, the time period this is expected to occur in, and the impact of the CQI Strategy on the quality of Aboriginal PHC, both now and in the next 1–3 years.

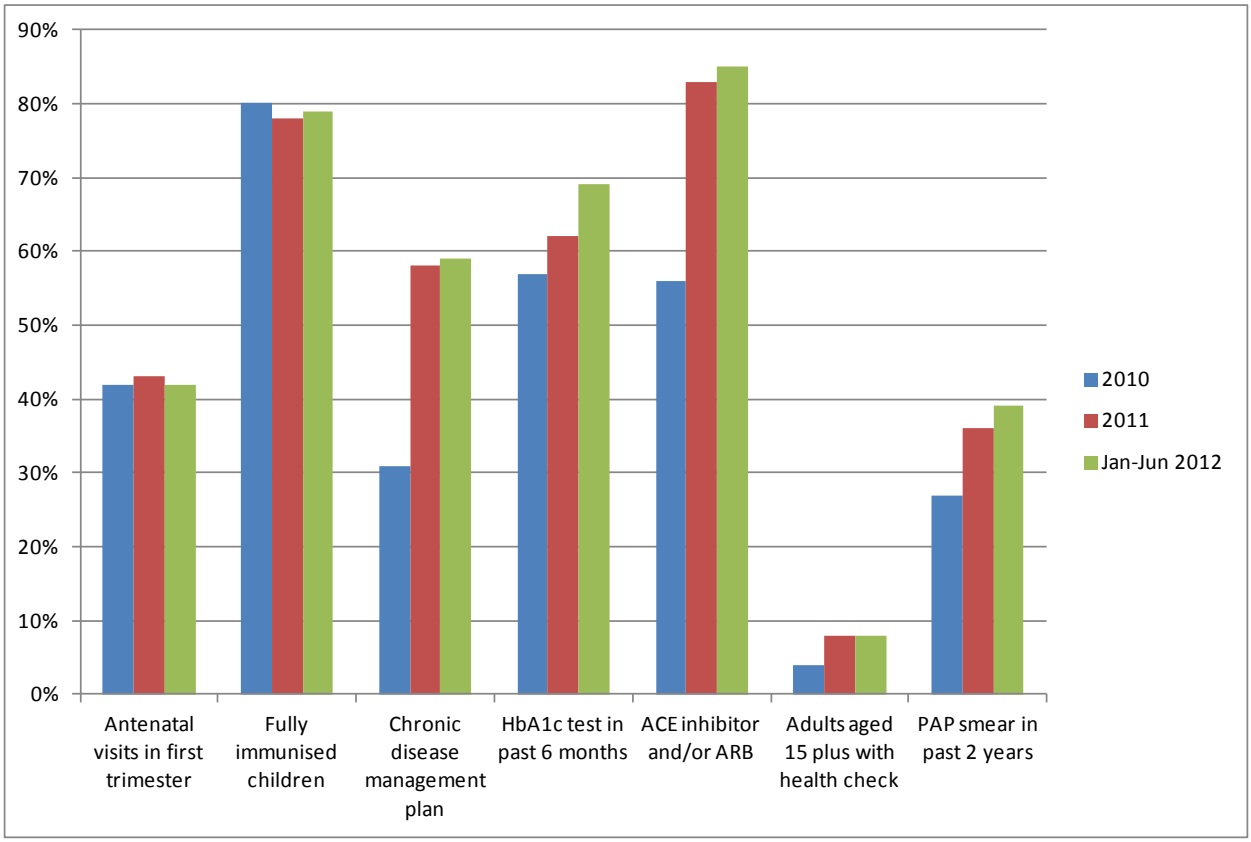
### 4.7.1 There is evidence that service delivery outputs are increasing, but it is not possible to attribute this to CQI

The CQI Strategy has a specific focus on clinical CQI. This approach assumes that 'quality' can be largely defined in clinical terms and, therefore, when appropriate clinical services are delivered, population health outcomes will be achieved. As previously discussed in this report, this evaluation has found numerous examples of changes to clinical practice that have been made as a result of engagement in CQI processes. These changes were generally a direct response to issues identified through the clinical audit process or NT AHKPI data. Where the CQI process identifies areas of service provision requiring improvement, there appears to be a perception that quality will be improved by implementing a program or intervention to address performance in that area. For instance, if clinical data reveals that women were not accessing PAP smear tests, health services will often implement a health promotion campaign or encourage staff to perform the test on all eligible women that access the clinic. There appears to be a genuine commitment amongst health service staff to ensure that consumers are provided with the services to which they are entitled, and staff are actively working towards this.

Discussion of the impact of CQI on population health outcomes needs to be approached with caution. The evaluation team analysed NT AHKPI data from all NT DoH services between January 2010 and June 2012. We were not able to access clinical data from ACCHO services, and recognise that this limits the generalisability of the analysis. The CQI Strategy has been operational for two years and any impact on clinical outcomes is unlikely to be apparent at this point. It is also extremely difficult to attribute any changes to CQI; the NT health sector has experienced extensive reform and a significant funding increase under the EHSDI. Separating the impact of these from any impacts of CQI is extremely difficult. In addition, many of the outcomes in the following graphs are strongly influenced by social determinants of health, such as poor housing and food insecurity, which clinical CQI is limited in its ability to influence. The data presented below is therefore subject to these caveats.

There is evidence that in DoH clinics service delivery outputs are increasing. Figure 5 shows trends in the NT AHKPI data of all DoH services against the indicators which relate to health service outputs[11] from January 2010 to June 2012. As shown in the graph, there have been increases in the proportion of patients who have a chronic disease management plan; the proportion of diabetic patients who have had HbA1c tests[12] in the past six months; the proportion of patients on ACE inhibitor and/or ARB; the proportion of adults over 15 that have had an adult health check in the past year; and the proportion of eligible women who have received a PAP smear test in the past two years. Data on the proportion of antenatal visits in the first trimester and the proportion of fully immunised children shows no significant increase or decrease.

**Figure 5: NT AHKPI output indicators data for DoH clinics, January 2010–June 2012**




Source: NT DoH

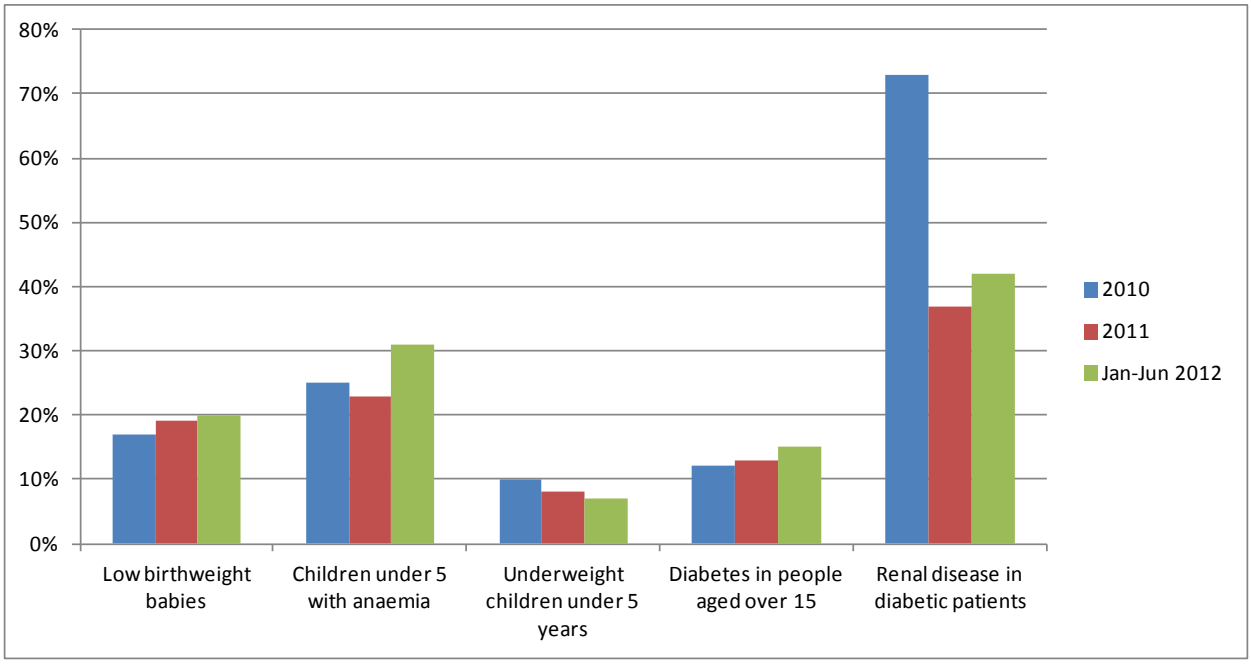
When compared with DoH NT AHKPI data on population health measures and other DoH data on disease prevalence, there are some encouraging signs: the proportion of underweight children has dropped slightly and the data shows a dramatic drop in the number of diabetic patients with renal disease (although there may be some issues with the quality of the 2010 data). On the other hand, there has been a slight increase in the proportion of low birth weight babies and the prevalence of diabetes is increasing. The prevalence of anaemia in children under five is also increasing (see Figure 6).

[11] KPIs 1.2, 1.4, 1.7-1.12.
[12] The HbA1c test is used to determine whether diabetes is under control.

As noted previously, it is not possible to determine the extent to which these trends can be attributed to the CQI Strategy as clinical interventions will have variable impact on some of these measures (e.g. diabetes prevalence). Although discussion with health services and review of clinic-level NT AHKPI data suggests that there is some evidence of impact on certain population health indicators at the health centre level, as shown in the graphs above, there has not been a large degree of impact on health outcomes at the NT level. Several health centre personnel also noted that it was sometimes difficult to see the connection between their CQI processes and a better service for patients:

> CQI seems to involve a lot of backroom work, looking at data, reporting, and making plans but it is not obvious to me how this will improve outcomes for our clients (AHP).

**Figure 6: NT AHKPI population health indicators data for DoH clinics, January 2010–June 2012**




Source: NT DoH

There are many different dimensions of 'quality'. The Washington Institute of Medicine (2001) identifies six dimensions through which the overall concept of quality is expressed: safety, effectiveness, patient-centredness, timeliness, efficiency, and equity. Other commentators have listed clinical practice, patient outcomes, culturally appropriate care, and accessibility as key dimensions of quality (Powell et al. 2008; Baker 2011; Marley et al. 2012).

The CQI Strategy to date has focused on a limited number of these: clinical practice, patient outcomes, and service accessibility. Systems assessments, including the One21seventy Systems Assessment Tool, provide the opportunity to consider other aspects of quality. If other aspects of quality are not included as part of the NT CQI approach it is unlikely that overall quality of Aboriginal PHC and, therefore, Aboriginal health, will improve. While it is acknowledged that CQI cannot be solely responsible for improving Aboriginal health outcomes, we do suggest that there is a need to ensure that the focus of the NT CQI approach is inclusive of other dimensions of quality. There is a need for discussion on what 'quality' of Aboriginal PHC means, and how CQI can interact with these dimensions of quality. The results of this discussion should be incorporated into any future policy documentation (such as a program logic model) that is developed to guide the NT CQI Strategy.

# 5 BARRIERS AND ENABLERS

This section addresses the overarching evaluation question: *what barriers and enablers have contributed to the success or otherwise of the CQI Strategy?* In assessing barriers and enablers, the evaluation considered:

- the governance of the CQI Strategy
- support by health service management and capacity in other closely related areas such as the functionality of the Clinical Information Systems
- the uptake of CQI training for PHC staff and whether that training was appropriate and effective
- the development of the CQI workforce (focusing on the workforce funded through the CQI Strategy) in relation to recruitment, retention, support, and training
- any change management strategies used to implement the CQI Strategy.

## 5.1 Summary of findings

The key evaluation findings relating to barriers and enablers are:

- the current CQI Strategy governance structures are effective in supporting the operation of the Strategy, but there is a gap in higher level strategic oversight of the Strategy
- governance of the Strategy would be assisted by more active contract oversight
- there is varying levels of support from management for CQI and this is reflected in the attitudes of their staff
- regular training to increase staff capacity in CQI has been provided under the Strategy. This training is valued by attendees
- the main barriers to training attendance are time and a lack of backfill staff
- the CQI Coordinator role is providing effective support to the CQI Facilitators; this could be enhanced by a complementary focus on supporting the strategic goals of the CQI Strategy
- the CQI Facilitator role has been critical to increasing CQI capacity and capability in the Aboriginal NT health sector
- recruitment and training processes for the CQI workforce were appropriate, but uncertainty of funding is a barrier
- the population based formula to determine placement of the CQI Facilitators could be reconsidered
- change management support has been provided through training and through the CQI workforce; further developing change management and communications plans would be beneficial
- patient information systems used by NT health services are suitable for the current CQI approach but may not support staff leading their own CQI processes
- the CQI approach in the NT needs to account for high staff turnover and use of temporary staff.

Potential adjustments and improvements to the ongoing implementation of the CQI Strategy are outlined in Box 3 below. The formal recommendations from this evaluation are outlined in section 8.

**Box 3: Potential areas for improvement**

1. Clarify who the CQI Steering Committee reports to, and develop a process for identifying and elevating emerging issues.
2. Clarify the role of regional managers in CQI activities and how they are expected to work with the CQI Facilitators and communicate the results of this discussion to the sector.
3. Reconsider the distribution of the CQI Facilitators workforce, including consideration of the population served, the number of communities and health clinics, and the remoteness of these clinics.
4. Include CQI as part of staff recruitment and performance appraisal processes and the orientation of new staff, including locum staff.
5. Explore rolling out the PENCAT system, or a similar tool, across the NT health sector.
6. Investigate including a CQI component as part of locum training and incentivising visiting GPs to come to the same clinic over time.
7. Develop a strategy to communicate key messages about CQI to the sector. This should outline key stakeholder audiences, the messages that will be provided to these audiences, and communication methods.
8. Clarify the information that is required from CQI funding contract holders, and how this information will be used, then enforce contract reporting against a limited number of key items.

## 5.2 Governance of the CQI Strategy

This section addresses the evaluation questions on how effective the CQI Strategy governance structures are, the extent to which CQI is embedded in the governance structures for Aboriginal PHC and investigates the relationship between the CQI governance structures and the NT PHC system's governance structures.

### 5.2.1 The current CQI Strategy governance structures have been effective in supporting the implementation of the Strategy, but there is a gap in higher level oversight of the Strategy

Implementation of the CQI Strategy is overseen by the CQI Steering Committee (formerly the CQI Planning Committee), which includes representatives from OATSIH, AMSANT, DoH, CQI Facilitators and Coordinators, and staff members of ACCHOs. The Committee's function, as outlined in its terms of reference, is to direct the on-going development and implementation of the CQI Strategy. The group meets face to face twice annually, with a core working group that meets on a monthly basis via teleconference. The chair of the Committee and the two CQI Coordinators play a key role in guiding and leading the group.

The Committee appears to have largely performed well in its task of operationalising the CQI Strategy. It has overseen key decisions regarding the implementation of the Strategy, including the development of a framework which depicts the core elements of the NT CQI approach, and overseeing the implementation of the CQI workforce (i.e. the CQI Coordinators and Facilitators). Later actions have included the development of a framework for the CQI evaluation and the establishment of a working group to facilitate the sharing of clinical data.

It is unclear who currently provides oversight for the activities of the Committee. On its establishment it was agreed that the Committee would report to the PHRG. Written reports were regularly provided until the end of 2011, typically including updates on the recruitment of the CQI workforce, CQI training provided to CQI Facilitators and health service staff, and upcoming priorities for the Committee. These appear to have functioned as 'updates' to the PHRG rather than providing an analysis of strategic decisions made or emerging issues. There is no documentation regarding what information was to be provided in the reports, and we have been informed that there was little or no feedback regarding whether the reports were useful.

After the PHRG was disbanded, the Committee now reports to the NT AHF. However the Forum has been meeting infrequently in recent times and there does not appear to be an alternative reporting mechanism for the Committee. Other than one written report provided in December 2011 the evaluators could find little documentation of the Committee's recent activities. This has meant that there is little visibility at the Australian and NT Government level about what the CQI Strategy was achieving. Governance of the Strategy would be improved by clarifying who the CQI Steering Committee reports to, the frequency of reporting, and guidance on what the reports should contain. We suggest that quarterly reporting would be appropriate, and that the reports should contain a more strategic analysis of issues and achievements, as well as the reporting of outputs.

The evaluators observed that few strategic policy decisions relating to the CQI Strategy have been made during 2012. There is no defined process by which emerging issues can be identified by the Committee and reported up to NT AHF. For example, as outlined in section 4.5.3, the CQI approach would be enhanced by clinical data sharing between organisations. To date there has been little data sharing due to concerns in the sector that the data may be used punitively. The CQI Steering Committee has responded to this issue at an operational level by setting up a working group to facilitate data sharing. This could have been supported by the NT AHF at a policy level but articulating system wide goals and protocols for the use of data. However the lack of a mechanism for reporting to the NT AHF and infrequent meetings (only one meeting was held in 2012) has meant there is little opportunity to discuss 'big picture' issues relating to the CQI Strategy.

We would conclude that there is a gap in higher level strategic governance of the Strategy. There is a need for an entity such as the NT AHF, or a subcommittee such as the Senior Officers' Group, which can look across the system to identify future issues and consider the challenges that are likely to emerge, where the gaps are in the CQI Strategy and how these can be filled. For example, decisions on whether the quality focus should be expanded out from clinical practice to encompass other elements of quality, as outlined in section 4.7.1, is a key governance issue. These strategic decisions can then be implemented by the CQI Steering Committee.

### 5.2.2 Governance of the Strategy would be assisted by more active contract oversight

A number of DoH and OATSIH officials spoken to noted that it is difficult to tell how the CQI Coordinators and Facilitators are performing due to limited oversight and monitoring of the CQI funding contracts. Interviews with OATSIH officials suggested that there had been little or no reporting against the contracts, leading to a lack of awareness around exactly what was being implemented under the Strategy and a lack of visibility on what is being achieved.

The evaluation team reviewed several CQI funding contracts; some do not appear to specify any reporting requirements, while others require biannual reporting 'containing the content as advised by the Commonwealth' (internal DoH document). It was suggested that reporting had not been enforced due to a reluctance to overburden the funded organisations. This is a valid concern, but it seems that this has led to very little information being requested or provided and limited accountability and oversight of the CQI funding. It would be useful for OATSIH to identify what its key information needs are, and how this information will be used, then enforce reporting against a limited number of key items.

## 5.3 Support by health service management

The evaluation questions under this objective consider the extent to which health service management are supportive of CQI and how is this support demonstrated.

### 5.3.1 There is varying levels of support from management for CQI and this is reflected in the attitudes of their staff

Health service management, including Area Service Managers, General Managers, CEOs and Boards, have a key role in the success of CQI in the NT Aboriginal health system. Management support for, and leadership of, CQI is a critical factor in gaining staff buy-in and engagement to CQI. There are currently varying degrees of support for CQI from health service management across the NT.

Some health service management personnel are highly engaged in CQI and are acting as advocates, while others struggle to see the benefits of CQI. This buy-in, or lack of, from management tends to be reflected in the attitudes of clinic staff. Examples of the varying degrees of management engagement in two case study sites are provided in Box 4 below.

**Box 4: Case examples of management support for CQI**

In one case study site the regional manager spoke of his passion for, and long history of involvement with, CQI. This manager regularly participates in CQI processes, including visiting clinics to contribute to audits, systems assessments and planning days, discussing KPI data with clinic managers and regularly 'checking in with clinics to keep them on their toes with CQI'. The manager felt that his involvement in driving CQI activities had made real changes to the health of the community, particularly in decreasing rates of chronic disease and rates of anaemia in children. The health service board meetings included CQI as a regular agenda item, with clinical data presented to the board using graphs and other visual displays. Staff in this service were on the whole supportive of CQI and regularly engaged in PDSA cycles, with many clinic managers directly interrogating the ePIRS to gather data to inform practice and a number of staff attending training workshops and CQI Collaboratives.

In contrast, at another case study site members of the management team were openly sceptical of CQI, which they viewed as a mechanism for providing information on their performance. There was a perception that CQI takes manager time away from 'on the ground work' and that the focus seemed to be on accountability rather than informing changes to practice. The management team acknowledged there were attempts within the organisation to move to a 'no blame' culture, but felt that this had not yet happened in practice. This attitude was reflected in that of the health centre staff. While some staff were enthusiastic about CQI, most described it as a periodic process of data collection rather than a tool through which practice could be improved.

Management support is also crucial in enabling the CQI Facilitators to access health centres in order to provide CQI support. It is noted that DoH management has mandated health service participation in CQI, and has centralised structures to support the CQI Facilitators if health centres are reluctant to engage in CQI. There is no equivalent role in ACCHOs, and gaining the support of management and boards for CQI is therefore vital to encouraging uptake.

Some managers, particularly at the regional level, were unclear about their role in CQI. Decisions pertaining to the implementation of the CQI Strategy are generally made by CQI Steering Committee and are rolled out by CQI Facilitators, while clinic staff participate in CQI processes. It appears that some regional managers are unsure as to where they fit in relation to CQI activities and how they are expected to work with the CQI Facilitators. It would be worthwhile to include discussion at the governance level as to the role of health service management in the CQI Strategy and communicate the results of this discussion to the sector.

## 5.4 CQI training for PHC staff

This section examines the training and support that has been provided to increase staff capacity in CQI, including consideration of the extent to which staff have taken up the training and whether the training is appropriate and effective.

### 5.4.1 Regular training to increase staff capacity in CQI has been provided under the Strategy and this training is valued by attendees

As outlined in section 3.3.5 there has been a significant amount of training provided to increase staff capacity in CQI. This includes training on the One21seventy tool for clinicians and health service staff, induction and ongoing training for CQI Facilitators and Coordinators, and CQI Collaborative workshops. The training is funded through the CQI Strategy, as well as majority of the costs associated with training attendance including travel and accommodation. Attendance rates at the training have generally been high; in 2011 a total 120 people took the One21seventy training, while the CQI Collaborative workshops have averaged 70 participants.

Those who had attended training were generally positive about the experience. The CQI Collaboratives have a high rate of repeat attendance; approximately 65 per cent of attendees have attended more than one Collaborative. These were highlighted as an opportunity to share knowledge and learn practical information about 'what works' from other attendees. The collegial atmosphere was praised by participants who characterised the Collaboratives as 'a shared hub of support'. One informant stated that:

> I feel reenergised after going to the workshops. Not everyone at [health centre] is all that keen on CQI and sometimes it feels like an uphill battle to get people on board. I always come away from the training with at least one or two new ideas.

In addition the CQI Facilitators provide onsite training and support to health service staff in CQI activities including CQI principles and approaches, undertaking audits, data analysis, and action planning. Discussion with health service staff suggested that this was a useful mechanism for skills transfer as it provides a 'hands on' opportunity to 'learn through doing'. As outlined in section 4.2.4 the CQI

Facilitators have a degree of flexibility in how they provide this training and it is not consistent or formalised.

### 5.4.2 The main barriers to training attendance are time and a lack of backfill staff

The evaluation found that, while the formal training provided as part of the CQI Strategy attracts high numbers of attendees, there appears to be group of people that regularly attend training sessions while others in the NT Aboriginal health sector have never attended a formal training session.

The main barriers to training attendance are related to time and workforce. For staff working in small remote clinics, which are a common feature of the NT Aboriginal health system, attending a one day workshop often requires a full day's travel to get to and from Darwin or Alice Springs. This means a three day absence from the clinic is necessary, and there is a lack of backfill staff available to cover the staff member while they are away. The evaluation found several examples in which staff had requested to attend CQI training but had been turned down by clinic management due to this issue. The majority of health service staff who participated in this evaluation had not attended formal training but had received training at their health centre through the CQI Facilitators.

The current training model of face to face workshops does not suit all staff, and could be complemented by other training mechanisms. This may include online training methods such as web seminars or online learning modules that enable training to be taken from remote locations. This could be supported with the development of an online repository for CQI information and resources.

## 5.5 CQI workforce

This section addresses the evaluation questions around the effectiveness of recruitment and retention processes for the CQI workforce, the training provided to the CQI workforce, and whether the capacity and capability of the CQI workforce is sufficient to meet the needs of the NT Aboriginal PHC sector.

### 5.5.1 The CQI Coordinator role is providing effective support to the CQI Facilitators; this could be enhanced by a complementary focus on supporting the strategic goals of the CQI Strategy

The dedicated CQI workforce in the NT Aboriginal health sector is comprised of two CQI Coordinators (Top End and Central Australia) based at AMSANT and 17 CQI Facilitators employed by DoH and ACCHOs. In addition many other roles in the system include a CQI support component, such as data officers, the DoH quality and safety manager and DoH Remote Health personnel.

The CQI Coordinator role was intended to provide expert leadership in the development of the sector-wide CQI model and assist with coordination, recruitment, orientation and training and of the CQI Facilitators (PHRG CQI Working Group paper, March 2009).

The way in which the CQI Coordinator role is implemented is largely fulfilling this intention. The CQI Coordinators provide support and mentoring to the CQI Facilitators, organise CQI training for health staff, and may provide direct support to health services in which the CQI Facilitator position is currently vacant. Outputs include:

- a quarterly newsletter
- twice annual CQI Collaborative sessions
- One21seventy training workshops
- support visits to health services, in partnership with CQI Facilitators
- professional development workshops for CQI Facilitators
- presentations on CQI to health boards and other interested groups.

The CQI Coordinator role is achieving the aim of providing 'downward' support to the CQI Facilitator team. The majority of CQI Facilitators spoken to as part of this evaluation valued the support provided, particularly the opportunity to access a 'sounding board' to discuss issues and generate ideas. This is an important function of the role and should be retained.

At the more strategic 'upward' level, the CQI Coordinators contribute to the CQI Steering Committee and play a key role in implementing its decisions. CQI Coordinators could potentially play a greater role in the strategic leadership of CQI in the NT, but the absence of articulated goals for the CQI Strategy has meant the Coordinator work program has been largely reactive (i.e. taking action to address issues as they arise). Developing a 'logic' for the CQI Strategy and setting clear priorities would enable the CQI Coordinators to undertake more structured and proactive planning in line with this strategic direction. The CQI Coordinator role would also be enhanced by a more effective chain of governance, under which the Coordinators could implement policy decisions made by the NT AHF and operationalised by the Steering Committee.

### 5.5.2 The CQI Facilitator role has been critical to increasing CQI capacity and capability in the Aboriginal NT health sector

The CQI Facilitators assist health services to implement CQI processes. The intention of the role is to get health staff to see the benefits of CQI, gain buy-in and engagement in CQI and support staff to undertake CQI processes. The activities undertaken as part of the CQI Facilitator role were developed in response to the 2009 needs assessment, which found that health centres wanted someone 'on the ground' who could provide support to help staff to undertake CQI activities.

The CQI Facilitators were widely seen as the lynchpin of CQI in the NT, and we recommend that the CQI Facilitator role is retained as part of the CQI Strategy. There is diversity in the way the role is implemented across the NT. Not all health services have recruited a Facilitator; for example at one case study site the role is spread amongst several staff members including the data integrity officer, PHC manager and medical director. In other health services, particularly where the Facilitator supports multiple clinics, the role is largely limited to supporting health services to use a specific CQI tool such as One21seventy, and in other areas the role includes components such as data cleansing, quality assurance or ePIRS training.

On the whole, the resources invested in CQI facilitation enabled health services to gain a higher level of capability and capacity in CQI. Many of those organisations that were undertaking CQI prior to the Strategy used the investment to focus on broader quality improvement activities (such as accreditation) and embedding CQI into their systems (for example through inducting all new staff in CQI). For many other clinics, their contact with the CQI Facilitator was the first time they had heard of the concept.

These organisations generally moved from not undertaking any quality improvement activities to periodic participation in CQI. There has also been significant work undertaken by the CQI workforce to encourage better understanding and use of NT AHKPI data.

As discussed elsewhere in this report, the current CQI arrangements tend to incentivise a focus on outputs and processes. When discussing the key aspects of their role, Facilitators spoke in terms of the CQI tools used, audit cycles undertaken, and processes employed to engage staff in CQI. These are all commendable activities, but it is worth exploring how the CQI Facilitator role could be reframed to explicitly focus on providing tailored support increase health services' CQI capacity and capability.

### 5.5.3 Recruitment and training processes for the CQI workforce were appropriate, but uncertainty of funding is a barrier

Recruitment processes for the CQI workforce appear to have been largely effective. Recruitment began in 2009 with the CQI Coordinators and in 2010 recruitment for the CQI Facilitators commenced. There are currently 17 Facilitators including 10 in the Top End and 7 in Central Australia, however not all of these positions are funded through CQI Strategy as some health services have used core funding to employ CQI staff. The CQI workforce is recruited by the organisation that employs them, in accordance with that organisation's policies.

Those employed have a range of backgrounds and skills; some have an employment history as a clinician and others have a background in quality improvement. There are currently four CQI Facilitators of Aboriginal descent. Training provided to the CQI Facilitators includes a half day induction and orientation led by the CQI Coordinator, with the majority of training occurring on the job through observation and peer support of other Facilitators. Two annual one day meetings are held with the entire CQI Facilitator workforce. Facilitators generally felt that this was adequate and that the role was largely one that was learnt through experience.

The number of CQI Facilitators has fluctuated since the implementation of the CQI Strategy, with a small number of positions vacant for more than six months. It is unclear why this has occurred. Several informants felt that organisations were reluctant to recruit due to funding uncertainties as discussed below. Other informants believed that the corporate governance capability of several of the funded organisations was limited, and that they may have struggled with the recruitment process. When positions have been advertised the response has generally been good with between two and seven applications received, resulting in the appointment of an appropriate candidate.

Recruitment of the CQI workforce is affected by common NT health sector issues such as the appeal of working in remote communities and the lack of housing. However, the main barrier identified in relation to recruitment and retention of staff is the short term nature of the CQI funding contracts. It was noted that it is difficult to attract quality candidates when the position can only be advertised as a 12 month contract. The lack of consistent funding was also reported to create annual anxieties related to job security. We have not been able to confirm the extent that this has affected the CQI workforce, however anecdotal evidence suggests that at least one CQI Facilitator has moved on to a permanent role in part due to ongoing employment uncertainties.

### 5.5.4 The population based formula to determine placement of the CQI Facilitators should be reconsidered

The funding for CQI Facilitators, and therefore their distribution across the NT Aboriginal health sector, is based on the EHSDI funding formula. We recognise that the intent of this funding model was to address regional inequities in PHC funding, which is discussed in section 7.2.2. Under this model, one CQI Facilitator supports health centres that service a population of approximately 3000. This means that some CQI Facilitators are supporting multiple communities while others have only one or two large communities.

There are several issues associated with this population based approach. Where the CQI Facilitator supports numerous communities (currently up to a maximum of 11 services) these tend to be small relatively isolated clinics. Supporting these services entails a significantly higher resource cost in terms of the time taken to travel to clinics as well as the need to support multiple teams of staff to undertake CQI processes. CQI Facilitators that work with a limited number of communities are able to take time to understand local needs and tailor their CQI approach to this. This is very difficult to do when the Facilitator is able to give only minimal time to each community, and generally means that the same process and tools are used with each community. The lack of time available to support staff at each clinic also means that the capacity for skills transfer is limited and the focus tends to be on ensuring that CQI is done, rather than supporting staff to increase their CQI capability. Establishing and maintaining relationships with many different centres and staff adds to the sustainability challenge, especially considering the high staff turnover and the need to constantly build new relationships.

We note that regional boundaries may change with regionalisation and recommend that any redistribution of the CQI Facilitators needs to balance population size with number of communities and the remoteness of these communities.

## 5.6 Change management strategies

The evaluation questions under the objective examine the change management strategies used to implement the CQI program and determine how effective these strategies have been.

### 5.6.1 Change management support has been provided through training and through the CQI workforce; further developing change management and communications plans would be beneficial

CQI is a complex intervention and the organisational tasks associated with adopting, implementing and sustaining it have much in common with other change management processes (Gardner et al. 2011). Embedding CQI as a core part of the NT Aboriginal health system will require not insignificant change at all levels of the system. Managing this change requires having a plan or ‘map’ articulating the goals and expected outcomes of the changes (where we are going) and the support that will be provided (how we will get there).

The current ‘plan’ (i.e. the CQI Strategy) includes some change management strategies. The CQI Facilitators are intended to provide change management support at the health service level through

communicating the benefits of CQI and facilitating transfer of CQI knowledge to staff. The training provided as part of the CQI Strategy, in particular the CQI Collaboratives, has been a means of managing change by sharing ideas, challenges, successes, and learnings.

We found that the NT CQI approach has tended to focus largely on 'doing' rather than a broader discussion of goals for the CQI program and the change management processes required to get there. An articulation of the logic of the NT CQI approach (as discussed in section 8.1.1), which outlines the outcomes sought by the CQI Strategy, would be a good basis from which to further develop change management plans and communications processes. These should set out the strategies and support that will be provided, the key stakeholder audiences, the messages that need to be communicated to these audiences, and communication methods.

## 5.7 Other barriers and enablers

This section examines other barriers and enablers that have impacted on the success or otherwise of the CQI Strategy.

### 5.7.1 Patient information systems used by NT health services are suitable for the current CQI approach, but may not support staff leading their own CQI processes

The commonly used ePIRS in the NT are PCIS which is used in all DoH clinics and Communicare which is used in most ACCHOs. Both these systems are adequate to extract clinical data to inform CQI processes such as undertaking audit cycles. Many of the CQI Facilitators are highly competent at using ePIRS and often interface with the system, rather than staff leading this process.

It is noted that among health staff there is a range of capability in the PCIS and Communicare systems. A minority of staff and managers are highly competent and able to directly interrogate the system, however this requires specialist knowledge and many staff found the process confusing and cumbersome.

The ePIRS are adequate to support the current CQI arrangements under which the audit process and data interface is largely led by the CQI Facilitator. However, moving to a system in which organisations and individuals are encouraged to be CQI competent will require either the provision of training or making changes to the ePIRS to better support staff to directly interrogate the system.

The PENCAT system has recently been rolled out to all community controlled health services. This tool is used to perform analysis with data from Communicare, and enables staff to query the clinic's patient records and produce reports on various population health measures as well as lists of individuals who fall into selected population groups. The tool also enables the identification of individual patients within these groups. It has been reported that in services that have made alterations to their Communicare system, integrating this with PENCAT so it provides accurate data is challenging and is a major barrier to its use for CQI. However the system has good potential; PHC staff stated that, once configured, the system was relatively easy to use and in particular spoke highly of the way that data was presented through graphs.

### 5.7.2 The CQI approach in the NT needs to account for high staff turnover and use of temporary staff

The CQI approach in the NT needs to consider two defining characteristics of the NT Aboriginal health system: high staff turnover with many new staff who may remain in a position for a relatively short time; and the high use of locum staff. This is currently acting as a barrier to embedding CQI in the routine practice of PHC staff. Turnover of clinic staff means that those who have been through one audit cycle are rarely there for the next and the process of knowledge transfer needs to begin again. This instability does not provide a strong base on which to build institutional knowledge and capacity.

Temporary or agency staff are a key part of the NT health system, but currently have little engagement with CQI. CQI Facilitators noted that permanent clinic staff are often reluctant to involve agency staff in CQI cycles as they are not part of the core clinic team. However, agency staff are a key part of the health system and work across a number of clinics so it is important that they are aware of and engaged in CQI. Many of these staff undertake multiple placements throughout the NT and could perhaps be better characterised as 'permanent migratory staff'.

Overcoming the barrier of high staff turnover requires an acceptance that, while a stable workforce is still the ideal, the CQI approach in the NT needs to recognise and account for the realities of a mobile health workforce. While retaining a focus on embedding CQI in staff practice, there also needs to be an emphasis on embedding CQI in systems. CQI is already included in the job description of most health service positions, but this could be enhanced by including CQI as part of recruitment and performance appraisal processes, as well as given greater emphasis during the orientation of new staff, including locum staff.

It is also noted that Aboriginal staff are often the most stable part of the health workforce, and have relationships with the communities in which clinics are located. Documented evidence suggests that maintaining community connections through the long term employment of Aboriginal health staff is a factor which contributes to successful CQI (Marley et al. 2012). Ensuring their participation and buy-in is essential to embed CQI as a core part of the NT health sector. As O'Donaghue (1998) points out, there needs to be a willingness to redirect power to the Aboriginal health workforce. This includes a need to focus CQI training on AHPs and ensure that the training meets their needs. A specific training day for AHPs was recently held as part of the CQI Collaborative; this is a positive step that could be built on further.

Training in CQI is readily accessible to permanent health sector staff, but there is little available for locums, despite many of these staff undertaking multiple placements. Including a CQI component as part of locum training could be explored as well as mechanisms such as online training. Engaging with locum agencies could become part of the CQI Coordinator role. Incentivising visiting GPs to come to the same clinic over time, to create a sense of belonging and encourage participation in and familiarity with local CQI activities, may be beneficial.

# 6 APPROPRIATENESS

This section addresses the overarching evaluation question relating to appropriateness: *to what extent is the CQI Strategy an appropriate response to improve quality in Aboriginal PHC in the NT?* The evaluation examined whether the CQI Strategy is appropriate in terms of:

- its consistency with the theory and practice of CQI in PHC including nationally agreed standards
- the priorities and needs of stakeholder organisations including government and non-government stakeholders
- its fit with the problem/s it is intended to solve
- its fit with the broader context of Aboriginal PHC reform in the NT including the *Pathways to Community Control* policy, regionalisation, the development of a core services approach, the expansion of PHC through the EHSDI, and the introduction of the NT AHKPIs.

## 6.1 Summary of findings and areas for improvement

The key evaluation findings relating to appropriateness are:

- There is a high degree of consistency between the CQI Strategy and key dimensions of CQI theory and practice.
- The CQI Strategy is sufficiently flexible to target a wide variety of local needs and priorities.
- The CQI Strategy is not sufficiently aligned with system level, longer term needs and priorities.
- There is greater consistency in approaches to CQI across the NT Aboriginal PHC sector.
- In order to fully embed CQI in the NT Aboriginal PHC system and build CQI capacity on the ground there is a need to build capability and capacity at an organisational level.
- The CQI Strategy builds naturally on other NT Aboriginal PHC reforms and systems.
- The CQI Strategy is consistent with key principles of regional reform and could further support the reform process ahead of more formal organisational arrangements.
- CQI is not yet embedded as 'business as usual' in the NT Aboriginal PHC system.

On the basis of these findings, the evaluation team suggests some areas where modifications and adjustments could bring improvements to the ongoing implementation of the CQI Strategy. These are provided in Box 5 below. These are intended to sit under our main recommendations, which are outlined in section 8.

**Box 5: Potential areas for improvement**

1. The various staff within the NT Aboriginal PHC system who are currently fully conversant with CQI should be further supported to lead and champion CQI.
2. Empower AHPs to lead engagement in quality improvement with health consumers/community members.
3. There is a need for a greater focus on completing CQI cycles and in further interpreting data at a local level, including corroboration with other forms of evidence such as community consultation/feedback.
4. In addition to using CQI at a local level, there is a need to focus on identifying and addressing problems at a regional and NT level.
5. Further engage middle managers in CQI, by making information more relevant to them, as a means to effecting behavioural and organisational change.

## 6.2 Consistency with quality improvement theory and practice

The evaluation questions under this objective sought to identify the key theoretical dimensions of CQI in PHC and the extent to which the CQI Strategy was consistent with these.

### 6.2.1 There is a high degree of consistency between the CQI Strategy and key dimensions of CQI theory and practice

In section 3.4 we identified seven themes from a review of evidence relating to CQI theory and practice. Table 11 shows an assessment of consistency between the CQI Strategy and these seven themes, or key dimensions of CQI, including where greater consistency could be achieved. The CQI Strategy shows a high degree of consistency with, or is heading in the right direction on, the following dimensions:

- strong leadership for CQI
- participation in CQI of a range of staff at all levels
- ability to adapt CQI processes to local contexts
- provision of training and technical support to implement CQI
- availability of high quality and timely data.

There is less consistency with the remaining two dimensions:

- clearly defined goals for CQI
- consumer participation in CQI.

**Table 11: Assessment of consistency with key dimension of CQI**

| Key dimensions of CQI | Assessment of consistency |
|---|---|
| Strong leadership for CQI | • The CQI Steering Committee is effective in leading the implementation of the CQI Strategy, including decision making to support its operation.<br>• There is a gap in higher level oversight of the CQI Strategy.<br>• Across the NT Aboriginal PHC system there are a number of staff who sit at various levels and in various roles (e.g. managerial, clinical, administrative, CQI Facilitators) who are fully conversant with CQI. These staff should be supported to lead and champion CQI. |
| Participation in CQI of a range of staff at all levels | • There is a high degree of participation in CQI by health centre staff.<br>• The level of engagement, capability and capacity in CQI is highly variable, and CQI is not yet 'everyone's business'.<br>• Participation in CQI is often driven by an external CQI Facilitator. |
| Ability to adapt CQI processes to local contexts | • There is evidence of CQI processes being adapted to fit local health service contexts (see section 7.2.3), particularly through the use of mini-cycles.<br>• In a number of cases, CQI processes are controlled externally, either by an external CQI Facilitator or their employer, and local staff have not been empowered to tailor processes to local circumstances. |
| Clearly defined goals for CQI | • The goals and objectives of the CQI Strategy have not been clearly defined, and CQI means different things to different stakeholders.<br>• When articulated, the goals for CQI are often described in terms of processes rather than outcomes. Similarly, in its operation the CQI Strategy is often seen as providing a service rather than achieving an outcome.<br>• Greater consistency with this dimension could be achieved through developing a program logic that defines short, medium and long term outcomes. |
| Provision of training and technical support to implement CQI | • Overall capability and capacity in CQI has increased as a result of the CQI Strategy (see section 4.3.1).<br>• There has been a significant amount of training provided under the CQI Strategy, and this training is valued (see section 5.4.1).<br>• CQI Facilitators are key providers of technical support, as are specialists associated with the providers of CQI tools (e.g. One21seventy), and data and quality specialists in regional or central roles. |
| Consumer participation in CQI | • There are a lack of mechanisms for consumer participation in CQI, and for providing input into service planning and the delivery of health care more generally.<br>• There is some evidence that CQI is discouraging consumers to engage with health services (see section 4.2.4).<br>• Where health service boards exist, CQI is regularly discussed at board meetings.<br>• AHPs could be better empowered to lead engagement in quality improvement with health consumers/community members. |

| Key dimensions of CQI | Assessment of consistency |
|---|---|
| Availability of high quality and timely data | • CQI processes are certainly based on analysis of data and are facilitating increased use of data, and improvements in the quality of data.<br>• The CQI Strategy complements and builds on existing data collections and systems (e.g. NT AHKPIs and ePIRS) and CQI tools (e.g. One21seventy).<br>• There is strong use of system wide indicators (e.g. through NT AHKPIs and One21seventy) and data is beginning to be used to identify regional and NT wide issues.<br>• There is a need for a greater focus on completing CQI cycles and in further interpreting data at a local level, including corroboration with other forms of evidence such as community consultation.<br>• Data collection can be stop-start, driven by an external facilitator and, therefore, not continuous or timely. |

## 6.3 Alignment with the priorities and needs of stakeholders

Under this objective, the evaluation questions examined how well the CQI Strategy met the needs and priorities of stakeholders and how it could better meet these.

### 6.3.1 The CQI Strategy is sufficiently flexible to target a wide variety of local needs and priorities

The evaluation found that the needs and priorities of stakeholder organisations varied significantly, and that the approaches to implementing CQI showed a similar pattern. As discussed in section 4.4.1, in the evaluation case studies, needs and approaches ranged from services which had low existing internal CQI capacity who required the services of an external facilitator, to services with significant existing internal CQI capacity who could use the resources and support provided through the CQI Strategy to strengthen their capacity and broaden the scope of CQI. Similarly, there was variation in what services were seeking to achieve through the CQI Strategy. Some services had a focus on increasing their own, internal CQI capacity; others sought improvements to the quality of specific services (e.g. maternal health services); others sought improvements to specific processes (e.g. file standardisation, or data collection, cleansing and reporting processes); and others used CQI to support broader organisational performance management. There was considerable meshing of these purposes, with some services seeking to do three or four different things through the CQI Strategy.

The design and implementation of the CQI Strategy allowed these varying local needs and priorities to be targeted.

### 6.3.2 The CQI Strategy is not sufficiently aligned with system level, longer term needs and priorities

In its implementation, the CQI Strategy has had a strong emphasis on local needs and solutions. As noted in section 6.2.1 this is consistent with CQI theory and practice. However, the CQI Strategy was designed as part of a broader strategy seeking improvements in the quality of health services and a number of evaluation participants articulated their needs and priorities at the health system level and questioned how well aligned the Strategy was with these needs: ‘approaches that are based primarily on file audits may not be able to identify broader systems issues’ (interview, health professional). The

momentum for CQI at a local level needs to shift to identifying and addressing problems at a regional and NT level. There is evidence that this is beginning to occur (e.g. regional analysis of ePIRS data) and regional reform initiatives may support this (e.g. through the role of CPHAGs).

Other evaluation participants, while acknowledging the achievements of the CQI Strategy and improvements to clinic processes and systems, felt that the priorities in terms of quality improvement demanded behavioural and organisational change and that these were not being targeted through the Strategy. Expectations in terms of achieving behavioural and organisational change can be high; however, there are practical ways to achieve this. One participant identified the need to target middle management:

> The program has struggled to effect behaviour change among some staff. While there has been a good level of engagement among front line and executive level staff in CQI, it has proved more difficult to involve middle managers – especially within government services.

They added that work was under way to adapt the System Assessment Tool to provide information that is likely to be more relevant to middle managers.

For many services, CQI currently relies on external support and is too person-dependent. External facilitation is a critical component of the Strategy; however, in order to truly embed CQI within the system and see it integrated into the core practices of health services, the services need to have the strength and capacity to do CQI themselves. This requires building the CQI capability and capacity of organisations over the medium term, and the CQI Strategy needs to align itself with such a goal.

## 6.4 Fit with the problem(s) it is intended to solve

For this objective, the evaluation focused on identifying the priority problems that CQI was intended to solve, and evidence of how well it was addressing those problems. As discussed in section 4.6.1, we found no clear articulation of success (i.e. what the CQI Strategy was intended to achieve) or what problem(s) it was intended to solve. Our assessment draws heavily on the priorities and needs as defined by various stakeholders, and this was discussed in the previous section.

### 6.4.1 There is greater consistency in approaches to CQI across the NT Aboriginal PHC sector

As noted in section 1.3, prior to the development of the CQI Strategy the level of uptake and capacity for CQI was inconsistent across the NT Aboriginal PHC sector. Some health services had the expertise and capacity to address CQI, while others had little or no exposure to formal CQI. The CQI Strategy was intended to build a consistent approach to CQI across the sector.

As discussed in sections 4.2 and 4.3, the evaluation found a high level of participation in CQI activities across health service staff, including health centre managers and clinicians, and overall capacity to undertake CQI has increased. The widespread use of the same CQI processes and tools, such as One21seventy, has supported a consistent approach to CQI across the sector. The growth in uptake and capacity has not, however, been consistent. As noted in Table 7, at the health centre level there is greater capacity among those working in larger health centres, and we have noted elsewhere that participation and capacity is lower in health centres where the CQI Facilitator position has been vacant. With the greater capacity for CQI that has been built in centralised and regional roles (e.g. among CQI Facilitators), we would expect to see a continued increase in consistency in approaches.

Small, remote and non-regionalised health centres (e.g. clinics staffed by a single remote area nurse (RAN)) are likely to continue to face significant barriers to increasing uptake and capacity for CQI in the absence of external support. Capacity for CQI in these centres can change from one day to the next with the movement of key personnel. We would suggest that there is a degree of size or aggregation required to maintain the CQI approach that has been adopted, and to fully engage in CQI (e.g. implement action plans as a result of audit cycles) might require a minimum of a clinical and a management position (permanent, not visiting/locums). Shifting health services to regional configurations may help to address some of the capacity challenges for small, decentralised health services.

### 6.4.2 In order to fully embed CQI in the NT Aboriginal PHC system and build CQI capacity on the ground there is a need to build capability and capacity at an organisational level

The CQI proposal that was agreed by the NT AHF in April 2009 suggests two overall problems that the CQI Strategy was intended to address: CQI was not embedded in the NT Aboriginal PHC system, and there was insufficient CQI capacity on the ground to make this happen. Clearly, capacity in CQI has increased across the system, although not consistently, as a result of the Strategy (see section 4.3.1). Flexibility in how the CQI facilitation resources can be used has been an appropriate response to building this capability and capacity on the ground; from purchasing external support (e.g. through CQI Facilitators) to building internal capacity. Alongside this, significant training and workshops have been delivered to PHC staff (see section 5.4) and we have observed staff in various roles across the system who are very competent in CQI. As discussed, competence tends to sit within individuals rather than within organisations and it would be appropriate to shift the Strategy's focus to building the CQI capability and capacity of organisations.

As a result of the CQI Strategy, there has been a significant increase in awareness of CQI, and in participation and engagement in CQI (see section 4.2). Engagement is often driven by external CQI Facilitators and the depth of engagement varies across and within different health service organisations. While CQI is embedded at variable levels in many health service organisations, it is not yet embedded across the NT Aboriginal PHC system (see section 6.5.3). The CQI Strategy has been an appropriate means to raise awareness, participation and engagement in CQI, and for empowering staff to use CQI processes. A shift in focus to building CQI capability and capacity at an organisational level is required if CQI is to be embedded at a system level.

## 6.5 Fit with the broader context of Aboriginal PHC reform

The evaluation questions under this objective examined how integral the CQI Strategy was to other PHC reforms, whether it contradicted other reforms, and the extent to which CQI had become embedded within the NT Aboriginal PHC system. The interface between the CQI Strategy and other programs in the NT Aboriginal PHC sector is also considered in section 7.4, but from an efficiency perspective.

### 6.5.1 The CQI Strategy builds naturally on other NT Aboriginal PHC reforms and systems

A number of health services in the NT Aboriginal PHC sector had involvement in quality improvement initiatives prior to the implementation of the CQI Strategy, such as the APCC and ABCD. This past

experience provided a solid, and appropriate, basis on which to design the Strategy, and to tailor its implementation to previous engagement in quality improvement at a clinic or regional level.

The significant interface between CQI processes implemented as a result of the CQI Strategy and the NT AHKPIs (e.g. as discussed in sections 4.5.5–4.5.7) also suggests a strong fit with previous reforms. KPI data was commonly used at a clinic level to complement and validate findings from CQI processes; and there was evidence of CQI processes supporting improvements to the quality of NT AHKPI data (e.g. CQI Facilitators reviewing the NT AHKPI reports) and, as a result, its greater use at a regional and NT level (e.g. through CPHAGs).

The EHSDI led to a significant expansion in PHC resourcing and staffing and the CQI Strategy has provided a mechanism to match these increases in the quantity of services with an improvement in health service quality. There is certainly a strong fit between investing in service expansion and in quality improvement, particularly given many of the new EHSDI-funded positions were expected to have a population health and preventative care focus. In section 7.2.1 and 7.2.2 we assess the use of the EHSDI funding allocation model for determining allocations of CQI Strategy funding, and suggest that it is not an appropriate model for this purpose. Nevertheless, the significant expansion in services certainly made it an appropriate time to invest in a quality improvement program.

Beyond specific PHC reform initiatives, CQI processes supported under the Strategy demonstrate a strong fit with a range of other systems and processes, particularly at a clinic level. CQI has helped to consolidate many of the benefits provided by these routine systems and processes. For example, all PHC clinics in the NT now use electronic information systems and participation in CQI has led to improvements in the quality of clinical data within these systems (section 4.5.4), as well as staff capability to use and interrogate data within ePIRS.

CQI processes also build naturally on the widespread use of treatment guidelines in the NT PHC sector, including the CARPA manual. These treatment guidelines provide a practical tool or resource for standardising practices, while CQI provides tools to review practices; both are aimed at updating and improving 'best practice'. A number of evaluation participants commented on the synergies between CQI processes and the CARPA treatment guidelines, and the strong platform the guidelines offered for undertaking clinical audit processes.

### 6.5.2 The CQI Strategy is consistent with key principles of regional reform and could further support the reform process ahead of more formal organisational arrangements

The regional reform agenda in the NT Aboriginal PHC sector encompasses a number of components, including the regionalisation of health services and the shift towards community controlled health services. These represent significant programs of reform and have the potential to impact on the quality of health service planning and delivery in the NT. It would be appropriate, therefore, to align the CQI Strategy with this reform.

In its design, the CQI Strategy demonstrates consistency with the regional reform agenda. The CQI Strategy funding was distributed on a regional and subregional basis that reflected current or emerging regional boundaries. Similarly, the organisations that were funded were consistent with principles embodied within the *Pathways to Community Control* policy with community controlled organisations receiving funding in regions that had both government and non-government services. Within its 10 key elements, the CQI Strategy approach states that 'the NT CQI program will be underpinned by the key

principles outlined in the *Pathways to Community Control* document' and emphasises the need for consumer input and Aboriginal engagement.

In its implementation, the interaction between the CQI Strategy and regional reform is closely associated with the current status of the reforms. In regions where there has been little recent progress on regional reform, such as Central Australia, other than the geographic boundaries in which CQI Facilitators operate and whether the employer of the Facilitator is the DoH or an ACCHO, the CQI Strategy is not significantly linked into regional reform. Services are largely supported on an individual community/clinic basis, and there is little regional or cross-community CQI activity. In communities serviced by DoH clinics, there are limited existing mechanisms for community engagement in health service planning or delivery and, as a result, CQI is implemented with little community or consumer input.

The evaluation included a case study region in which there has been progress on regional reform with one health service transitioning to community control in 2012 and, perhaps more significantly in terms of CQI, the establishment of a regional CPHAG in 2011. The membership of the CPHAG, which is voluntary, includes representatives of all health service providers in the region, including DoH services and ACCHOs, and including the CQI Facilitators, service managers and clinicians. Its focus is to work collaboratively to increase coordination and integration of health services; although it operates independently of the Regionalisation Steering Committee, which is the formal structure established to develop a regional model for PHC service planning and delivery. It is not a decision making body; however, it reports and makes recommendations to a regional health advisory board which acts as an interim governance body for the emerging health service model. A number of evaluation case study participants spoke about the CPHAG approach positively. It appears to benefit from being able to separate itself from the considerable but necessary negotiations and work required to reform health service organisations, such as the work required in merging ACCHOs, building community capacity in health service planning and governance, decentralising DoH health service management and transitioning DoH clinics to community control.

The CPHAG meets regularly to identify ways to improve health system functioning and address key health issues. CQI is a standing item on its meeting agenda. As part of this, the group reviews the six-monthly NT AHKPI data for its region to identify priorities. It reports this information and its analysis to health service board members to promote evidence-based decision making. The information is summarised to support greater understanding (e.g. through the use of traffic lights showing the status of indicators), and board members have received training to enhance their understanding of data, and are supported by other board members who help in the translation and interpretation of data. Sharing of further information across services requires the willingness and ongoing participation of the CPHAG member organisations, and it is hoped that the CPHAG will foster the sharing of data and reports generated through One21seventy (interview, health professional). This would further help shift the scope of CQI from a community/clinic level to a regional level, in line with regional reform.

There would appear to be much to learn from the CPHAG approach in supporting regional reform and regional approaches to CQI alongside the more formalised organisational components of the reform agenda. In particular, it would be useful to know more about why the CPHAG approach has worked, and whether the approach would be undermined if its role in regional reform was elevated or formalised. These lessons could be of widespread benefit; given the slow progress in regional reform across many NT regions/HSDAs. As CPHAGs develop in other regions, there may be a need to (re-)align CQI Facilitators to ensure ongoing geographic fit with regional boundaries.

In terms of the transition of a health service from government to community control, the evaluation found that CQI activity at the health service level can stall or become fragmented (e.g. focused on specific programs rather than across an organisation) as resources and staff time and attention focuses on transition issues. This can involve substantial issues such as the transition of funding and the transfer of employment contracts. It is perhaps easy to see why CQI activity can decline; however, a health service's (i.e. its staff's) background and expertise in CQI is likely to survive transition, and evaluation participants were confident that once transition issues are resolved, staff will continue to perform their own clinic level CQI activities, and increasingly contribute to regional activities and decision making within the expanded ACCHO.

### 6.5.3 CQI is not yet embedded as 'business as usual' in the NT Aboriginal PHC system

While the CQI Strategy seems to be building naturally on other components of PHC reform in the NT, we have reported in section 4.2 that CQI is perceived by many health staff as a discrete task to be carried out in addition to their clinical duties, rather than embedded as part of their core business. As a result, its impacts to date are more at an individual program, process or clinic level. If CQI becomes more embedded in the NT Aboriginal PHC system, we would anticipate CQI being used more as a tool for broader health service planning and for impacts to occur at the organisational, outcome and regional/NT levels. Health services that have more experience and engagement in CQI are beginning to demonstrate this level of activity and impact.

# 7 EFFICIENCY

This section addresses the overarching evaluation question relating to efficiency: *to what extent does the investment in CQI in the NT Aboriginal PHC sector represent good value for money?* In assessing the efficiency of the CQI Strategy, the evaluation examined:

- whether the activities and strategies employed have been well targeted to high priority problems or issues with quality
- whether similar outputs, activities or outcomes could have been achieved with fewer resources
- whether there is any duplication or synergy arising from overlap or interaction with other programs or investments in PHC.

## 7.1 Summary of findings and key areas for improvement

The key evaluation findings relating to efficiency are:

- CQI Strategy funding was distributed using a model designed to address PHC funding inequities; the distribution was not targeted at poor quality services or priority problems.
- CQI Strategy funding is secondary to equity concerns, however on its own, it is a very weak instrument with which to address PHC funding inequities.
- At a local level activities have the ability to target priority problems.
- CQI Strategy funding and contracts should more closely match the degree of development of CQI capability and capacity in particular services.
- Around $2.8 million per annum has been allocated over four years; not all this funding has been spent; however, it has been supplemented by other funding sources.
- There are additional transactional costs for services participating in CQI, but these costs are outweighed by the value services gain.
- Delays in making funding allocations and continued uncertainty over long term funding is likely to be affecting the efficiency of the CQI Strategy.
- The facilitation resources provided through the CQI Strategy were needed to activate CQI in many services.
- Alternative approaches to supporting CQI were not widely considered.
- There is insufficient evidence to compare the value for money of the CQI Strategy compared to alternative approaches to improving quality in NT Aboriginal PHC.
- The CQI Strategy was effectively interacting with other initiatives at a clinic level.
- There are opportunities for a greater interface between the CQI Strategy and systems level initiatives and issues.

On the basis of these findings, the evaluation team suggests some areas where modifications and adjustments could bring improvements to the ongoing implementation of the CQI Strategy. These are provided in Box 6 below. These are intended to sit under our main recommendations, which are outlined in section 8.

**Box 6: Potential areas for improvement**

1. Continue to promote a stronger interface with One-21-seventy (e.g. by facilitating feedback on One21seventy tools from high users, such as CQI Facilitators, to the system developers).
2. Promote the implementation of CPHAGs in other regions and the role of the DoH's regional structure (e.g. Area Service Managers) within CQI processes.
3. Strengthen interface with workforce initiatives, such as the RAHC program, to incentivise longer term placements in communities and repeat deployments of the same health professional to the same community.

## 7.2 Targeting of activities and strategies to high priority problems

The evaluation questions under this objective were designed to examine whether the CQI Strategy was targeted at issues of poor quality (e.g. services or particular service areas) or high priority problems, or whether it was seen as an improvement tool for all services.

### 7.2.1 CQI Strategy funding was distributed using a model designed to address PHC funding inequities; the distribution was not targeted at poor quality services or priority problems

As discussed in section 3.3.4, the CQI Strategy funding was distributed using the EHSDI funding model. This funding model was developed as a means to distribute the available EHSDI funding equitably among HSDAs, rather than representing the total amount of funding required by each region. The model establishes an EHSDI funding benchmark for each HSDA, determined by multiplying the national average MBS payment with an agreed remoteness factor, fluency in English language factor and NT cost of service delivery factor for each HSDA. The funding allocations then target regions furthest from the EHSDI benchmark. The model is designed to address PHC funding inequities.

As a result of applying the funding model, Table 12 shows that East Arnhem and Central Australia received the most funding. This is to be expected given their large Indigenous populations and relative high degree of remoteness. On a per capita basis, Borroloola and Katherine West received the most funding. Several HSDAs only received a small amount of CQI Strategy funding and one HSDA, Katherine Urban, received no funding.

The distribution of funding did not factor in population health status, health service performance or quality.

**Table 12: Total and per capita CQI Strategy funding by HSDA, 2009-10**

| HSDA or region | 2009-10 CQI Strategy funding[(a)] | Total Indigenous population (2006 ERP) | 2009-10 CQI Strategy funding per capita |
|---|---|---|---|
| East Arnhem | $564,634 | 9,929 | $56.87 |
| Central Australia | $509,911 | 10,633 | $47.96 |
| Darwin Urban/Rural | $240,000 | 13,360 | $17.96 |
| Barkly | $206,156 | 3,902 | $52.83 |
| Katherine East | $200,658 | 3,687 | $54.42 |
| Katherine West | $149,553 | 2,420 | $61.80 |
| Alice Springs Urban | $102,535 | 5,637 | $18.19 |
| Maningrida | $93,453 | 2,577 | $36.26 |
| Borroloola | $79,604 | 1,204 | $66.12 |
| West Arnhem | $58,977 | 2,350 | $25.10 |
| Top End West | $23,059 | 3,275 | $7.04 |
| Tiwi | $3,778 | 2,256 | $1.67 |
| Katherine Urban | $0 | 2,775 | $0.00 |
| **Total** | **$2,232,318** | **64,005** | **$34.88** |

[(a)] Funding levels were the same for 2010-11 and 2011-12.

The evaluation found that there is not a common understanding of the method used to determine the HSDA funding allocations. A number of evaluation participants felt the allocations reflected how much money regions/services were already spending on quality improvement, so that regions/services already investing relatively highly to support quality improvement received less funding than others.

When the CQI Strategy was launched, there were some initial expectations and assumptions built up around each HSDA/region receiving a minimum of $150,000 so that there could be at least one CQI Facilitator in each HSDA. The CQI Facilitator positions are central to the CQI Strategy approach and this may have driven these assumptions. Miscommunication between the NT AHF and AMSANT and DoH also contributed to the expectation that every region would receive $150,000 (interview, government official). As a result, when the actual funding allocation information was released, officials needed to work on repairing relationships with some services and managing these expectations.

From our analysis of the regional funding allocations it is not clear that the CQI Strategy funding allocations were based entirely on the EHSDI funding model. Table 13 shows that, excluding the Darwin HSDAs where an agreement was reached covering both HSDAs, Borroloola and Katherine West received the greatest percentage increase in per capita funding as a result of the CQI Strategy funding; however, from a baseline of 79.7 per cent and 84.7 per cent of the EHSDI benchmark respectively, these HSDAs were not furthest from the benchmark (Maningrida and East Arnhem were). Conversely, there were five HSDAs with baseline per capita funding closer to the EHSDI benchmark than Katherine Urban and Tiwi, the HSDAs which achieved the least percentage increase in per capita funding.

**Table 13: Percentage increase in per capita funding against EHSDI benchmark as a result of CQI Strategy funding by HSDA, 2009-10**

| HSDA or region[a] | 2009-10 per capita EHSDI benchmark | 2009-10 baseline PHC funding[b] | | PHC funding including CQI Strategy | | Percentage increase |
|---|---|---|---|---|---|---|
| | | $ per capita | % of benchmark | $ per capita | % of benchmark | |
| Borroloola | $4,015 | $3,202 | 79.7 | $3,268 | 81.4 | 1.6 |
| Katherine West | $3,949 | $3,343 | 84.7 | $3,405 | 86.2 | 1.6 |
| East Arnhem | $3,640 | $1,629 | 44.8 | $1,686 | 46.3 | 1.6 |
| Katherine East | $3,515 | $2,455 | 69.8 | $2,509 | 71.4 | 1.5 |
| Barkly | $3,582 | $2,212 | 61.8 | $2,265 | 63.2 | 1.5 |
| Central Australia | $3,538 | $2,013 | 56.9 | $2,061 | 58.3 | 1.4 |
| Maningrida | $3,176 | $1,379 | 43.4 | $1,415 | 44.6 | 1.1 |
| Alice Springs Urban | $1,992 | $1,443 | 72.5 | $1,461 | 73.4 | 0.9 |
| West Arnhem | $3,242 | $1,951 | 60.2 | $1,977 | 61.0 | 0.8 |
| Top End West | $3,000 | $2,518 | 83.9 | $2,525 | 84.2 | 0.2 |
| Tiwi | $2,975 | $2,074 | 69.7 | $2,075 | 69.8 | 0.1 |
| Katherine Urban | $2,140 | $1,453 | 67.9 | $1,453 | 67.9 | 0.0 |

[a] Excludes Darwin Urban and Darwin Rural where a separate agreement was reached covering both HSDAs; listed in order of the percentage increase in funding (final column).
[b] Excludes EHSDI service expansion and capital and infrastructure funding.

### 7.2.2 CQI Strategy funding is secondary to equity concerns, however on its own, it is a very weak instrument with which to address PHC funding inequities

Across the NT Aboriginal PHC system, the CQI Strategy funding represents less than two per cent of total funding. It is, therefore, a very weak or ineffectual instrument with which to address regional inequities in PHC funding. While the EHSDI funding model has provided a methodology for allocating the CQI Strategy funding on a regional level, its use should be reviewed given the EHSDI funding model's primary purpose is around addressing inequities. Equity should remain an important principle in NT Aboriginal PHC funding allocations; however, the method for allocating the CQI Strategy funding needs to better consider the objectives behind this investment: to build a system wide approach to CQI. Using a minority and uncertain funding stream to address funding equity issues is insufficient, and possibly unsustainable. Alternative methods of targeting funding are discussed below.

There is a tension between the need to move funding to a more equitable basis across the NT Aboriginal PHC system and the more precise signal a funding stream sends to a service when it wants a particular activity (CQI in this case) undertaken. In addition, there is a tension between the desire by funders to send precise signals through contract arrangements, and the loss of precision as a consequence of the sheer volume of such signals (see for example, Dwyer et al. 2009). It is important that the CQI funding approach does not inadvertently undermine the drive towards equitable funding, or add unnecessarily to an already overcrowded contracting environment.

To address these tensions requires action on both funding equity and contract arrangement complexity. These sit outside the more immediate concerns of the CQI Strategy. We recommend that NT AHF must

play a more active oversight role in moving the system towards equity, so that there is increased confidence that it is being addressed within a reasonable timeframe, and that contracts are aligning with equitable funding principles. The use of the CQI instrument, which represents less than two per cent of total funding, appears to be a weak and ineffectual instrument in this regard, and we suggest the NT AHF considers other approaches to addressing equity. In addition the NT AHF needs to guide funding agents in relation to what are the important 'signals' they are wanting to send into the system by way of specific contract arrangements, such as CQI.

A longer term solution to this dilemma is to move the CQI funding arrangements towards outcome funding where services are demonstrating the desired CQI capability and capacity. The effective use of the CQI approach would be instrumental in moving all contract arrangements towards more of an outcome basis, hence reducing the number of contracts and transaction costs, and increasing efficiency.

In a sense the CQI Strategy is primarily aimed at assisting the services to be 'thinking and problem solving' providers of health services. Under current arrangements, funders are trying to micro-manage service activities as they lack confidence in providers' ability to choose to do the right thing. The funder is directly stipulating inputs and outputs. Providers are 'following the contract' and not exploring sufficiently the opportunities and challenges of their particular context, or innovating. The CQI Strategy holds the promise of shifting the funder-provider relationship to one where the funder stipulates the results or outcomes it is seeking and is confident the provider has the capability and capacity to deliver on them.

### 7.2.3 At a local level activities have the ability to target priority problems

While funding distribution at the NT level did not target priority problems, in principle CQI Facilitators have the flexibility to be able to target local priorities. There is evidence of this, with CQI activities targeting clinical or administrative processes identified as a priority by local health service staff (e.g. access to men's health services), or targeting areas of clinical care which have been identified as a priority (e.g. maternal health care). This is most evident in health services implementing short CQI cycles, or mini-cycles, targeting a specific problem. The use of mini-cycles would seem to be a useful entry point into targeting high priority problems. There is also evidence, however, of CQI activities being delivered in a standard way to multiple health services with little targeting towards local priority problems. In these instances the emphasis seems to be on increasing the engagement and capacity of health service staff in CQI, as a first step, before targeting towards locally identified priorities.

### 7.2.4 CQI Strategy funding and contracts should more closely match the degree of development of CQI capability and capacity in particular services

Evaluation participants did not identify many alternative ways to target the distribution of the CQI Strategy funding. One participant felt that, given the emphasis on 'making CQI everyone's business' and thereby building everyone's capacity to implement CQI, funding could be distributed on the basis of the number of health service staff (FTEs). This participant also suggested the distribution factor in the type of accreditation services were aiming for, as there are different levels of workload associated with different types of accreditation.

We would recommend reviewing the current method for distributing CQI Strategy funding, in parallel with a review of what the CQI Strategy aims to achieve and what role the CQI Facilitators play in this,

with a view to more closely matching funding and contracts to the degree of CQI capability and capacity of particular services or regions. One option would be to define a level of CQI capability and capacity expected of a service, appropriate in the context of NT Aboriginal PHC, and then classify services as either in a growing phase (beneath this defined level of capability and capacity) or a mature phase (having reached it). The distribution of CQI Strategy funding to services in the growing phase would reflect what each service needs to become CQI competent, whereas equity would come into play in funding services at the mature phase. The overall distribution of funding across the two levels of CQI capability and capacity needs to incentivise services to move into the mature phase and, once there, to continue to be CQI competent. This may or may not mean differential levels of funding for services in a growing phase from services in a mature phase. We would suggest that, as well as through dedicated CQI funding, services in a mature phase might be incentivised through outcomes based contracts which provide for greater autonomy in how CQI funding is spent.

Under such an approach, funding contracts and CQI activities would reflect whether services are in the growing or mature phase. For services in the growing phase, contracts would be based on the objective of becoming CQI competent and would need to articulate the degree of CQI capability and capacity expected. The associated CQI activity, for example provided through CQI Facilitators, would be focused on building the CQI capability and capacity of the service. For services in the mature phase, contracts would be based around longer term service quality and health improvement outcomes. Eventually, as CQI becomes part of a service's core business, CQI could be embedded into every contract and not as a separate one. Over time the scope of quality could also be broadened from the current focus on clinical CQI. The associated CQI activity would be led by the service itself and could focus, for example, on the completion of CQI cycles and implementation of action plans.

These suggestions are picked up in this report's recommendations (see section 8.2).

## 7.3 Similar outputs, activities or outcomes for fewer resources

Under this objective the evaluation questions considered how much has been spent on CQI, whether these resources were needed to activate CQI activity, and what alternative approaches to CQI were considered. In addressing these questions, the evaluation also considers whether the CQI Strategy represents good value for money in terms of alternative approaches to improving quality in NT Aboriginal PHC.

### 7.3.1 Around $2.8 million per annum has been allocated over four years; not all this funding has been spent; however, it has been supplemented by other funding sources

In addition to the $2.2 million that has been allocated to HSDAs/regions over four years (2009-10 to 2012-13), $556,520 has been allocated to AMSANT each year to employ and fund the work of the two CQI Coordinator positions. This means a total of around $2.8 million has been allocated in each of the four years.

It is difficult to assess how much of this funding has been spent, and this is a significant gap in our analysis of efficiency. As discussed, a number of CQI Facilitator positions have been unfilled at various points but the multi-year funding agreements mean that services (DoH or ACCHOs) can roll funding over

to later years provided it is quarantined for CQI purposes.[13] Also, not all HSDAs or services have spent the funds on CQI Facilitator positions, with some services electing to out source services when required, or allocate funds across other positions which perform CQI functions, such as in data and information systems support positions.

The CQI Strategy funding was intended to augment CQI activity and the funding allocations do not represent the total amount of money invested in CQI activities. Some HSDAs or services which did not receive sufficient funding to employ a CQI Facilitator have topped up the funding with other funds (e.g. baseline funding or Medicare funding) to enable them to employ a Facilitator. It is difficult to estimate how much 'supplementary funding' has been spent, and how much of this has been as a result of the CQI Strategy. The HSDA that received no CQI Strategy funding, Katherine Urban, supports around 2.5 FTE CQI positions from alternative funding sources, and Tiwi topped up its allocation of $3,778 to enable a Facilitator to be employed. Other services have topped up the funding to enable them to employ several staff in CQI roles. For example, Congress supplemented its allocation of $102,535 for Alice Springs Urban with baseline funding to enable it to employ three staff in CQI roles.

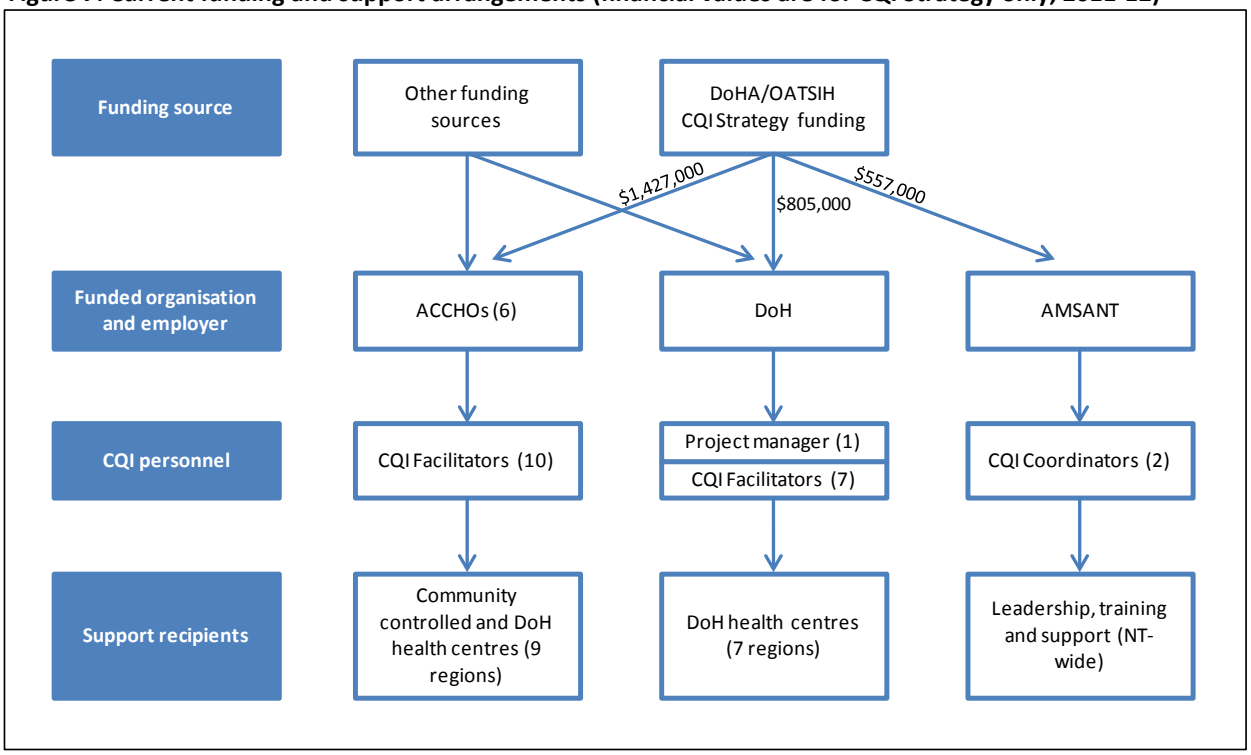
Figure 7 shows the current funding and support arrangements, with DoHA directly funding AMSANT who employs the CQI Coordinators, and DoH and six ACCHOs who employ the CQI Facilitators. Both community controlled and DoH services receive support from a Facilitator that they employ themselves, or who is employed by an emerging regional ACCHO. This means that some DoH services receive support from an ACCHO employed Facilitator, but no ACCHOs receive support from a DoH employed Facilitator. Figure 7 also notes the existence of other funding sources to support CQI activity, including the employment of CQI Facilitators.

Notwithstanding issues relating to delays in allocating funding to the funded organisations and continued uncertainty over long term funding (see section 7.3.3), the model of allocating CQI funding direct to the main service providers (DoH and six ACCHOs) appears to be an efficient way of investing directly into the NT Aboriginal PHC system. In line with the agreed CQI approach, these organisations have generally used the funding to employ CQI Facilitators to support activities at a health centre level. Employing staff in CQI designated positions is another way to invest directly into the system, although CQI capability and capacity needs to transfer from these individuals into organisations. In section 7.2.4 and in this report's recommendations (section 8.2) we propose an alternative way of funding CQI, and quality improvement more generally, particularly for those organisations that already have or reach a degree of capability and capacity in CQI.

The funding and support arrangement shown in Figure 7 were, as noted in section 6.5.2, designed to be consistent with the *Pathways to Community Control* policy by channelling support through emerging regional ACCHOs. Any change to the funding and support arrangements needs to continue to reflect the emerging regional governance arrangements. In principle, the funded organisation should be the same organisation that has the authority to act on any decisions that are made through CQI processes, even if this organisation is centralised. This will require a shift in the current arrangements as regional health services are established, and as health services shift to community control.

[13] We understand that provisions for rolling over unspent funding to the new financial year may have been tightened, for ACCHOs at least.

**Figure 7: Current funding and support arrangements (financial values are for CQI Strategy only, 2011-12)**




Note: Does not include all CQI activity that takes place in the NT Aboriginal PHC system. Some services undertake CQI separate from this NT-wide approach.

The right hand side of Figure 7 shows that AMSANT plays a key role in hosting the leadership and coordination of the CQI Strategy. This function could be provided by other, external organisations, and the function could extend to recruiting and deploying facilitators and providing technical leadership. However, we suggest that it is appropriate to keep this function within the main organisations within the system, in parallel to a partnership arrangement to provide strategic leadership and direction (e.g. the CQI Steering Committee), and to continue to draw on technical expertise from across the sector (e.g. from One21seventy). AMSANT's strong relationship with the community controlled sector (as a peak body) and the government controlled sector (though the strategic partnership with DoH and OATSIH) brings internal efficiencies.

### 7.3.2 There are additional transactional costs for services participating in CQI, but these costs are outweighed by the value services gain

On the whole, health centre managers and staff considered the time required for CQI as reasonable and felt that they got good value for money from the investment of this time. As noted earlier, staff time and resources were identified by most evaluation participants as major challenges in participating in CQI, and they were more likely to comment on the lack of time available for CQI than spending too much time on it.

Within the evaluation case studies, participation in the audit process was commonly cited as requiring considerable staff time, and this was exasperated by it needing to all happen at once (e.g. over a week). There have been costs for some services as a result of participating in these processes, such as from

having to backfill permanent staff with temporary nurses so that staff could partake in the audits. A health centre manager acknowledged that it was important for staff to be involved in the audit process, but suggested it would be more efficient if a proportion of the audits could be done centrally, prior to the CQI Facilitator visiting the clinic, so the audit process could be completed over 2–3 days rather than taking a full week.

### 7.3.3 Delays in making funding allocations and continued uncertainty over long term funding is likely to be affecting the efficiency of the CQI Strategy

As noted in section 3.3.3, most services did not receive funding for the first year (2009-10) until June 2010. The initial lack of clarity about how much funding HSDAs would receive, and then delays in releasing this funding, meant that some services had to reallocate their budgets to find sufficient funding to recruit CQI Facilitators and recruitment could not commence until 2010-11. Delays in confirming and then releasing funding have continued to impact on the efficiency of the Strategy, with funding for 2012-13 only confirmed in October 2012.

Challenges for services as a result of delays in receiving funding have been compounded by a lack of certainty over long term funding for the CQI Strategy. EHSDI funding for the CQI Strategy ran through to 30 June 2012. There was an expectation that funding under the 10 year *Stronger Futures in the Northern Territory National Partnership Agreement* would replace the EHSDI funding from July 2012, with one evaluation participant expecting the funding for CQI to be released in five year blocks (interview, government official). However, multi-year funding agreements have not been operationalised. At the time of the case study visits (October–November 2012) services had received no further funding from the Australian Government for implementing the CQI Strategy since the EHSDI funding to 30 June 2012. Services were continuing to implement the Strategy on the expectation that the *Stronger Futures* funding was imminent, and the NT Government had agreed that the DoH could roll over contracts for its CQI Facilitators for an additional six months (to 31 December 2012) in anticipation of the funding. While *Stronger Futures* funding was confirmed in late October 2012, it was only approved for the current financial year, so through to 30 June 2013.

The lack of certainty around future funding means that most of the CQI workforce is on short term contracts and a number of positions have gone unfilled. The short term contracts can limit the appeal of these jobs and narrow the range of potential applicants. Delayed and short term funding can also add to the complexity and burden of reporting, with reports due at irregular intervals and the inability to implement long term reporting arrangements. There is a tension between the desire to build long term systematic change through CQI, and the current short term funding.

### 7.3.4 The facilitation resources provided through the CQI Strategy were needed to activate CQI in many services

The evaluation found that much of the enthusiasm for, and increased engagement in, CQI is attributable to the CQI Strategy, and in particular the role played by CQI Facilitators. All health centres visited as part of the evaluation reported being more engaged in CQI than they were three years ago and attributed much of this to the CQI Strategy. If the Strategy had not been implemented, we would expect to see CQI activity continuing on an ad hoc basis, and largely seen as an add on to core health centre practices. As

one health centre manager put it: 'without the support of the CQI Facilitator, all CQI activities in the clinic would grind to a halt'.

Many NT Aboriginal PHC services were actively engaged in CQI activities prior to the CQI Strategy, including as part of other initiatives such as the APCC and ABCD, and as discussed earlier some services have continued to be actively engaged in CQI in the absence of direct support through the CQI Strategy. Some of these services were operating fairly sophisticated CQI processes and are unlikely to have required the additional support to continue their engagement in and use of CQI.

Clearly the resources supplied through the CQI Strategy were not the only factors required to activate CQI. The CQI Strategy builds on both the APCC and ABCD. It also builds on the significant increases in the quantity of PHC services, achieved as a result of additional funding and staffing in the NT through the EHSDI over 2008–2012, and on the implementation of the NT AHKPIs. Improvements in electronic information systems and the widespread use of treatment guidelines such as the CARPA manual (which in themselves facilitate CQI-type activities) are other factors which made the NT 'fertile ground' for a CQI initiative.

There are some NT PHC services that have yet to activate CQI anywhere beyond an ad hoc basis. It would seem that some of these services have yet to receive significant or meaningful support under the CQI Strategy (e.g. because CQI Facilitator positions had been vacant for some time) and it is possible that CQI Strategy resources have targeted staff and services seen as most 'receptive' to CQI approaches. We did not find any specific evidence of this, but it was a view shared by a number of evaluation participants.

### 7.3.5 Alternative approaches to supporting CQI were not widely considered

We did not find evidence that alternative approaches to supporting CQI were considered during the development of the CQI Strategy. It would appear that CQI was seen as one way to support improvements in quality in Aboriginal PHC, and that the CQI Strategy was designed to augment other ways and build on existing CQI programs and tools. CQI was seen as a good thing to have and a CQI model based around a common framework, but with flexibility in how facilitation resources could be used, was agreed as the approach.

There was some discussion among the NT AHF partners regarding a standardised approach to CQI (e.g. requiring all services to use the same CQI tools) to allow comparability between services and as a basis for quality standards, but this was rejected.

During this evaluation, two participants questioned whether the approach to CQI should be more targeted at health centre managers than at all staff, suggesting that CQI needs to be embedded in their roles so it becomes part of a manager's core business.

### 7.3.6 There is insufficient evidence to compare the value for money of the CQI Strategy compared to alternative approaches to improving quality in NT Aboriginal PHC

It is very difficult to compare the value for money of CQI compared to other approaches to improving quality in Aboriginal PHC, such as investing in data and information systems, expanding clinical positions or building governance and leadership. This is because:

- we do not have strong evidence about the value for money of CQI or of alternative approaches to improving quality in the NT Aboriginal PHC context
- the value of CQI is strongly associated with the value of alternative approaches, making it difficult to judge the value of any approach in isolation of other approaches.

The positive interactions between the CQI Strategy and other clinic level initiatives are discussed in section 7.4.1. This shows that the value of the CQI Strategy built on earlier investments in data systems (e.g. NT AHKPIs), CQI systems (e.g. One21seventy), and in the expansion of clinical positions (through the EHSDI investment). Without this interface with other initiatives, the value for money of CQI as a tool to improve quality is likely to have been significantly reduced.

Alternative approaches to supporting CQI may offer better value for money than the CQI Strategy approach, which was strongly based around investing in a dedicated CQI workforce to provide external facilitation and support for CQI. Alternative approaches include investing in CQI systems, such as One21seventy, and potentially making the use of such systems mandatory. This could also involve funding an external body such as the Improvement Foundation or One21seventy to provide training and support in the use of CQI processes and tools. Another approach would be to further invest in clinical positions to provide greater capacity that could create more space and time for clinicians to engage in CQI activities. Alternatively, CQI investment could be targeted at training middle managers and/or health centre managers in the use of CQI processes and tools with an aim of embedding it in managers' roles. A further alternative would be to combine the CQI Coordinator and Facilitator functions. Again, there is insufficient evidence from the literature we reviewed (section 3.3) to judge the value for money of these alternative approaches to improving quality in NT Aboriginal PHC. We also note that the CQI Strategy does not exclude many of these alternative approaches and has resulted in, for example, facilitating training and support provided by One21seventy and managers receiving training in CQI processes.

## 7.4 Duplication or synergy arising from overlap or interaction with other programs

Evaluation questions under this objective examined how the CQI Strategy interacted with other programs or investments operating in the NT Aboriginal PHC sector, and whether there were areas of overlap or complementarity, or gaps.

### 7.4.1 The CQI Strategy was effectively interacting with other initiatives at a clinic level

At the health centre level the CQI Strategy was building on other PHC initiatives and there was evidence of mutual benefit from this interaction. The synergies with the investment in the NT AHKPIs was perhaps most evident, with the KPI data being a key contributor to CQI processes and the use of the data for CQI purposes, in turn, resulting in improvements to the quality of the NT AHKPI data. Where services had previously been unwilling to share KPI data, CQI processes were helping to create an environment where data was being shared, with a focus on quality improvement and shared learning.

The significant use of the CQI tools in the One-21-seventy system has resulted in another effective interface, with a spin-off benefit of health centre staff becoming more adept at using their clinic's ePIRS and the data in these systems being improved. There is potential for a stronger interface with One-21-seventy, in particular by facilitating feedback on the tools from high users, such as CQI Facilitators, to

the system developers. We understand that there is a process to enable this in place already. This should be further encouraged to ensure One21seventy is responsive to issues encountered on the ground.

In DoH health centres, there was evidence of strong and mostly effective interaction between CQI and PHC support functions provided through the Health Development team. Health Development staff were closely involved in many CQI audit processes, and in developing and implementing solutions in response to these. The CQI audits provide a good basis for the Health Development team to identify key issues within a community. We did not find evidence of effective interaction between the Health Development team and ACCHOs.

### 7.4.2 There are opportunities for a greater interface between the CQI Strategy and systems level initiatives and issues

With its focus on local health services through the support of CQI Facilitators and the predominance of CQI processes based around file audits, a number of evaluation participants felt there was a gap in the CQI Strategy's ability to interact with system and NT-wide issues and initiatives. One participant described the CQI Strategy as 'the right solution to the wrong problem', suggesting that it needed to have an NT-wide population health focus, as opposed to a focus on discrete local PHC services, and focus on using local level data and analysis to identify broader systems issues, including issues that arise from the determinants of health. We also found, however, that through getting local clinical staff engaged in audit processes, who often operate solely in an acute mode, the CQI Strategy was bringing a greater understanding of systems capability. Furthermore, we saw evidence that data analysis was beginning to happen across HSDAs and, primarily through the CQI Collaboratives, cross-HSDA problems and solutions were beginning to be discussed.

In terms of specific systems initiatives, we found evidence of interaction between the CQI Strategy and the regionalisation agenda in North East Arnhem but little interaction within other regions such as Maningrida and Central Australia. These regions have made less progress towards regional reform. Certainly the funding allocation was designed with regionalisation and *Pathways to Community Control* in mind, in terms of the funded organisation and the location of CQI Facilitators. There are opportunities to strengthen the synergies with regionalisation through, for example, promoting the implementation of CPHAGs in other regions and the role of the DoH's regional structure (e.g. Area Service Managers) within CQI processes.

The evaluation also found greater opportunities to strengthen the CQI Strategy's interface with NT system wide PHC workforce initiatives, such as the RAHC program. There would be benefit in working with the RAHC Agency, and other agencies involved in recruiting and deploying temporary staff, to investigate opportunities to incentivise longer term placements in communities and repeat deployments of the same health professional to the same community (see section 5.7.2).

We recognise these wider systems issues reflect many of the defining characteristic of the NT Aboriginal PHC system and need to be addressed at this systems level, rather than discretely as part of the CQI Strategy.

# 8 CONCLUSIONS AND RECOMMENDATIONS

In our short report produced in December 2012 following the sense making workshop, we included a list of key strengths and weaknesses with the implementation of the CQI Strategy, and a list of areas where we suggested modifications and adjustments could bring improvements to its ongoing implementation. These issues remain relevant and we have included these lists in Appendix E. They have also informed the conclusions and recommendations in this section.

This section sets out our conclusions and recommendations in three areas:

1. The overall design of and investment in the CQI Strategy.
2. Improvements to the delivery of the CQI Strategy.
3. Monitoring and reporting on, and for future evaluation of, the CQI Strategy.

We have focused the conclusions and recommendations on issues specific to the CQI Strategy. While these recommendations recognise the considerable achievements to date under the CQI Strategy, there are a number of changes which will be required over the medium term to move into a new, more sustainable phase of development, and to move it from a separate 'program' to the core way in which the sector operates. Two of the three recommendations are, therefore, deliberately aspirational. The intent of the three recommendations is to: define the desired outcomes of the CQI Strategy; align support to the defined outcomes and adapt the approach to the specific CQI needs of organisations; and ensure completion of CQI cycles.

Some of our findings relate to system wide characteristics which sit over and above the issue of CQI. The NT Government, Australian Government and AMSANT need to continue initiatives aimed at addressing these issues. While we do not make specific recommendations on these issues, key points for consideration are outlined below.

- **Leadership** – The evaluation found a gap in leadership and governance of the CQI Strategy at the health system level. Implementation is led by the CQI Steering Committee, and in particular the chair of the Committee, and the two CQI Coordinators. Stronger system level governance would provide valuable strategic decision making support to the CQI Steering Committee, and bring greater accountability. This leadership is essential if CQI is to be fully integrated into all activities in the NT Aboriginal health system. It would help to increase the impact of the CQI Strategy by ensuring its implementation better aligns with other systems level approaches to improving health service quality and population health outcomes (e.g. regional reform, hospital quality initiatives, and the development of Medicare Locals).
- **Sustainable funding** – There were expectations that the CQI Strategy would receive continued funding (post-EHSDI/30 June 2012) through the 10 year *Stronger Futures in the Northern Territory National Partnership Agreement.* In late 2012 *Stronger Futures* funding was confirmed up to 30 June 2013. The continued lack of certainty over long term funding and the ongoing need to negotiate funding extensions creates significant uncertainty for the CQI workforce and health services, and contributes to inefficient spending. Longer term funding is needed to support the systemic improvement to quality in PHC services sought by the CQI Strategy.
- **Equitable funding of NT PHC services** – The approach taken to CQI funding has attempted to address a wider system problem of inequitable funding of services, despite CQIs modest contribution to total NT Aboriginal PHC funding (two per cent). The priority of moving towards

sustainable and equitable funding is supported, however this needs to be addressed with the overall funding package so that CQI funding can more effectively be used to incentivise CQI activities.

- **Workforce** – The high turnover of staff in the NT Aboriginal PHC sector was commonly cited as a barrier to effective engagement in CQI. Governments need to continue initiatives aimed at achieving a stable workforce, and the CQI Strategy needs to better reflect the current reality of a mobile PHC workforce. This could include better orientation or training of new and temporary staff, incentivising longer term deployments and repeat deployments of temporary staff to the same communities, and prioritising engagement of the most stable part of the PHC workforce, AHPs, in CQI.

  Within the PHC workforce, we might expect CQI to be driven by people with a mix of skills, including in IT/information systems, clinical expertise and experience in health systems at a local community or clinic level. This is a high degree of specialisation that you might not expect to find at a local or regional level. However, over the course of the evaluation we found a number of NT PHC staff who were fully conversant with CQI, and who sat in various roles and levels in the system (e.g. local health centre managers, local clinicians such as AHPs and RANs, visiting doctors). The CQI Strategy needs to build on these strengths by identifying and then supporting these people to lead CQI.

- **Community engagement/feedback** – The current CQI approach includes key elements on Aboriginal engagement, consumer input and feedback. The evaluation found that Aboriginal health service staff were highly engaged in CQI processes in some health services, but there was considerable room for improvement in some others. Health service consumer and community input and feedback was lacking in most health services, other than through ACCHO Boards. DoH services were limited by the absence of existing mechanisms for community engagement, such as Health Advisory Committees (HACs). CPHAGs are a potential mechanism for increasing community engagement in CQI, but they are largely made up of clinical and public health staff rather than community members, and were only active in one region included as a case study in this evaluation.

- **Regional reform** – The design of the CQI Strategy is consistent with the key principles of regional reform, particularly in the way the resources have been distributed to match the emerging regions, and in the decisions to locate the CQI Coordinator positions within AMSANT, and the CQI Facilitators in regions with both government and community controlled services in an ACCHO.

  Three of the evaluation case studies were in regions targeted by regional reform: East Arnhem, Maningrida and Central Australia. The evaluation evidence suggests there is not currently a great deal of regional reform activity in Central Australia and Maningrida; nevertheless the CQI Strategy needs to continue to align with the regional configurations which are expected to develop in these regions (e.g. through ensuring CQI Facilitators support services in a single emerging region). In East Arnhem regionalisation has progressed, and the CQI Strategy resource has reconfigured as a result of the move of one health service from government to community control. CQI is a routine item on the work program for the CPHAG in this region.

  Regional reform is expected to lead to improvements in the effectiveness, appropriateness and efficiency of health service delivery, and so the potential connection with the CQI agenda is strong. CQI could support the regional reform process by further moving to a regional configuration alongside the more formal organisational arrangements. This might involve, for

example, stronger focus on the establishment and implementation of CPHAGs, with CQI being a key focus of these groups.

There are some challenges in terms of the capacity of the CQI Strategy to support quality improvement in so many health service organisations, particularly given the added challenge of the small size/capacity and remoteness of many of these organisations. Regionally configured health services, such as those in Katherine East and Katherine West, could help to address some of these capacity challenges as the CQI Strategy could focus its resources at the single health service organisation level (e.g. a CQI Facilitator could be supporting a single health service provider, covering numerous community clinics, to increases its CQI capability and capacity, as opposed to supporting up to 11 different organisations).

- **Alignment and coherence** – The CQI Strategy operates within a complex health system, with multiple initiatives and organisations, and a rich history of innovation in policy and practice. The interaction between the Strategy and other parts of the systems is a critical feature of the system, and we would conclude that progress and achievement on a number of fronts as a 'package' is likely to be more effective than progressing initiatives independently (i.e. 'the whole is greater than the sum of its parts'). There would be considerable benefit in promoting greater alignment and coherence, at both a policy and operational level, between different parts of the NT Aboriginal PHC system. The CQI approach could be used to increase alignment and coherence of contracting and contracts, reporting, quality assurance and risk management. This would mean wider adoption of the approach at other levels of the system (NT AHF, OATSIH, DoH), as well as recognition of the CQI process across all contract management and clinical governance activities.

We have also identified some broader implications of the evaluation findings in terms of what the NT experience may mean in relation to developing and support CQI in the Aboriginal PHC sector in other jurisdictions and at a national level. These are discussed in section 8.4 below.

## 8.1 Overall design of and investment in the CQI Strategy

### 8.1.1 Define the desired outcomes of the CQI Strategy

The evaluation found a lack of clearly defined goals and objectives for the CQI Strategy, and a wide variety of views on how it is understood and what it is expected to achieve. Many CQI Facilitators were focused on providing a service, compared with moving the services to be self sustaining in CQI. We suggest there would be value in articulating an overall framework for the CQI Strategy which would bring consistency in the definition and descriptions of short term and long term outcomes, but enable flexibility in how resources and processes are applied at a local level in order to get to these outcomes. This might involve articulating the program logic for the CQI Strategy similar to the basic framework shown in Figure 8. The program logic should be further informed by the existing CQI Strategy principles, framework and elements.

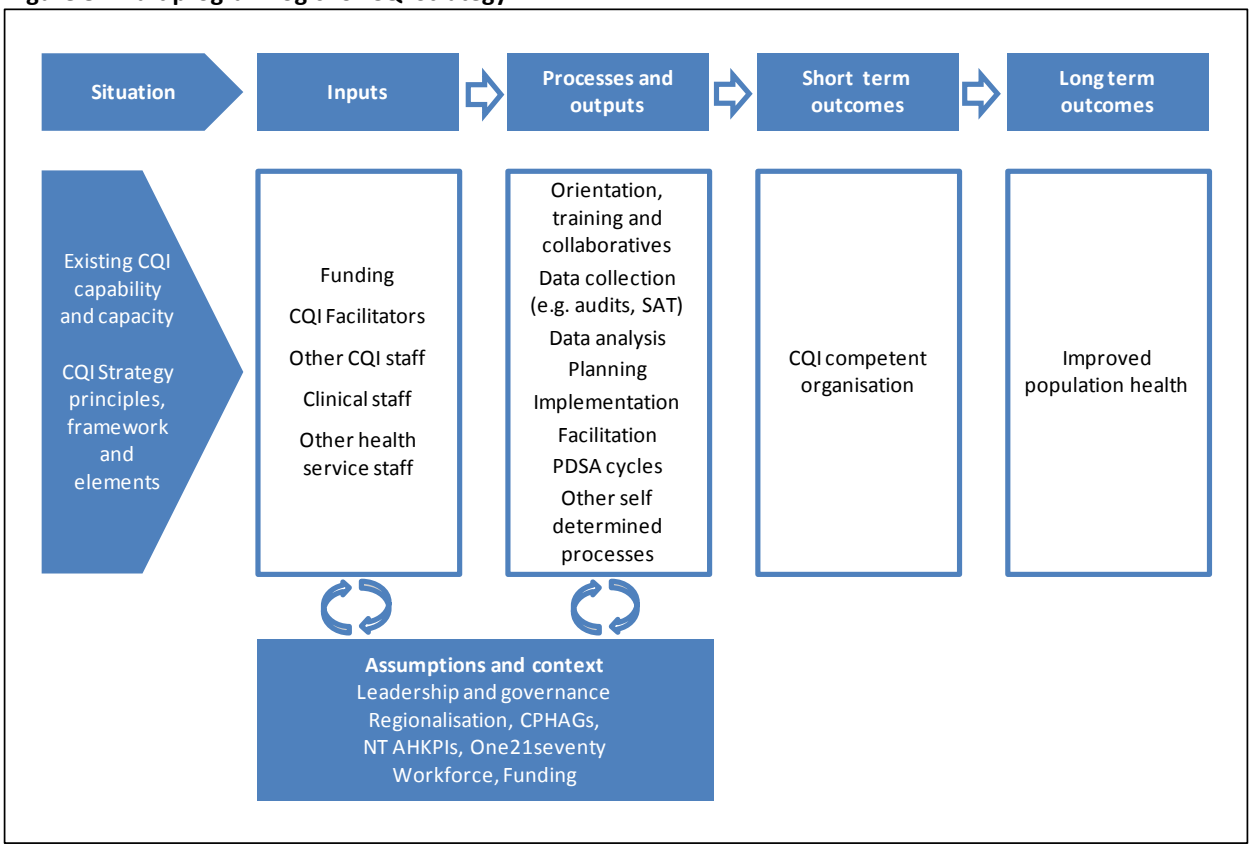
An agreed high level framework will inform the development and implementation of CQI activities, and the monitoring and evaluation of the CQI Strategy. We have suggested the framework includes two primary outcomes; a short term (1–3 year) outcome that organisations/services are 'CQI competent' (i.e. having a defined level of capability and capacity in CQI), and a long term (4–10 year) outcome

related to a contribution to improved population health outcomes. These outcomes relate to the possible phased design of implementing the CQI Strategy which is discussed below in section 8.2.1.

The logic model in Figure 8 is simplistic and provided as a starting point. Further development of the framework should consider:

- other short term outcomes, such as improved health service coverage
- the inclusion of medium term (4–6 year) outcomes relating to improved quality in health service delivery
- the relationship between the CQI Strategy and performance monitoring and accreditation standards
- how other dimensions of quality, such as safety, patient-centredness, timeliness, equity, culturally-appropriate care, effectiveness, and efficiency interface with the CQI Strategy (e.g. should there be specific outcomes for each of these within the framework, and over what term, or should these be incorporated into a separate framework around quality improvement that is broader, and potentially more aspirational, than the CQI program?).

**Figure 8: Draft program logic for CQI Strategy**




Note: Many other components of health service delivery contribute to the long term outcome of improved population health, including clinical service delivery and health promotion/community development. The social determinants of health also have a significant impact on population health outcomes.

Further development of the framework should be undertaken by, or in close collaboration with, the key partner organisations (AMSANT, DoH and DoHA). It will be important to ensure that any articulated goals or expected outcomes for the CQI Strategy have buy-in at all levels of the sector. We recommend involving CQI leaders or champions, who may sit in various roles within the NT Aboriginal health sector, in the development of the program logic.

The critical role of context and assumptions is evident in the draft framework in Figure 8. The Aboriginal PHC landscape in the NT is a busy one, and all these factors need to be considered in deciding on what and how resources and processes are used to achieve the desired outcomes. These contextual factors will impact on different health services in different ways.

Indicators to support monitoring and evaluation of the implementation of the CQI Strategy should be added to the framework. These are discussed under section 8.3 below.

**Recommendation 1: Develop, agree and communicate a plan or framework for the CQI Strategy which sets out the partners' (AMSANT, DoH and DoHA) expectations in terms of short and long term outcomes, timeframes, indicators for monitoring CQI activities and impacts, and that describes the context for CQI activities.**

## 8.2 Implementation of the CQI Strategy

### 8.2.1 Align support to the defined outcomes and adapt the approach to the specific CQI needs of organisations

Health service organisations are at different levels of CQI capability and capacity and the type and level of support they would benefit from the most varies. Flexibility in the CQI model allows for this flexibility in support.

The allocation of CQI Strategy funding is currently determined by a funding model designed to bring greater regional equity in PHC funding levels, as opposed to being based on the needs of individual services to develop a CQI approach.

The CQI Facilitators within HSDAs are a major component of the CQI Strategy and account for around three-quarters of the funding investment. The evaluation found services were using the CQI Facilitator role in diverse ways and some services had not recruited staff specifically for this role. Some CQI Facilitators support a single health clinic or health service organisation, while others support staff and CQI processes in multiple services. This has had a big impact on the way CQI Facilitators operate, including on their capacity to work directly with health centre management and clinical staff, and to tailor their support to local needs.

In the absence of clear objectives and outcomes for the CQI Strategy, CQI facilitation is taking place without consistent short or long term objectives. Many CQI Facilitators focus on supporting health services in undertaking CQI cycles with a focus on audits and system assessments. Other Facilitators include elements of data cleansing, providing ePIRS training and supporting the health service to gain accreditation as part of their role.

For many health services, the CQI Facilitators are the 'face' of the CQI Strategy and they have been responsible for leading engagement, and substantially increasing staff engagement, in CQI activities at

various levels of the health system. Further attention needs to be given to truly embedding CQI within health services; some health services still consider CQI to be the role of their CQI Facilitator and the behavioural and organisational change required to make CQI 'everyone's business' has not been widely achieved.

In implementing the current CQI model, there has tended to be an emphasis on data collection and analysis, with less emphasis on planning and implementation and on the development of a sustaining PDSA cycle. Health services need to be incentivised to complete CQI cycles, and CQI Facilitators need to be incentivised to support health services to build their CQI capability and capacity.

The management of and reporting on contracts has been minimal. DoHA has an understanding of what has been delivered (e.g. number of training courses and collaboratives delivered), but not of what has been achieved (e.g. level of CQI capability and capacity reached). In the absence of strong system governance and leadership, more active contract management would provide greater accountability and could serve as a tool to leverage change among services. This would need to be balanced with concerns regarding reporting overburden, which should be against a small number of key items and focus on outcomes as well as outputs. Consideration should also be given to a move towards longer term funding contracts, which would enable the development of longer term (i.e. less frequent) reporting processes.

We have recommended the development of a framework that defines the direction of the CQI Strategy (recommendation 1) with a short term outcome of services achieving greater CQI capability and capacity and a long term outcome of improved population health outcomes. In terms of looking to the future of the CQI Strategy, we suggest the CQI model be reviewed to better align with this overall framework and to better incentivise services to achieve these outcomes.

This might involve, as suggested in section 7.2.4, moving towards a phased CQI model, with one phase targeted at growing the CQI capability and capacity of services and another at supporting CQI mature services to maintain their competency and to expand the scope of their CQI activities to include the patient journey through referred services and to tackle additional dimensions of quality (e.g. equity, efficiency, effectiveness, safety).

This would require defining or describing CQI competency. Table 14 provides a starting point for defining a CQI competent organisation within the context of a NT Aboriginal PHC service. This could be developed further in line with the processes described in section 8.1.1. A key consideration is the need to ensure that the definition of CQI competence is flexible enough to apply to a variety of contexts within the NT, including small and larger ACCHOs as well as DoH services. It is expected that a number of NT PHC services would already fit the definition of a CQI competent organisation.

While we have described CQI competency in two phases, it could perhaps be better described as a continuum, with health services likely to display high levels of capability and capacity in some aspects and less ability in others. Health services may also move between levels of capability and capacity in responses to management and staffing changes.

**Table 14: CQI competency (capability and capacity)**

| | CQI competent organisation | CQI mature organisation |
|---|---|---|
| **Description** | CQI embedded in clinical services | CQI fully integrated into core practices |
| **Scope** | Identifies problems<br>Collects accurate data<br>Analyses data<br>Discusses solutions/plans and implements them<br>Reviews the implementation of solutions/plans | … and extends scope of CQI to include:<br>• referral systems<br>• community views<br>• other dimensions of quality |
| **Engagement processes** | High degree of staff engagement, including Aboriginal staff | … and community (including board) engagement (e.g. community and consumer input and feedback) |

It is also recognised that health services in the NT have differing levels of governance and management capacity, and for those with low capacity it may be difficult to implement CQI in the context of broader issues that affect the service's ability to deliver quality care. We believe that the CQI Strategy should continue to engage with these services, but the starting point may be to assist services to get to a stage where CQI becomes a useful tool. This may involve a process through which the CQI Facilitator acts as an entry point for referral to other types of support (for example, assistance to improve corporate governance).

Implementing such a model would be a major reframing of the CQI approach, and we recommend moving towards this in a considered manner. As an initial step, the description of CQI competence could be disseminated through the sector and used by health services and CQI Facilitators as a tool to determine where the organisation currently sits. This would then act as a basis for service goal setting. Support provided by the CQI Facilitator could be targeted to assisting the service to achieve these goals, with a range of CQI tools and approaches being available depending on where the capacity gap lies.

A longer term goal might be to move towards different contracting arrangements based on the level of CQI capability and capacity. A two (or more) phase CQI model is likely to involve different contracting arrangements for organisations in each phase, and we would suggest reviewing the CQI facilitation function with a view to it, and the role of the CQI Facilitator, being strongly focused on the proposed outcomes. This might mean, for example:

- CQI facilitation for organisations in a CQI growing phase is targeted at supporting services to become CQI competent within a specific timeframe (such as 1–3 years), through supporting staff though a CQI Facilitator type role. This is likely to involve continuing to support CQI through a structured program, with active management of contracts and reporting against CQI processes and outputs, and short term outcomes.
- CQI facilitation for CQI mature organisations supports the maintenance of internal capacity in, and ownership of, CQI to bring improvements in population health outcomes over the longer term. This could involve continuing to fund facilitation through a structured program, but not prescribing how the funding is spent; however, it may be preferable to have CQI expectations embedded within all contracts and within baseline funding. Reporting would be on the basis of outcomes (e.g. improvements in health service quality and improvements in health outcomes

across all the dimensions of quality) and could be incorporated into an organisation's annual report.

- For organisations that are not yet ready to undertake CQI due to broader organisational capacity issues, the function of the facilitation role could be to identify specific areas which are acting as barriers to successful CQI and assisting the organisation to access support to address these issues.

This would potentially affect the way CQI Strategy funding is allocated. Separate, programmatic funding would target organisations that are not yet at a defined level of CQI capability and capacity, on the basis of the needs of the services. Any funding for CQI competent organisations would be allocated on an equitable basis. This may or may not mean differential levels of funding for services in a growing phase from services in a mature phase. As noted in section 7.2.4, as well as through dedicated CQI funding, services in a mature phase might be otherwise incentivised, such as through outcomes based contracts which provide for greater autonomy in how CQI funding is spent. Depending on the balance of incentives for services to be classified as either CQI growing or mature, there may be a need to consider who makes the assessment of an organisation's CQI capability and capacity under such an arrangement.

**Recommendation 2: Consider developing and implementing a phased CQI implementation model that targets support for services based on whether they are at a growing or mature phase in terms of their CQI capability and capacity.** As part of this, we would recommend:

- defining the characteristics and standards expected of a CQI competent NT Aboriginal PHC service
- in the short term, using this definition as a tool for health organisations and CQI Facilitators to determine their current level of CQI capacity and capability, and tailor the CQI approach to best meet the organisations' needs
- in the longer term, moving towards separate contractual arrangements for CQI growing and mature services which reflect the different support required and outcomes expected, including aligning the CQI facilitation role with the proposed outcomes
- developing appropriate incentives and support for services in the growing phase to become CQI competent within a specific timeframe
- developing appropriate incentives and support for services in the mature phase to maintain internal capacity in, and ownership of, CQI and to increase the scope of quality to include referral systems and other dimensions of quality, especially systems for community engagement
- increasing the alignment of CQI activities and the operation of CPHAGs
- developing appropriate indicators and reporting arrangements
- considering targeting funding to support CQI growing services on the basis of need (or potential benefit), and CQI mature services on an equitable basis
- investigating alternative and sustainable ways to facilitate CQI in small, dispersed health service organisations, as necessary.

### 8.2.2 Ensure the completion of CQI cycles

The CQI Strategy has led to improvements in the quality of data collected and increased the capacity of health service staff to use electronic information systems for CQI. These are significant achievements. They are partly attributable to the dominance of the NT AHKPIs and data collection, audit and analysis processes required in implementing the One21seventy tools. There is a need to strengthen the interpretation of data, including through completing the latter steps of CQI cycles. This requires engagement in processes that go beyond focusing only on data or specific indicators to define problems, including group interpretation and community consultation.

NT Government health services are beginning to share electronic data and this is enabling more specialised analysis to be undertaken centrally, and analysis of data directly abstracted from ePIRS. It is also enabling data to be analysed at different levels – locally, regionally and NT-wide – and in real time. This is useful for identifying problems common at a regional level and should help in the planning and implementation of regional solutions. Efforts are progressing to share electronic data from the community controlled sector which would further enhance regional collaboration.

**Recommendation 3: Promote the uptake of CQI methods that bring greater interpretation and meaning to data to enable problems to be more clearly defined, including at a regional level, and therefore more appropriate, innovative and effective solutions to be developed and implemented.** As part of this, we would recommend:

- incentivising the completion of CQI cycles
- where problems are identified, ensuring that the problems and solutions are understood and communicated to different levels of the NT PHC system
- supporting mechanisms for exploring the effectiveness of different responses to identified system problems before corrective action is undertaken.

## 8.3 Monitoring and evaluation

The development of a plan, framework or logic model for the CQI Strategy would provide a useful basis for identifying appropriate monitoring indicators and evaluation questions. Figure 9 on the following page adds some suggested key indicators and questions to the logic model suggested in section 8.1.1. These are included in this report as a starting point, for review and further development. They include some indicators and questions relevant to an additional, medium term (4–6 year) outcome of improved quality in health service delivery.

For organisations which are not yet at a defined level of CQI capability and capacity, the proposed monitoring and evaluation focuses on assessing progress with the implementation of CQI activities, and on how well services are advancing towards the standards of a CQI competent organisation. For CQI competent organisations, the focus shifts to assessing changes to health services and the impact of these on population health outcomes, while still examining the processes and outputs delivered to give effect to these outcomes.

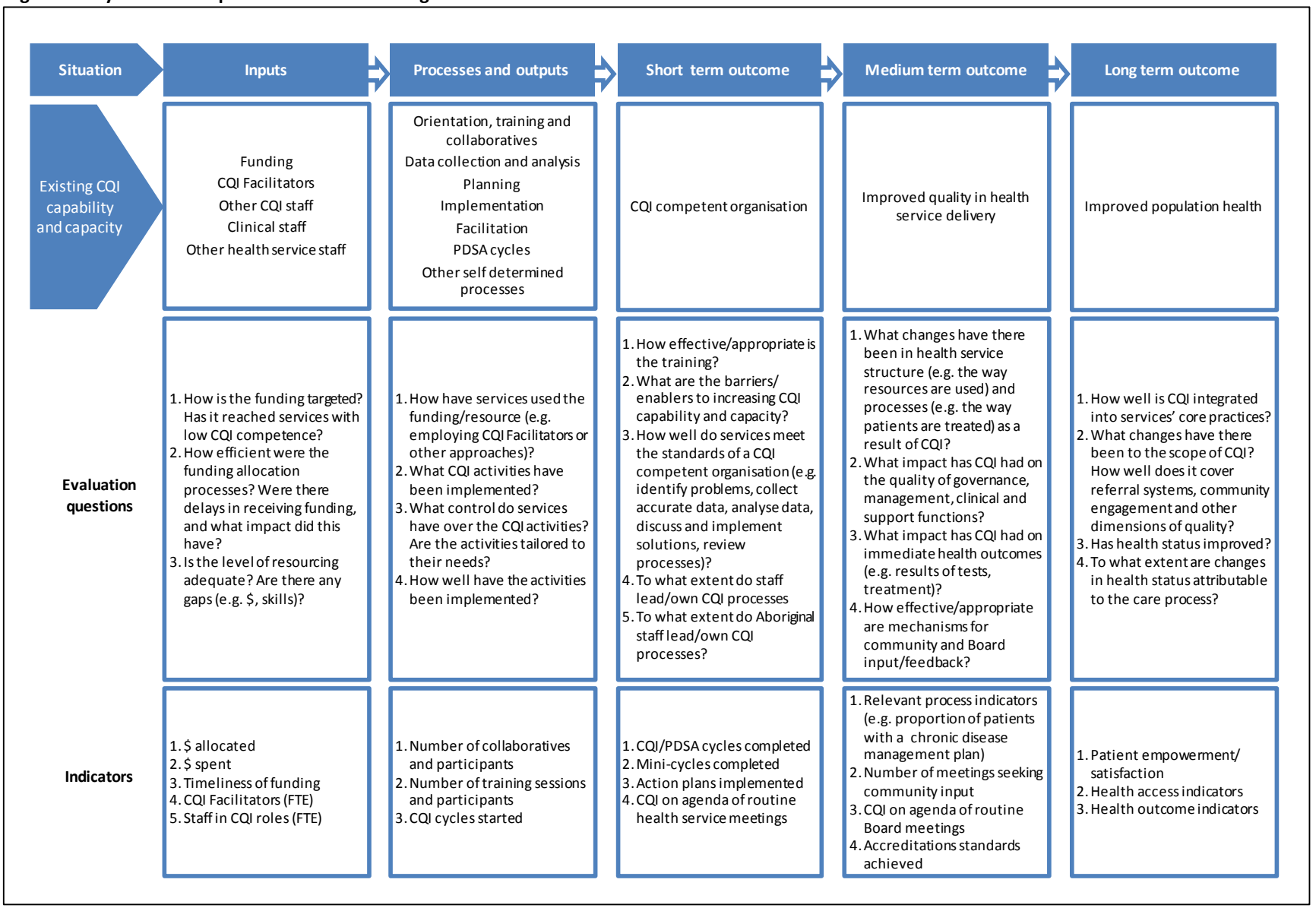
As discussed earlier, indicators and reporting for organisations which are not yet at a defined level of CQI capability and capacity would likely be based around contractual arrangements relating to CQI

funding; whereas the indicators and reporting for CQI competent organisations could, ultimately, be integrated into all contracts (i.e. not CQI programmatic type contracts) and an organisation's annual report.

Monitoring and evaluation systems will need to recognise that different NT PHC service organisations are at different starting points in the suggested program logic, and therefore what is considered an appropriate medium term (4–6 year) outcome for one organisation, may be considered a short term (1–3 year) outcome for another (i.e. for an organisation that is already CQI competent). Future evaluations will want to capture organisations at various starting points in the logic, and assess the journey or distance travelled by each organisation.

Effectiveness, appropriateness and efficiency are likely to continue to be relevant overarching criteria for future evaluation activity. Defining these within the context of NT Aboriginal PHC would assist future evaluation activity. The development of a framework for the CQI Strategy which defines short, medium and long term outcomes will drive the definition of effectiveness: to what extent have the stated outcomes been achieved? Appropriateness needs to consider current circumstances; from a health system level (e.g. government policy, such as appropriateness in the relation to regional reform), to the needs of a particular service (e.g. activities are tailored/targeted to individual needs). In terms of demonstrating efficient use of resources, future evaluations need to look at both processes for investing CQI resources (e.g. funding allocation processes and program management costs) and system efficiencies, and ultimately improved and more equitable outcomes that can be attributed to the CQI Strategy. The latter is, therefore, reliant on being able to assess effectiveness, after which the cost of the effect can be assessed.

**Figure 9: Key evaluation questions and monitoring indicators**



The suggested timing of future evaluation activity is subject to any modifications made to the CQI Strategy on the basis of the recommendations in this evaluation. If a phased model is adopted as suggested, or an alternative way of refocusing the current implementation to more strongly target building CQI capability and capacity within health service organisations, then further evaluation 1–2 years after modifying the program would be appropriate. At this point an evaluation would provide useful information on what works/doesn't in building CQI capability and capacity, at a time when the information could inform ongoing implementation of the CQI Strategy for organisations not yet CQI competent. If CQI Strategy resources are realigned to target organisations not yet CQI competent, then this would also be an appropriate point at which to assess processes and outcomes for CQI competent organisations, focusing on whether they have sustained and extended the scope of their CQI activities, or whether the less programmatic approach to supporting CQI led to a drop in activity.

We would expect some health services to be able to demonstrate medium term outcomes over the next 1–2 years, and there could be valuable lessons to share with other services at that point of time. We would not expect long term outcomes to be demonstrable for 4–5 years from now.

The timing of future evaluation activity should also consider changes in contextual factors in the NT Aboriginal PHC sector, such as regional reform and moves towards community control.

## 8.4 National considerations

Several of the findings from the evaluation of the CQI Strategy in the NT are potentially significant in terms of considering whether and how to support CQI in the Aboriginal PHC sector in other jurisdictions, and at a national level. While this was not a specific focus of the evaluation, and was not an issue we consistently canvassed in the data collection and analysis, we have identified a number of key messages from the NT experience. These issues would benefit from further analysis, and in particular with reference to other recent evidence on CQI in the sector, notably the recent *National Appraisal of CQI Initiatives in Aboriginal and Torres Strait Islander PHC* (Wise et al. 2012).

Key messages include:

- Control over CQI processes and activities should sit at the level where decisions can be made as a result of those processes. So, for example, if a local clinic can make the decision to implement actions as a result of CQI, it should have the capability and capacity to control the CQI activity. Similarly, if this decision making sits at a regional level, then it is appropriate that that level controls how the organisation engages in CQI.
- External CQI facilitation appears to be an effective, efficient and appropriate function in cases where internal capability and capacity is insufficient to fully engage with CQI. But the facilitation role should focus on building internal capability and capacity; not on doing CQI. While a greater level of active oversight of CQI processes may be needed initially to help build awareness and capability, the focus needs to shift to embedding capability in internal roles and in the health service organisation. Alternative approaches, such as focusing CQI investment in health service managers and clinicians is likely to result in variable uptake of and engagement in CQI.
- Where organisational capability and capacity in CQI is high, health services should be provided greater flexibility in how they use CQI resources, although focused on a common outcome such

as improved health outcomes, and incentivised to extend the scope of CQI into other aspects of quality such as patient-centredness, timeliness, efficiency and equity.

- System level governance, leadership and cross-sector (government control/community control) partnerships are critical to ensuring CQI interacts with wider systems issues.
- Strategic leadership in CQI should build on existing expertise within a jurisdiction's Aboriginal PHC system. This expertise and interest is likely to sit in various positions and at various levels within a system, and not all be centrally based.
- There are efficiencies to be gained from locating a CQI coordination function within an organisation with close interactions with service providers. The coordination function is critical for organising training and support, and for providing advice and support to facilitators.
- Support needs to extend to helping services complete CQI cycles, and in using data effectively (beyond data extraction) and drawing on other sources of information and analysis (e.g. community consultation). CQI processes should be encouraged to use data gathered for other purposes, such as for reporting on National Key Performance Indicators (nKPIs) and jurisdictional level KPIs.
- Engagement of AHPs is essential, in particular for engaging communities in CQI (e.g. community consultation around identifying solutions) and embedding CQI in services with high staff turnover.
- The evidence is inconclusive as to whether the approach should focus on embedding clinical CQI as a first step, and then extending it to other aspects of quality improvement from there, or whether it is more beneficial to build foundations for all dimensions of CQI at same time.
- It is essential to recognise that embedding CQI is a lengthy process and requires significant time to move through the steps of raising awareness of CQI, gaining wide participation, and then real engagement and buy-in.
- Long term funding is critical to encourage CQI to become embedded as a core part of health service provision.

## REFERENCES

Allen and Clarke 2011, *Evaluation of the Child Health Check Initiative and the Expanding Health Service Delivery Initiative: Final report,* Department of Health and Ageing, Canberra.

Australian Commission on Safety and Quality in Health Care 2011, *National Safety and Quality Health Service Standards,* ACSQHC, Sydney.

Australian Health Ministers' Advisory Council (AHMAC) 2012, *Aboriginal and Torres Strait Islander Health Performance Framework 2012 Report,* AHMAC, Canberra.

Australian Medical Association 2012, *Aboriginal and Torres Strait Islander Health Audit Report 2012: Progress to Date and Challenges that Remain*, AMA, Barton, ACT.

Bailie R 2012, 'Revisiting first principles: Applying CQI at all levels of the health system', Presentation to the Lowitja Institute National Conference on Continuous Quality Improvement (CQI) in Aboriginal and Torres Strait Islander Primary Health Care, Alice Springs, 14–15 May 2012.

Baker G 2011, *The roles of leaders in high-performing health care systems,* Paper commissioned by The King's Fund, United Kingdom.

Balding C 2012, Untitled presentation to the Lowitja Institute National Conference on Continuous Quality Improvement (CQI) in Aboriginal and Torres Strait Islander Primary Health Care, Alice Springs, 14–15 May 2012.

Busari J 2012, 'Comparative analysis of quality assurance in health care delivery and higher medical education', *Advances in Medical Education and Practice* 3: 121–127.

Braithwaite J, Greenfield D, et al. 2010. 'Health service accreditation as a predictor of clinical and organisational performance: a blinded, random, stratified study'. *Quality and Safety in Health Care* 19: 14–21.

COAG Reform Council 2012, *Indigenous reform 2010–2011: Comparing performance across Australia,* COAG Reform Council, Sydney.

Davies H, Nutley S, Mannion R 2000, 'Organisational culture and quality of health care', *Quality in Health Care 9*(2):111–119.

Donaldson LJ, Ara Darzi 2012, 'Quality measures: bridging the cultural divide', *BMJ Quality and Safety,* 21: 969–972.

Dwyer J, O'Donnell K, Lavoie J, Marlina U, Sullivan P 2009, *The overburden report: contracting for Indigenous health services*, Cooperative Research Centre for Aboriginal Health, Darwin.

Franco L, Silimperi C, Veldhuyzen van Zanten T, MacAulay C, Askov K, Bouchet B, and Marquez L 2002. *Sustaining Quality of Healthcare: Institutionalization of Quality Assurance.* Published for the U.S. Agency for International Development (USAID) by the Quality Assurance Project.

Fung C, Lim Y, et al. 2008, 'Systematic Review: The Evidence That Publishing Patient Care Performance Data Improves Quality of Care', *Annals of Internal Medicine,* 148(2): 111-123.

Gardner K, Bailie R, Hains J 2010, Poster publication, *Supporting quality improvement in Indigenous primary health care: lessons for policy from a multi-site study of audit and best practice for chronic disease in Australia.*

Gardner K, Bailie R, et al. 2011, 'Reorienting primary health care for addressing chronic conditions in remote Australia and the South Pacific: Review of evidence and lessons from an innovative quality improvement process', *Australian Journal of Rural Health* 19: 111–117.

Gardner KL, Dowden M, Togni S, Bailie R 2010, *Understanding uptake of continuous quality improvement in Indigenous primary health care: lessons from a multi-site case study of the Audit and Best Practice for Chronic Disease project.*

Hermann R, Provost, S 2003, 'Best Practices: Interpreting Measurement Data for Quality Improvement: Standards, Means, Norms, and Benchmarks' *Psychiatric Services 54*(5).

Implementation Science 2010, 5:21 (http://www.implementationscience.com/content/5/1/21)

Kahan B, Goodstadt M 1999, 'Continuous quality improvement and health promotion: can CQI lead to better outcomes?', *Health Promotion International* 14 (1): 83-91.

Keroack MA, Youngberg BJ, Cerese JL, Krsek C, Prellwitz LW, Trevelyan EW 2007, 'Organizational Factors Associated with High Performance in Quality and Safety in Academic Medical Centers', *Academic Medicine*, Vol. 82, No. 12 / December 2007.

Kritchevsky S, Simmons B 1991, 'Continuous quality improvement: concepts and application for physician care', *Journal of the American Medical Association* 266(13: 1817–23.

Marley J, Nelson C, O'Donnell V, Atkinson D 2012, 'Quality indicators of diabetes care: an example of remote-area Aboriginal primary health care over 10 years', *Medical Journal of Australia,* 197(7): 404–408.

NT AHF 2010, *NT Aboriginal Health Key Performance Indicators: Definitions*, Version 1.3.3.

NT CQI Program Steering Committee, *Terms of Reference*, unpublished, updated 17 October 2012.

O'Donaghue L 1998, 'Towards a culture of improving indigenous health in Australia', Keynote address to the Fourth Biennial Australian Rural and Remote Health Scientific Conference, *Cultures in Caring*, 27–28 August 1998, Toowoomba, Queensland.

Phillips C, Pearce C, Hall S, Travaglia J, de Lusignan S, Love T and Kljakovic M 2010, 'Can clinical governance deliver quality improvement in Australian general practice and primary care? A systematic review of the evidence', *Medical Journal of Australia* 193 (10): 602–07.

PHRG CQI Working Group 2009, Proposed EHSDI Investment in Continual Quality Improvement (CQI), unpublished briefing Paper to NT AHF, 27 March 2009.

PHRG CQI Working Group 2009, EHSDI Continuous Quality Improvement Needs Analysis Report, unpublished report to NT AHF, 16 November 2009.

Powell A, Rushmer R 2008. *A systematic review of quality improvement models in health care.* Social Dimensions of Health Institute, University of Dundee and St Andrews.

Shortell S, Bennett C, Byck G 1998, 'Assessing the Impact of Continuous Quality Improvement on Clinical Practice: What It Will Take to Accelerate Progress', *Milbank Quarterly,* Vol.76, Issue 4, pp.593–624.

Shortell SM, O'Brien JL, Carman JM, Foster RW, Hughes EF, Boerstler H, O'Connor EJ 1995, 'Assessing the impact of continuous quality improvement/total quality management: concept versus implementation', *Health Service Research*, June; 30(2): 377–401.

Urbis Consulting Group 2006, *Evaluation of the Continuous Improvement Projects (CIP) for the Early Detection and Management of Chronic Disease for Aboriginal and Torres Strait Islander People,* OATSIH, Canberra.

Washington Institute of Medicine 2001, *Crossing the Quality Chasm: A New Health System for the 21st Century*. Institute of Medicine, Washington DC.

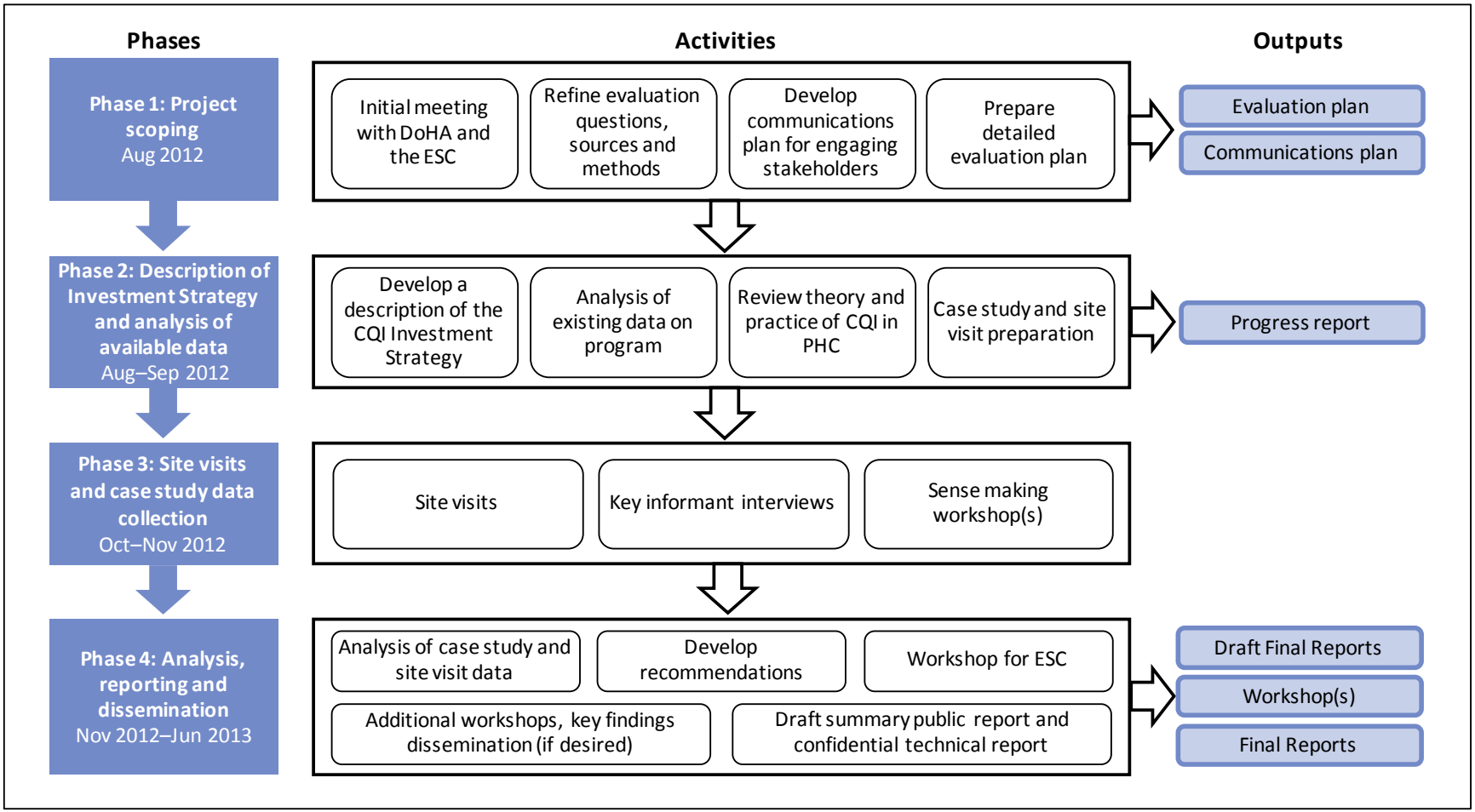
Wilson T, Condon JR, Barnes T 2007, 'Northern Territory Indigenous life expectancy improvements, 1967–2004', *Australian and New Zealand Journal of Public Health*, vol.31, no.2, pp.184–188.

Wise M, Angus S, Harris E, Parker S, *National Appraisal of Continuous Quality Improvement Initiatives in Aboriginal and Torres Strait Islander Primary Health Care.* University of New South Wales, Sydney.

# APPENDIX A: LIST OF ABBREVIATIONS

| Abbreviation | Term |
|---|---|
| ABCD | Audit and Best Practice for Chronic Disease |
| ACCHO | Aboriginal Community Controlled Health Organisation |
| ACSQHC | Australian Commission on Safety and Quality in Health Care |
| AGPAL | Australian General Practice Accreditation Limited |
| AHP | Aboriginal Health Practitioner |
| AMSANT | Aboriginal Medical Services Alliance of the Northern Territory |
| APCC | Australian Primary Care Collaboratives |
| CARPA | Central Australian Rural Practitioners Association |
| CIP | Continuous Improvement Projects |
| COAG | Council of Australian Governments |
| CPHAG | Clinical Public Health Advisory Group |
| CQI | Continuous Quality Improvement |
| DoH | (Northern Territory Government) Department of Health |
| DoHA | (Australian Government) Department of Health and Ageing |
| EHSDI | Expanding Health Service Delivery Initiative |
| ePIRS | Electronic Patient Information and Recall System |
| ERP | Estimated Resident Population |
| ESC | Evaluation Steering Committee |
| HSDA | Health Service Delivery Area |
| nKPIs | National Key Performance Indicators |
| NT | Northern Territory |
| NT AHF | Northern Territory Aboriginal Health Forum |
| NT AHKPIs | Northern Territory Aboriginal Health Key Performance Indicators |
| OATSIH | Office of Aboriginal and Torres Strait Islander Health |
| PCIS | Primary Care Information System |
| PDSA | Plan-Do-Study-Act |
| PENCAT | PEN Clinical Audit Tool |
| PHC | Primary Health Care |
| PHRG | Primary Health Reform Group |
| PIRS | Patient Information and Recall System |
| QAAMS | Quality Assurance for Aboriginal and Torres Strait Islander Medical Services |
| RAN | Remote Area Nurse |

## APPENDIX B: EVALUATION PLAN



# APPENDIX C: EVALUATION QUESTIONS

## Effectiveness

**Overarching question: what are the key achievements and outcomes of the CQI Strategy?**

| Objective | Evaluation questions |
|---|---|
| Engagement of health services with CQI at all levels (board, management and clinicians) | • To what extent are health service board management and clinicians engaged in CQI?<br>• What impact has the CQI Strategy had on engagement in CQI?<br>• What does CQI mean to different actors in the system (staff, management, boards, NT Government, Australian Government)?<br>• How and to what extent does CQI empower different stakeholders, at all levels? |
| CQI activity and capacity | • What impact has the CQI Strategy had on the capacity of the NT Aboriginal PHC system to undertake CQI?<br>• What changes in health practice and/or processes have occurred since the implementation of the CQI Strategy? What were the drivers of this change? To what extent did participation in CQI processes influence this change?<br>• How much responsibility, control and capacity for CQI sits at the service/community level? |
| Number and range of CQI activities in the NT Aboriginal PHC sector | • What impact has the CQI Strategy had on the number and range of CQI activities in the NT PHC sector?<br>• What impact has the CQI Strategy had on the uptake and use of CQI tools, including intensity of uptake and use?<br>• Which CQI activities and tools are seen as effective and appropriate? Which are not? Why? |
| Collection, analysis and use of clinical data and the NT AHKPIs for CQI purposes | • How is clinical data being used at different levels (staff, management, boards, NT Government, Australian Government)?<br>• How is NT AHKPI being used at different levels (staff, management, boards, NT Government, Australian Government)?<br>• Is the system based on good quality (i.e. robust and complete) information?<br>• To what extent is the NT AHKPI indicator set appropriate for CQI purposes?<br>• What impact has the CQI Strategy had on capacity to analyse and use clinical data and the NT AHKPIs for CQI purposes? |
| Assessment of implementation against the original CQI Strategy | • To what extent have the measures of success identified in the original CQI Strategy been met?<br>• Are the measures of success identified in the original CQI Strategy still relevant? |
| Quality of Aboriginal PHC services | • What dimensions of quality in Aboriginal PHC does the CQI Strategy aim to improve? And over what time period?<br>• What impact has the CQI Strategy had on the quality of Aboriginal PHC?<br>• What impact is it likely to have in the next 1–3 years? |

## Barriers and enablers

**Overarching question: what barriers and enablers have contributed to the success or otherwise of the CQI Strategy to date?**

| Objective | Evaluation questions |
|---|---|
| Governance of the CQI Strategy | • How effective are the CQI Strategy governance structures?<br>• How embedded is CQI in the governance structures for Aboriginal PHC?<br>• What is the relationship between the CQI governance structures and the NT PHC system's governance structures?<br>• How could governance be strengthened? |
| Support by health service management and capacity in related areas (such as Clinical Information Systems) | • To what extent are health service management supportive of CQI? How is this support demonstrated?<br>• To what extent is the functionality of Clinical Information Systems supportive of CQI? |
| CQI training for PHC staff | • What training and support has been provided to increase staff capacity in CQI?<br>• To what extent have staff taken up the training?<br>• Is the training appropriate and effective? |
| CQI workforce | • How effective are recruitment and retention processes for the CQI workforce?<br>• What support and training is provided and is it appropriate and effective?<br>• Is the CQI workforce capacity and capability sufficient to meet the needs of the NT Aboriginal PHC sector? |
| Change management strategies | • What change management strategies have been used to implement the CQI program?<br>• How effective have these strategies been? |
| Other barriers and enablers | • To what extent have other barriers and enablers impacted on the success or otherwise of the CQI Strategy (e.g. leadership, ICT support and development, dedicated support team)? |

## Appropriateness

**Overarching question: To what extent is the CQI Strategy an appropriate response to improve quality in Aboriginal PHC sector in the NT?**

| Objective | Evaluation questions |
|---|---|
| Consistency with quality improvement theory and practice | • What are the key theoretical and practical dimensions of CQI in NT PHC?<br>• To what extent are activities implemented under the CQI Strategy consistent with CQI theory and practice?<br>• To what extent are activities implemented under the CQI Strategy in line with nationally agreed standards?<br>• Is CQI undertaken as part of a continuous cycle: e.g. plan, do, study, act? |
| Alignment with the priorities and needs of stakeholders | • What are the needs and priorities of the different stakeholders, at all levels of the system?<br>• How well does the Strategy meet these?<br>• How could it better meet these needs and priorities? |
| Fit with the problem(s) it is intended to solve | • What are the priority problems that CQI is intended to solve?<br>• How well does it address these problems? |
| Fit with the broader context of Aboriginal PHC reform in the NT | • How integral is the CQI Strategy to other PHC reforms, and how has this changed over time?<br>• Does the CQI contradict any of the other reforms?<br>• To what extent is CQI embedded as 'business as usual' in the NT Aboriginal PHC system? |

## Efficiency

**Overarching question: To what extent does the investment in CQI in the NT Aboriginal primary health care sector represent good value for money?**

| Objective | Evaluation questions |
|---|---|
| Targeting of activities and strategies to high priority problems | • How is the CQI investment being distributed and targeted?<br>• Is it targeted at poor quality, or seen as an improvement tool for all services?<br>• How well does this reflect needs or priorities?<br>• What impact has the CQI investment had on priority problems? |
| Similar outputs, activities or outcomes for fewer resources | • How much funding has been allocated and spent?<br>• What are the additional transactional costs of the CQI Strategy? How much routine staff time (managers and clinicians) is spent on CQI activities?<br>• Were any alternative approaches considered to improve quality in Aboriginal PHC in the NT? What were these? Why were these not pursued?<br>• To what extent were the facilitation resources needed to activate CQI? (i.e. how embedded was CQI in the system previously, and would services have implemented without the additional support) |
| Duplication or synergy arising from overlap or interaction with other programs | • How does the CQI Strategy interact with other programs or investments operating in the NT Aboriginal PHC sector?<br>• What are the main areas of overlap or complementarity, and where are the gaps? |

# APPENDIX D: TIMELINE OF THE CQI INVESTMENT STRATEGY

| Date | Activity |
|---|---|
| 5 December 2008 | NTAHF agreed to:<br>1. The need for a strong and effective CQI process in PHC in the NT<br>2. The need to urgently assess the effectiveness and coverage of CQI across the NT, prior to NTAHF consideration of strategies to fill identified gaps. |
| December 2009–April 2009 | CQI Working Group continued to develop proposed CQI approach |
| 8 April 2009 | NT AHF agreed to the proposed EHSDI CQI Investment Strategy to fill identified gaps and to build an effective, sustainable and coordinated approach to CQI across the NT Aboriginal PHC service system. |
| 1 July 2009 | Closing the Gap in the NT National Partnership Agreement is implemented. This included provision of funding for the extension of the EHSDI. |
| September 2009 | CQI Planning Committee endorsed CQI Needs Analysis questionnaire. |
| 16 November 2009 | Needs Analysis report presented to the PHRG |
| December 2009 | NT AHF endorsed CQI approach. |
| June 2010 | OATSIH released CQI 2009-10 funding allocations. |
| August 2010 | First NT AHKPIs Collaborative Workshop. |
| By September 2010 | 3.5 CQI Facilitators appointed. |
| October 2010 | CQI Facilitator training and orientation held in Darwin.<br>One21seventy training held in Alice Springs, Darwin and Tennant Creek for clinicians. |
| February 2011 | 10 CQI Facilitator positions recruited, 3 positions vacant. |
| March 2011 | Second NT AHKPIs Collaborative Workshop.<br>CQI Facilitator workshop held with a focus on peer learning and future planning.<br>One day CQI Forum for Top End Primary Health Centre Managers. |
| April 2011 | CQI Coordinator position in Central Australia recruited for replacement. |
| 17 May 2011 | Face to face workshop for CQI Facilitators held in Darwin with a focus on peer learning and future planning. |
| May and June 2011 | One21seventy Foundation Training Workshops held in Darwin and Alice Springs. This training was for clinicians and health service staff participating in clinical audits. |
| July 2011 | 9 CQI Facilitator positions recruited, 4 positions vacant. |
| September 2011 | PHRG disbanded. |
| October 2011 | CQI Facilitator orientation workshop. |
| November 2011 | Third NT AHKPIs Collaborative Workshop.<br>CQI Facilitator Training and Planning Day.<br>Discussion forum for Communicare and PCIS users. |
| January 2012 | 10 CQI Facilitator positions filled. |
| February 2012 | One21seventy Foundation Training Workshops held in Darwin and Alice Springs.<br>One21seventy training for senior clinicians and managers held in Darwin and Alice Springs. (follow on from the One21seventy Foundation courses) |
| April 2012 | Fourth NT AHKPIs Collaborative Workshop. |
| May 2012 | National CQI Conference, held in Alice Springs (Lowitja Institute). |
| August 2012 | CQI Steering Committee meeting.<br>Evaluation of CQI Strategy initiated. |
| October 2012 | OATSIH approves extension of funding to June 2013. |
| November 2012 | CQI Collaboratives Workshop. |

# APPENDIX E: STRENGTHS, WEAKNESSES AND AREAS FOR IMPROVEMENT

The following conclusions are drawn from our *Report on the Sense Making Workshop,* dated December 2012.

## Strengths

- The CQI Strategy has helped to create a common language about population health improvement, particularly around chronic disease, that transcends professional and institutional boundaries.
- The CQI Strategy has led to improvements in the quality of data collection.
- There have been improvements in the reporting, transparency and accountability of health service activities and performance.
- The CQI Strategy has helped to create a degree of enthusiasm and fervour among health workers. This is very significant.
- Some health services are demonstrating very advanced levels of CQI processes.

## Weaknesses

- CQI in the NT Aboriginal primary health care sector is strongly dominated by NT AHKPIs and One21seventy reporting and audit requirements, with other aspects of the CQI cycle weak.
- CQI is largely seen as a process issue, rather than as a means to achieve specific outcomes. When outcomes are considered, population health gain and equity are predominant. Other dimensions of quality – such as safety, patient-centred care, efficiency and effectiveness – are not currently strongly considered. This is partly because the NT AHKPIs are used to define the boundaries of the problem. Other dimensions of quality need to be given space for expression and the opportunity to be addressed through the CQI cycle.
- Communities, and to a large extent many AHPs, are not actively engaged in the CQI process to date.

## Areas for improvement

- More emphasis needs to be placed on the completion of CQI cycles, in addition to the data collection and analysis.
- Data is an indicator; there needs to be more attention to considering different ways that the meaning of the data can be interpreted to further define the problem, and then to address the problem. More broadly this requires greater emphasis on promoting a learning culture.
- Frontline health clinic staff and communities need the opportunity to play a greater role in identifying the problem to be addressed. This participation needs to include a broad discussion of all aspects of community health (i.e. a holistic view) and not be restricted to the issues framed by the NT AHKPIs or the specifics of chronic disease management.

- The issue of efficiency of resource use needs to be given some consideration. The CQI process needs to demonstrate it is an efficient use of resources and being able to point to system efficiencies, as well as improved outcomes, will be increasingly important.
- Health services should be incentivised to become 'CQI competent' (i.e. be able to identify problems, collect accurate data, analyse, discuss and implement solutions, review, etc, and through a process which has a high degree of community and AHP engagement). The CQI Facilitators should be incentivised to assist health services to achieve this degree of competency within a specific time frame.
- There needs to be greater effort to institutionalise CQI in management, orientation and induction, and training for Remote Area Nurses and AHPs.
- CQI could assist regionalisation through moving its own activities to a regional configuration ahead of the more formal organisational arrangements. This is beginning to happen through CPHAGs.
- Shifting to a regional configuration may help to address some of the capacity challenges relating to individual CQI Facilitators supporting many health services. Alternative approaches to supporting small, dispersed and independent providers need further exploration.