



**ALLEN+CLARKE**

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

**SUMMARY REPORT**

**30 June 2013**

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

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### **Note:**

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

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## 1 MAIN MESSAGES

The CQI Investment Strategy (the CQI Strategy) has been developed and implemented in the Northern Territory (NT) Aboriginal primary health care (PHC) sector over 2009–2013. The CQI Strategy aims 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.

These main messages represent the key lessons that people who make decisions on running the NT PHC system can take from the evaluation. Section 5 of this report presents a set of specific recommendations.

- The CQI Strategy has increased overall CQI capability and capacity within the NT Aboriginal health sector, with some health services demonstrating very advanced levels of CQI processes. It has also helped to create a degree of enthusiasm and fervour among health workers for quality improvement. These are significant achievements. The investment in the CQI Strategy should be continued.
- While overall capability and capacity has increased, there has been differential growth throughout the system. The CQI Strategy needs to provide tailored support based on each individual health service’s capability and capacity in CQI and contextual factors such as staff numbers and population served.
- The ongoing implementation of the CQI Strategy would be enhanced by articulating and gaining agreement on the expected short, medium and long term outcomes of the Strategy. Activities implemented under the Strategy should align with the achievement of these outcomes.
- CQI activities have been largely focused on the data collection and analysis steps of the CQI cycle. This has led to a tendency to view the data as defining a problem, to be addressed by implementing a program or intervention. There is a need to incentivise completion of the latter steps of the CQI cycle, including a focus on understanding the nature of the problem and broader interpretation of what the indicators mean.
- More needs to be done to support the engagement of Aboriginal health practitioners and communities; this is vital to the success of CQI in the NT.
- In order to fully embed CQI as a core part of the NT Aboriginal PHC system it will be necessary to expand the current focus on building CQI capability and capacity at the service level to include a focus on incorporating CQI processes into organisational, regional and NT level activities and functions.
- The CQI Strategy has made a deliberate decision to focus on clinical CQI with an emphasis on data/clinical audit. Consideration should be given to ensuring the scope of the CQI Strategy is inclusive of other aspects of quality such as safety, effectiveness, patient-centredness, efficiency, and equity. There is a need for discussion on what ‘quality’ Aboriginal PHC means, and how CQI can interact with these dimensions of quality.

## 2 EXECUTIVE SUMMARY

This report provides findings and recommendations based on an evaluation of the Northern Territory (NT) Continuous Quality Improvement Investment Strategy (CQI Strategy). The evaluation, commissioned by the Australian Government Department of Health and Ageing (DoHA), has been undertaken independently and the interpretation, conclusions and recommendations in this report are those of the authors.

This report summarises the key findings of a full evaluation report. It also includes the recommendations from the full report.

The NT Aboriginal primary health care (PHC) system is complex and faces a number of significant challenges. Key barriers relate to geographical remoteness, cultural diversity and the influence of social determinants on health outcomes. Other challenges include a high turnover of the health workforce, and significant expansion and reform of the health system. Against this context, the CQI Strategy has been successful in establishing the practice of quality improvement across the NT Aboriginal PHC system. 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.

### 2.1 Key findings

The key findings from the evaluation are as follows.

#### **The CQI Strategy has increased awareness of, and participation in, CQI activities and processes**

Nearly all health service managers and clinicians interviewed were aware of the concept of CQI, could articulate what it meant, and were able to provide examples of CQI activities that they had participated in. Most informants were able to provide examples of changes to practices they had made as a result of recent engagement in CQI processes.

#### **A significant amount of CQI training and support has been provided under the Strategy**

Formal training opportunities, such as training on the One21seventy tool for health service staff and CQI Collaborative workshops, have achieved high attendance rates and are valued by PHC staff as a shared learning experience. The onsite training and support provided by CQI Facilitators was widely seen as the lynchpin of CQI in the NT. 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'.

#### **There is flexibility in the way the CQI approach is implemented across the NT**

Tailoring the CQI approach to respond to local needs and contexts is a key factor for successful CQI. The evaluation found that the CQI model is being implemented differently across the NT, variously incorporating elements such as quality assurance, CQI mini-cycles, data cleansing, clinical audits, and performance monitoring. Similarly, the CQI facilitation resource is being used in a way that responds to

local needs, from purchasing external support (e.g. through CQI Facilitators) to building internal capacity.

### **CQI is not yet embedded as core business within the NT Aboriginal health sector**

The main focus of the CQI Strategy has been on increasing CQI capability and capacity at the service level. To date, engagement is largely programmatic and intermittent and 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. The evaluation found that there has been little consideration or emphasis on embedding CQI processes in policy and planning at the regional or NT level.

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

Decisions regarding which CQI tools and approaches are used are generally made by boards, CEOs or senior managers of ACCHOs, and regional or territory managers within the DoH, sometimes in consultation with CQI Facilitators. The 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. Shared responsibility and control for CQI is vital for successful and sustainable quality improvement in health systems (Powell et al. 2008). The ongoing implementation of the CQI Strategy needs to provide for greater decision making at the local level.

### **More could be done to support Aboriginal health practitioner (AHP) and community engagement in CQI**

Communities, and to a large extent many AHPs, have not been actively engaged in the CQI process to date. The specific 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, and engaging with consumers is challenging due to the lack of appropriate mechanisms through which to engage with communities. 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. AHPs tend to be the most stable element of the NT health workforce and need to be empowered to take a lead role in CQI. A specific training day for AHPs that was recently held as part of the CQI Collaborative is a positive step that could be built on further.

### **There is differential growth in the capacity and capability of those that drive CQI, and that of front line health staff**

The evaluation found that NT health sector personnel generally fall into one of three broad groups: those that have high capability and capacity to undertake CQI; those who periodically engage with CQI; and those that are actively resistant to CQI. Those with higher capacity are becoming increasingly sophisticated in their CQI techniques, and there is a risk that the CQI process may move beyond the

understanding of ordinary health workers and become confined to CQI specialists. Future consideration needs to be given to how health personnel in the 'periodic engagement' and 'active resistance' groups can be supported to increase their skills and knowledge in CQI.

### **The goals and objectives of the CQI Strategy are not clearly defined**

Policy documentation on the CQI Strategy describes the processes through which the Strategy will be implemented, but the evaluation found little evidence of what *outcomes* are expected from 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 'doing' CQI rather than working towards outcomes such as the transfer of skills to increase the CQI capability and capacity of the health centre. There would be value in developing a framework 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 builds naturally on other NT Aboriginal PHC reforms and systems**

The CQI Strategy interacts with and builds on other reforms in the sector, including other quality improvement initiatives, the implementation of the NT Aboriginal Health Key Performance Indicators and the Expanding Health Service Delivery Initiative (EHSDI) investment. 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 more formalised arrangements.

### **The CQI Steering Committee is performing well in its task of operationalising the Strategy, but there is a gap in higher level oversight of the Strategy**

The CQI Steering Committee has overseen key decisions regarding the implementation of the Strategy, including the development of the NT CQI principles, framework and approach, and overseeing the implementation of the CQI workforce, and the establishment of a group to facilitate the sharing of clinical data. 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 in to other areas of quality) and how the Strategy interacts with other reforms (e.g. regionalisation).

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

CQI funding was distributed based on the EHSDI funding formula, which is intended to address regional inequities in PHC funding. Distribution was not targeted at poor quality services or priority problems. Across the NT Aboriginal PHC system, the CQI Strategy funding represents less than two per cent of total

funding and is, therefore, a very weak or ineffectual instrument with which to address regional inequities in PHC funding. The use of the EHSDI funding model to distribute CQI Strategy funding should be reviewed. 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.

## 3 THE REPORT

### 3.1 Context

This report presents the findings and recommendations 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. The evaluation findings and recommendations are expected to inform the ongoing implementation of the CQI Strategy, and national considerations relating to CQI in Indigenous health.

#### 3.1.1 The CQI Strategy

The CQI Strategy was agreed by the NT Aboriginal Health Forum (NT AHF) 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:

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 evaluation of the CQI Strategy.

The CQI Strategy has received funding of around \$2.79 million per annum to support the implementation of the above components. Funding was allocated based on the Expanding Health Service Delivery Initiative (EHSDI) model under which a per capita benchmark was developed for each HSDA to determine which regions were prioritised for funding. This reflects that ‘the intention of the CQI Strategy is 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’ (interview, government official). 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*.

#### 3.1.2 The purpose of the evaluation

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 NT 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 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.

The Department of Health and Ageing (DoHA) and its partners set three overarching evaluation objectives of effectiveness, appropriateness, and efficiency, a fourth objective relating to barriers and enablers, and a set of more detailed objectives for each. *Allen + Clarke* then developed specific evaluation questions for each objective. These are included in Appendix B.

## **3.2 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 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. This 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.

### **3.2.1 Evaluation methods and data sources**

The evaluation used a mixed-method design, drawing on multiple sources of information. The methods used in the evaluation included:

- A review of published evidence on CQI and quality improvement in PHC settings, and reports from recent evaluations relating to quality improvement in Aboriginal PHC.
- Five case studies, including four based on specific health services and one regional level case study which included visits to two health services. These involved interviews with health service staff and those developing and implementing the CQI Strategy at a regional level, observation, an administered survey and mapping of how data is used for CQI purposes.
- Key informant interviews with people with experience or expertise in Aboriginal PHC and/or CQI.
- Review and analysis of program and program-related data such as data on funding allocations, NT AHKPI data relating to health outputs and population health indicators, and baseline data on key Indigenous health indicators in the NT.

- Review of program documents including policy papers related to the development of the CQI Strategy, status reports to the NT AHF, documentation from CQI Steering Committee meetings, funding agreements, and CQI tools used by the NT Aboriginal PHC sector.
- A sense making workshop with members of the Evaluation Steering Committee, members of the CQI Steering Committee, a number of CQI Facilitators and experts, clinical staff from NT Aboriginal PHC centres and government policy, planning and evaluation staff. The workshops discussed emerging findings from the evaluation and aimed to achieve participatory analysis and interpretation of the findings.

### **3.2.2 Data 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.

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.

## 4 FINDINGS

This section includes a summary of the evaluation findings in relation to the:

- effectiveness of the CQI Strategy
- key barriers and enablers
- the appropriateness of the CQI Strategy
- the efficiency of the investment in CQI.

### 4.1 Effectiveness of the CQI Strategy

#### 4.1.1 Engagement of health services in CQI

The evaluation found that awareness of, and participation in, CQI has increased among health service boards, management, and staff, and that this is largely attributable to the CQI Strategy. Nearly all health service managers and clinicians who were interviewed had participated in 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 informants were able to provide examples of changes to practices they had made as a result of recent engagement in CQI processes:

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 (Aboriginal health practitioner).

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).

Buy-in to the concept of CQI is mixed. The groups that are most empowered by CQI tend to be those in central NT Department of Health (DoH) roles and the CQI Facilitators, as well as certain individuals within health services who are highly engaged in CQI and act as '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.

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, while others expressed doubt that the benefits of CQI were worth the time away from 'on the ground' activities.

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. These challenges included 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.

Decisions regarding which CQI approaches and tools are used 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. 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. This has been beneficial in the early stages of the CQI Strategy as a mechanism for getting CQI 'off the ground', supporting health centre staff to become familiar with CQI concepts and tools, and increasing awareness and buy-in to CQI. However, a risk of the current arrangements 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), rather than a significant part of their own role. This also enforces the idea of CQI as a program to be engaged with intermittently, rather than an overarching system to be embedded in practice.

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.

Health service consumers and Indigenous communities have not significantly featured in the CQI dialogue to date. 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 through which to engage with the community.

#### **4.1.2 CQI capability and capacity**

Overall CQI capability and capacity in the NT has increased as a result of the CQI Strategy. 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 overall capacity is increasing, there appears to be higher CQI competence in some parts of the health system. 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:<sup>1</sup>

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<sup>1</sup> 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.

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

The key characteristics of these groups are outlined in Table 1.

**Table 1: Typology of capability and capacity of health sector personnel to undertake CQI**

High capability and capacity in CQI	Periodic engagers	Active resisters
<ul style="list-style-type: none"> <li>• a small number of health centre managers and clinicians, particularly those working at large health centres</li> <li>• centralised roles in the NT DoH and large ACCHOs</li> <li>• CQI Facilitators</li> <li>• regularly attend CQI training and networking opportunities</li> <li>• confident in their ability to undertake CQI</li> <li>• use a range of CQI techniques and processes</li> <li>• act as advocates and ‘champions’ of CQI</li> <li>• able to give clear examples of changes to practice as a result of undertaking CQI</li> <li>• relatively small group</li> </ul>	<ul style="list-style-type: none"> <li>• majority of health centre managers and clinicians, particularly those in small/remote clinics</li> <li>• may have attended training but more likely to have been exposed to CQI ‘on the job’</li> <li>• able to articulate theoretical benefits of CQI</li> <li>• have participated in basic CQI processes such as plan-do-study-act (PDSA) cycles or One21seventy audit cycles</li> <li>• see CQI as a ‘program’ to which time needs to be periodically assigned</li> <li>• majority of health sector personnel are in this group</li> </ul>	<ul style="list-style-type: none"> <li>• a small number of health centre managers and clinicians</li> <li>• unfamiliar with CQI concepts, tools, and techniques</li> <li>• limited participation in CQI activities or have not participated at all</li> <li>• view CQI as an accountability tool and a ‘report card’ on performance</li> <li>• see CQI as taking time away from other, more important work</li> <li>• small and decreasing group</li> </ul>

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 electronic patient information systems (ePIRS) and are moving to monthly CQI mini-cycles. There is also increasing interest in the PEN Clinical Audit Tool (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.

The enthusiasm and skill of this group is encouraging, and bodes well for the future of CQI in the NT health sector. 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.

### 4.1.3 Number and range of CQI activities

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 2.

**Table 2: CQI models in the case study communities**

Case study	CQI model
1	Annual audit cycles based on Audit and Best Practice for Chronic Disease (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 <sup>2</sup> ; data cleansing; quality assurance

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. 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 5.1).

One21seventy is the most common CQI tool, used by all DoH health services and many ACCHOs. The tool has been specifically designed for use in Aboriginal PHC settings and provides a solid technical basis for CQI. 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 modules. 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 chose 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.

<sup>2</sup> Mini-cycles involve health service personnel directly interrogating their ePIRS to gather data on a specific issue, rather than undertaking a comprehensive audit process.

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 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.

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

The quality of clinical data has improved markedly over the past two years, and was generally seen as suitable to support CQI processes. 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 to provide a clear picture of clinic performance. 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.

The capacity of health service clinical and management staff to understand and use clinical and NT AHKPI data has increased since the implementation of the CQI Strategy. This is largely due to the onsite support provided by the CQI Facilitators to health centre staff, and the formal training provided as part of the CQI Strategy. Several health centre managers noted that after interaction with the CQI Facilitator they had gained a clearer understanding of clinical and NT AHKPI data, what the indicators meant, and how the data could be used to direct practice.

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 because 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.

There is a tendency to view data gathered through CQI processes as defining a problem, rather than as an indicator of what the symptoms and causes of a problem might be, and a focus on implementing programs or interventions as solutions to these specific 'problems'. A number of health staff described responding to identified gaps by increasing the clinic's delivery of certain services. For example, in one case study site 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. While this may increase clinic performance against the indicators measured, it is questionable whether this reflects improved service quality.

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 have been efforts to encourage data sharing between health services. This is most prevalent in DoH 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 'healthy competition' between clinics and their data. In the regions where Clinical Public Health Advisory Groups (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.

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 PHC 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 the service to improve.

#### 4.1.5 Implementation against the CQI Strategy

Policy documentation related to the CQI Strategy is largely a description of processes regarding 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 framework subsequently 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 (e.g. working with health centres to undertake CQI audit cycles) rather than achieving outcomes (e.g. focusing on the transfer of skills to increase the CQI competence of the health centre). Funding contracts reviewed by the evaluation team also do not list any expected outcomes.

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). See section 5.1 for further discussion.

#### 4.1.6 Quality of Aboriginal PHC services

The CQI Strategy has a specific focus on clinical CQI, with an emphasis on data/clinical audit. 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. 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 any 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.

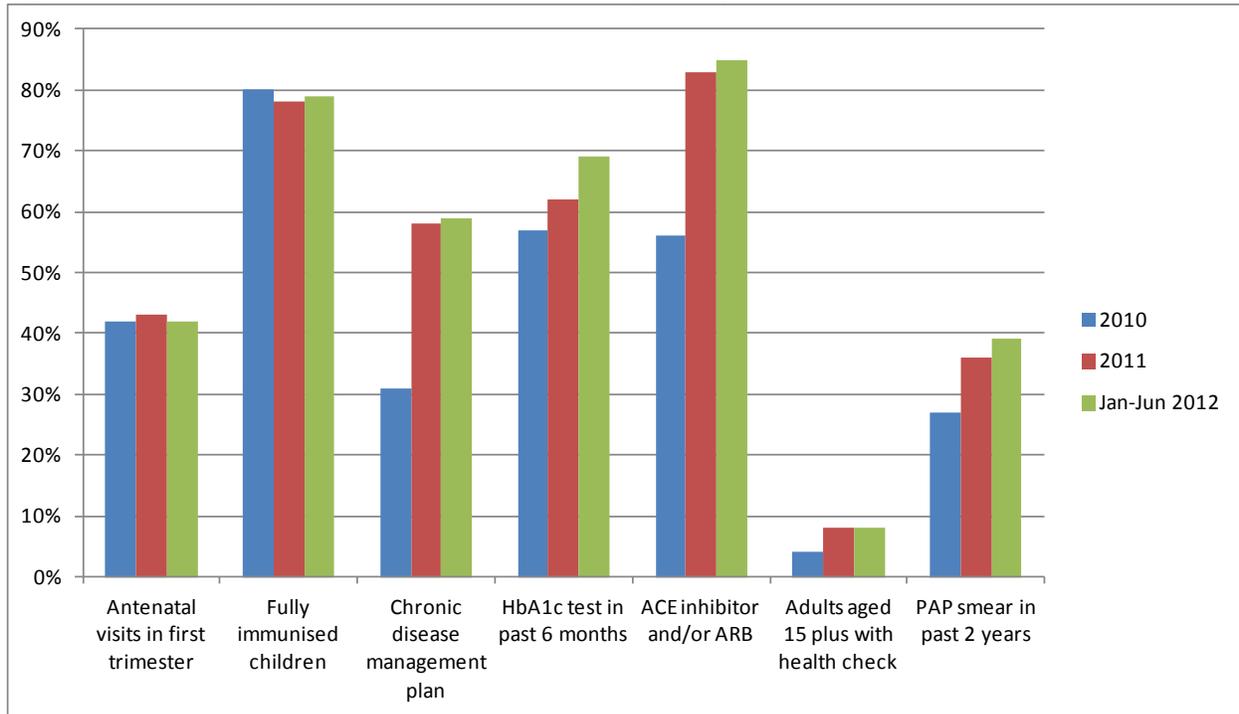
There is evidence that in DoH clinics service delivery outputs are increasing. Figure 1 shows trends in the NT AHKPI data of all NT DoH services against the indicators which relate to health service outputs<sup>3</sup> from January 2010 to June 2012. As shown in the graph, there have been increases in the proportion of patients who have a chronic disease management plan; the proportion of diabetic patients who have

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<sup>3</sup> NT AHKPIs 1.2, 1.4, 1.7–1.12.

had HbA1c tests<sup>4</sup> 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 show no significant increase or decrease.

**Figure 1: NT AHKPI output indicators data for DoH clinics, January 2010–June 2012**



Source: NT DoH

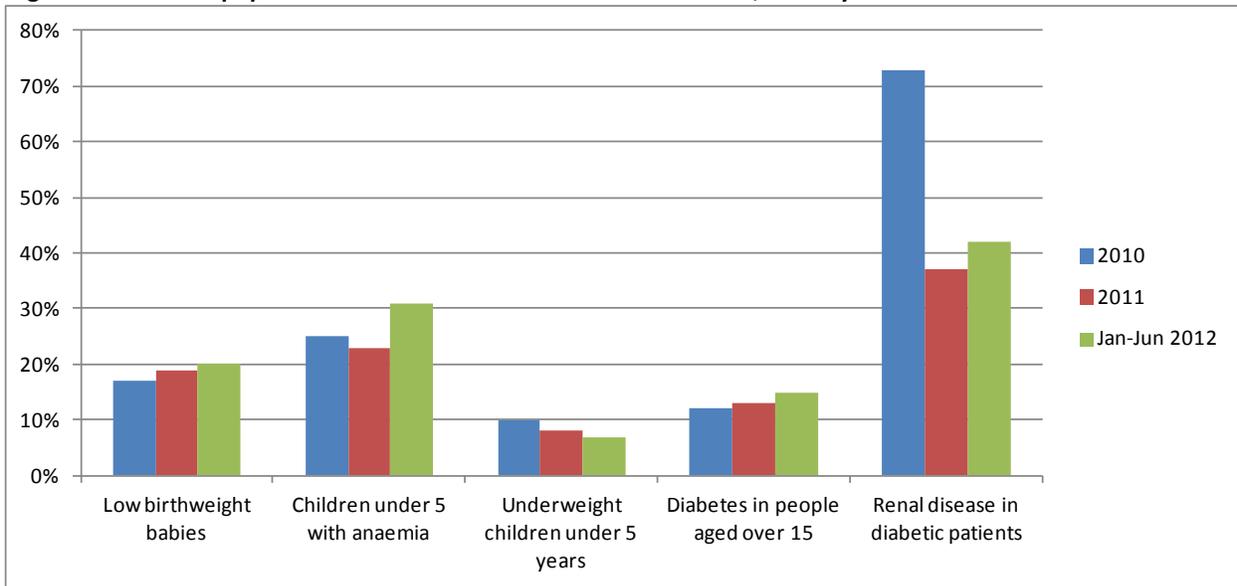
When compared with DoH NT AHKPI data on population health measures and other DoH data on disease prevalence, there are some encouraging signs: the proportion of underweight children has dropped slightly and the data shows a dramatic drop in the number of diabetic patients with renal disease (although 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 2).

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 (Aboriginal health practitioner).

<sup>4</sup> The HbA1c test is used to determine whether diabetes is under control.

**Figure 2: 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.

## 4.2 Barriers and enablers

### 4.2.1 Governance of the CQI Strategy

Implementation of the CQI Strategy is overseen by the CQI Steering 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 Committee appears to have largely performed well in this task; 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 Primary Health Reform Group (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. After the PHRG was disbanded, the Committee now reports to the NT AHF. However, the Aboriginal Health Forum has been meeting infrequently in recent times and there does not appear to be an alternative reporting mechanism for the Committee. This has meant that there is little visibility at the Australian and NT Government level about what the CQI Strategy is achieving.

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.

#### **4.2.2 Support by health service management**

Health service management, including DoH Area Service Managers, DoH 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 in 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 1 below.

##### **Box 1: 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.

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, how to make CQI more relevant to managers' roles, and to communicate the results of these discussions to the sector.

#### **4.2.3 CQI training for PHC staff**

There has been a significant amount of training provided under the CQI Strategy. This includes training on the One21seventy tool for health service staff, induction and ongoing training for CQI Facilitators and Coordinators, and CQI Collaborative workshops. Attendance rates at the training have generally been high; in 2011 a total 120 people undertook One21seventy training, while the six CQI Collaborative workshops have averaged 70 participants. In addition, the CQI Facilitators provide onsite training and support to health service staff in CQI activities. 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'.

Those who had attended formal 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.

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

#### **4.2.4 CQI workforce**

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.

##### ***CQI Coordinator role***

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 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, biannual CQI Collaborative sessions, One21seventy training workshops, professional development workshops for CQI Facilitators, and 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 interviewed 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.

##### ***CQI Facilitator role***

The intention of the CQI Facilitator 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. 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 among several staff members including the data integrity officer, PHC manager, and medical director. In some 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 sites 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 move to 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 other

clinics, their contact with the Facilitator was the first time they had heard of CQI. These organisations generally moved from not undertaking any quality improvement activities to intermittent participation in CQI. There has also been significant work undertaken by the CQI workforce to encourage better understanding and use of NT AHKPI data.

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. As discussed elsewhere in this report, the current CQI arrangements tend to incentivise a focus on outputs and processes (i.e. supporting organisations to 'do CQI'). It is worth exploring how the CQI Facilitator role could be reframed to explicitly focus on providing tailored support to increase health services' CQI capability and capacity. This may involve, for example, working with the service to determine their current level of CQI capability, assisting the service to set CQI goals, and presenting a range of CQI approaches and tools from which clinicians and managers select and adapt to local circumstances. The type of support required may vary over time, and it is recognised that the organisation may move along a continuum of CQI capability and capacity, and therefore require different support, depending on contextual factors such as staff turnover.

The funding for CQI Facilitators is based on the EHSDI funding formula, which is intended to address regional inequities in PHC funding. 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 health services while others have only one or two large services. 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. This means it is very difficult to tailor the CQI approach to local needs, and the same process and tools are generally 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. We note that boundaries may change with regionalisation and recommend that any redistribution of the CQI Facilitators needs to balance population size with the number of communities and the remoteness of these communities.

### ***Recruitment and training of the CQI workforce***

Recruitment processes for the CQI workforce appear to have been largely effective. As at April 2013 there were 17 Facilitators including 10 in the Top End and 7 in Central Australia; however, not all of these positions are funded through the 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 by 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 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.

#### **4.2.5 Change management strategies**

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 significant 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). Such transformational change also requires strong leadership and governance.

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, is 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 5.1), 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.

#### **4.2.6 Other barriers and enablers**

##### ***Electronic patient information systems***

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. Under the current CQI arrangements, the audit process and data interface is largely led by the CQI Facilitators, many of whom are highly competent in using ePIRS. Among PHC staff there is a range of capabilities; a minority of staff and managers are highly competent and able to directly interrogate the system; however, many staff found the process confusing and cumbersome. Moving to a system which focuses on increasing the CQI capability and capacity of organisations and individuals will require continuous improvements to health information systems, including to reduce the compliance burden associated with using systems for CQI, and better supporting staff to directly interrogate health information systems.

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 the 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.

### ***NT remote health workforce issues***

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 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 NT health system and often 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. 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. 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.

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 Aboriginal health practitioners (AHPs) and ensure that the training meets their needs. A specific training day for AHPs was recently held as part of a CQI Collaborative; this is a positive step that could be built on further.

### 4.3 Appropriateness

#### 4.3.1 Consistency with quality improvement theory

The evaluation team undertook a review of evidence relating to CQI theory and practice, which identified seven key themes or dimensions of successful quality improvement. Table 3 shows an assessment of consistency between the CQI Strategy and these seven themes, 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: 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; and availability of high quality and timely data. There is less consistency with the remaining two dimensions: clearly defined goals for CQI and consumer participation in CQI.

**Table 3: Assessment of consistency with key dimensions of CQI**

Key dimensions of CQI	Assessment of consistency
Strong leadership for CQI	<ul style="list-style-type: none"> <li>• The CQI Steering Committee is effective in leading the implementation of the CQI Strategy, including decision making to support its operation.</li> <li>• There is a gap in higher level oversight of the CQI Strategy.</li> <li>• 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.</li> </ul>
Participation in CQI of a range of staff at all levels	<ul style="list-style-type: none"> <li>• There is a high degree of participation in CQI by health centre staff.</li> <li>• The level of engagement, capability and capacity in CQI is highly variable, and CQI is not yet ‘everyone’s business’.</li> <li>• Participation in CQI is often driven by an external CQI Facilitator.</li> </ul>
Ability to adapt CQI processes to local contexts	<ul style="list-style-type: none"> <li>• There is evidence of CQI processes being adapted to fit local health service contexts (see section 4.4.1), particularly through the use of mini-cycles.</li> <li>• 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.</li> </ul>

Key dimensions of CQI	Assessment of consistency
Clearly defined goals for CQI	<ul style="list-style-type: none"> <li>• The goals and objectives of the CQI Strategy have not been clearly defined, and CQI means different things to different stakeholders.</li> <li>• 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.</li> <li>• Greater consistency with this dimension could be achieved through developing a program logic that defines short, medium and long term outcomes.</li> </ul>
Provision of training and technical support to implement CQI	<ul style="list-style-type: none"> <li>• Overall capability and capacity in CQI has increased as a result of the CQI Strategy (see section 4.1.2).</li> <li>• There has been a significant amount of training provided under the CQI Strategy, and this training is valued (see section 4.2.3).</li> <li>• 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.</li> </ul>
Consumer participation in CQI	<ul style="list-style-type: none"> <li>• 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.</li> <li>• There is some evidence that CQI is discouraging consumers to engage with health services.</li> <li>• Where health service boards exist, CQI is regularly discussed at board meetings.</li> <li>• AHPs could be better empowered to lead engagement in quality improvement with health consumers/community members.</li> </ul>
Availability of high quality and timely data	<ul style="list-style-type: none"> <li>• CQI processes are certainly based on analysis of data and are facilitating increased use of data, and improvements in the quality of data.</li> <li>• The CQI Strategy complements and builds on existing data collections and systems (e.g. NT AHKPIs and ePIRS) and CQI tools (e.g. One21seventy).</li> <li>• 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.</li> <li>• 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.</li> <li>• Data collection can be stop-start, driven by an external facilitator and, therefore, not continuous or timely.</li> </ul>

#### 4.3.2 Alignment with the priorities and needs of stakeholders

The evaluation found that the needs and priorities of stakeholder organisations varied significantly, and that the approaches to implementing CQI showed a similar pattern. The evaluation case studies ranged from services which had low existing internal CQI capacity and required the services of an external facilitator, to services with significant existing internal CQI capacity who used the CQI Strategy resources to further 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.

This emphasis on local needs and solutions is consistent with CQI theory and practice. However, 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).

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

The CQI proposal that was agreed by the NT AHF suggests two overall problems that the CQI Strategy was intended to address: that CQI was not embedded in the NT Aboriginal PHC system, and that there was insufficient CQI capacity on the ground to make this happen.

While CQI is embedded at variable levels in many health service organisations, it is not yet embedded across the NT Aboriginal PHC system. 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.

Capacity in CQI has increased across the system, although not consistently, as a result of the Strategy. Flexibility in how the CQI facilitation resources can be used, from purchasing external support (e.g. through CQI Facilitators) to building internal capacity, has been an appropriate response to building this capability and capacity on the ground. Alongside this, significant training and workshops have been delivered to PHC staff and we have observed some very CQI competent staff in various roles across the system. 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.

#### **4.3.4 Fit with the broader context of Aboriginal PHC reform**

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 Australian Primary Care Collaborative (APCC) and ABCD. This past experience provided a solid 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 also suggests a strong fit with previous reforms. 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 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 its design, the CQI Strategy demonstrates consistency with the regional reform agenda in the NT Aboriginal PHC sector. The CQI Strategy funding was distributed to reflect 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.

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, the CQI Strategy is not significantly linked to regional reform other than the geographic boundaries in which CQI Facilitators operate and whether the employer of the Facilitator is the DoH or an ACCHO. Services are largely supported on an individual community/clinic basis, and there is little regional or cross-community CQI activity.

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 the establishment of a regional CPHAG in 2011. The CPHAG includes representatives of all health service providers in the region, and 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 and reports this information to health service board members to promote evidence-based decision making. 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.

## **4.4 Efficiency**

### **4.4.1 Targeting of activities and strategies to high priority problems**

The CQI Strategy funding was distributed using the EHSDI funding model. This model was developed as a means to distribute the available funding equitably among HSDAs, rather than representing the total amount of funding required by each region. As a result of applying the funding model, Table 4 shows that East Arnhem and Central Australia received the most funding. This is to be expected given their large Indigenous populations and relatively 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 4: Total and per capita CQI Strategy funding by HSDA, 2009-10**

HSDA or region	2009-10 CQI Strategy funding <sup>(a)</sup>	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
Borrooloola	\$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
<b>Total</b>	<b>\$2,232,318</b>	<b>64,005</b>	<b>\$34.88</b>

<sup>(a)</sup> Funding levels were the same for 2010-11 and 2011-12.

Across the NT Aboriginal PHC system, the CQI Strategy funding represents less than 2 per cent of total funding. It is, therefore, a very weak or ineffectual instrument with which to address regional inequities in PHC funding. The use of the EHSDI funding model to distribute CQI Strategy funding should be reviewed; 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.

A longer term solution is to move the CQI funding arrangements towards outcome funding where services are demonstrating the desired CQI capability and capacity. We recommend reviewing the 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 reach the defined level of capability and capacity, 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 in to the mature phase and, once there, to maintain and expand the scope of their CQI competency. 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.

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

A total of around \$2.79 million has been allocated in each of the four years the CQI Strategy has been operational. It is difficult to assess how much of this funding has been spent: a number of CQI Facilitator positions have been unfilled at various points but the multi-year funding agreements mean that services can roll funding over to later years provided it is quarantined for CQI purposes.<sup>5</sup> Also, not all HSDAs or services have spent the funds on CQI Facilitator positions, with some services electing to outsource 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.

Most services did not receive funding for the first year (2009-10) until June 2010 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 funding delays 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 and was replaced with the 10 year *Stronger Futures in the Northern Territory National Partnership Agreement*. One evaluation participant expected the funding for CQI to be released in 5 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. While *Stronger Futures* funding was confirmed in late October 2012, it was only approved 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

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<sup>5</sup> We understand that provisions for rolling over unspent funding to the new financial year may have been tightened, for ACCHOs at least.

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.

#### **4.4.3 Duplication or synergy arising from overlap or interaction with other programs**

At the health centre level the CQI Strategy is building on other PHC initiatives and there is 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. Similarly, the use of CQI tools such as One21seventy has resulted in health centre staff becoming more adept at using their clinic's ePIRS and the data in these systems being improved. 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.

There are opportunities for a greater interface between the CQI Strategy and system and NT-wide initiatives and issues. One evaluation 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.

As outlined previously, 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.

## 5 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings, the evaluation 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 cover leadership, sustainable funding, equitable funding, workforce, community engagement/feedback, regional reform, and alignment and coherence.
2. A small number of focused recommendations specific to the overall design and 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 not included in this summary report.

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.

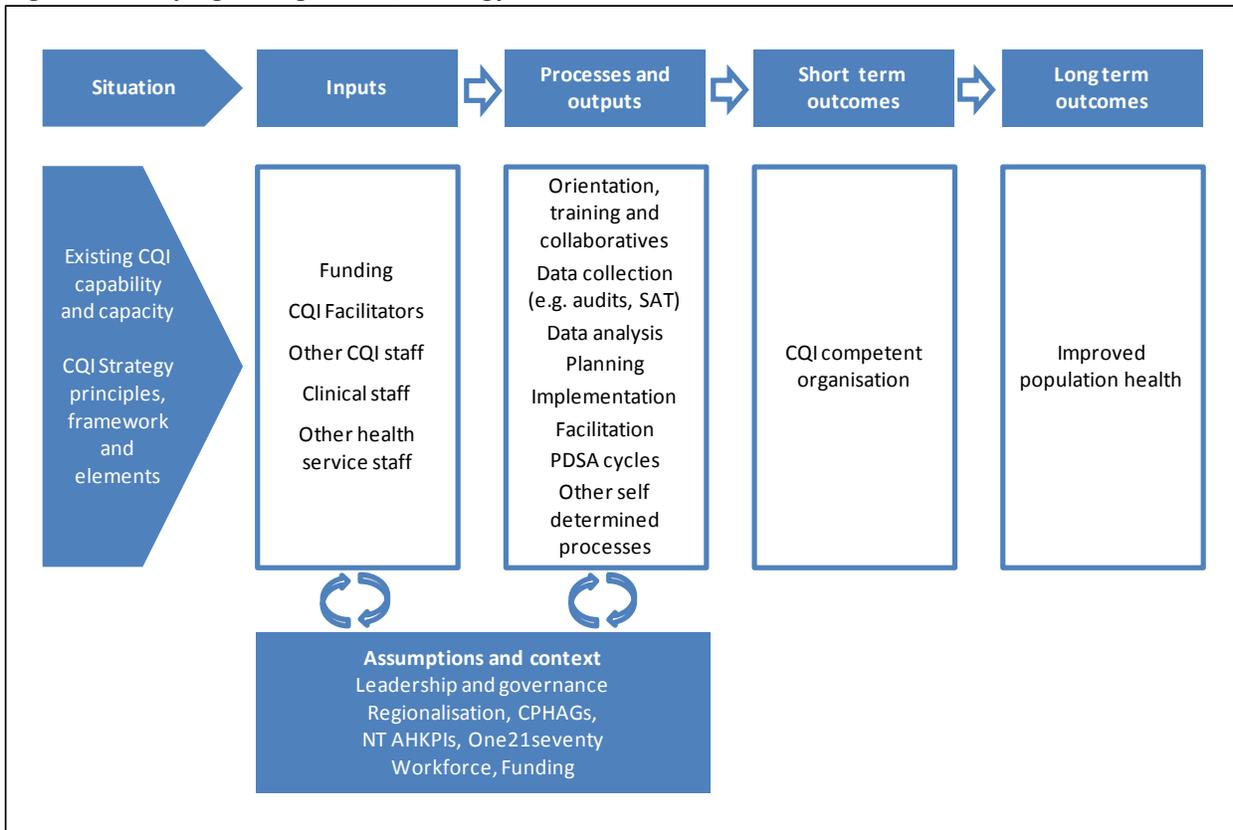
### 5.1 Define the desired outcomes of the CQI Strategy

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. 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 where the Strategy is going (e.g. 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 3. 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.

The logic model in Figure 3 is simplistic and has been provided as a starting point. 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 any program logic.

Figure 3: 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.

**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.**

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

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. There is a need to better align the support provided to outcomes. Health service organisations are at different levels of capability and capacity in CQI and the type and level of support they would need in order to achieve the outcomes varies. So the CQI approach needs to be specific to the CQI needs of a service.

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 being CQI competent 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 moving towards a phased CQI model, with one phase targeted at growing the CQI capability and capacity of services and another on 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 capability and capacity. Table 5 provides a starting point for defining a CQI competent organisation within the context of a NT Aboriginal PHC service. This would need to be developed further, and in doing so ensuring 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.

**Table 5: CQI capability and capacity**

	CQI competent organisation	CQI mature organisation
<b>Description</b>	CQI embedded in clinical services	CQI fully integrated into core practices
<b>Scope</b>	Identifies problems Collects accurate data Analyses data Discusses solutions/plans and implements them Reviews the implementation of solutions/plans	... and extends scope of CQI to include: <ul style="list-style-type: none"> <li>• referral systems</li> <li>• community views</li> <li>• other dimensions of quality</li> </ul>
<b>Engagement processes</b>	High degree of staff engagement, including Aboriginal staff	... and community (including board) engagement (e.g. community and consumer input and feedback)

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.

It is also recognised that health services in the NT have differing levels of governance and management capacity, and for those with lower 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 CQI competency. 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.

**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 competency.** 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 long 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.

### 5.3 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.

### 5.4 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

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

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*.

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.

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.

O'Donoghue 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.

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.

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
AHP	Aboriginal Health Practitioner
AMSANT	Aboriginal Medical Services Alliance of the Northern Territory
APCC	Australian Primary Care Collaborative
CARPA	Central Australian Rural Practitioners Association
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
EHSI	Expanding Health Service Delivery Initiative
ePIRS	Electronic Patient Information and Recall System
ERP	Estimated Resident Population
FTE	Full Time Equivalent
GP	General Practitioner
HSDA	Health Service Delivery Area
KPI	Key Performance Indicator
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
RAHC	Remote Area Health Corp
RAN	Remote Area Nurse

## APPENDIX B: 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)	<ul style="list-style-type: none"> <li>To what extent are health service board management and clinicians engaged in CQI?</li> <li>What impact has the CQI Strategy had on engagement in CQI?</li> <li>What does CQI mean to different actors in the system (staff, management, boards, NT Government, Australian Government)?</li> <li>How and to what extent does CQI empower different stakeholders, at all levels?</li> </ul>
CQI activity and capacity	<ul style="list-style-type: none"> <li>What impact has the CQI Strategy had on the capacity of the NT Aboriginal PHC system to undertake CQI?</li> <li>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?</li> <li>How much responsibility, control and capacity for CQI sits at the service/community level?</li> </ul>
Number and range of CQI activities in the NT Aboriginal PHC sector	<ul style="list-style-type: none"> <li>What impact has the CQI Strategy had on the number and range of CQI activities in the NT PHC sector?</li> <li>What impact has the CQI Strategy had on the uptake and use of CQI tools, including intensity of uptake and use?</li> <li>Which CQI activities and tools are seen as effective and appropriate? Which are not? Why?</li> </ul>
Collection, analysis and use of clinical data and the NT AHKPIs for CQI purposes	<ul style="list-style-type: none"> <li>How is clinical data being used at different levels (staff, management, boards, NT Government, Australian Government)?</li> <li>How is NT AHKPI being used at different levels (staff, management, boards, NT Government, Australian Government)?</li> <li>Is the system based on good quality (i.e. robust and complete) information?</li> <li>To what extent is the NT AHKPI indicator set appropriate for CQI purposes?</li> <li>What impact has the CQI Strategy had on capacity to analyse and use clinical data and the NT AHKPIs for CQI purposes?</li> </ul>
Assessment of implementation against the original CQI Strategy	<ul style="list-style-type: none"> <li>To what extent have the measures of success identified in the original CQI Strategy been met?</li> <li>Are the measures of success identified in the original CQI Strategy still relevant?</li> </ul>
Quality of Aboriginal PHC services	<ul style="list-style-type: none"> <li>What dimensions of quality in Aboriginal PHC does the CQI Strategy aim to improve? And over what time period?</li> <li>What impact has the CQI Strategy had on the quality of Aboriginal PHC?</li> <li>What impact is it likely to have in the next 1–3 years?</li> </ul>

## 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	<ul style="list-style-type: none"> <li>• How effective are the CQI Strategy governance structures?</li> <li>• How embedded is CQI in the governance structures for Aboriginal PHC?</li> <li>• What is the relationship between the CQI governance structures and the NT PHC system’s governance structures?</li> <li>• How could governance be strengthened?</li> </ul>
Support by health service management and capacity in related areas (such as Clinical Information Systems)	<ul style="list-style-type: none"> <li>• To what extent are health service management supportive of CQI? How is this support demonstrated?</li> <li>• To what extent is the functionality of Clinical Information Systems supportive of CQI?</li> </ul>
CQI training for PHC staff	<ul style="list-style-type: none"> <li>• What training and support has been provided to increase staff capacity in CQI?</li> <li>• To what extent have staff taken up the training?</li> <li>• Is the training appropriate and effective?</li> </ul>
CQI workforce	<ul style="list-style-type: none"> <li>• How effective are recruitment and retention processes for the CQI workforce?</li> <li>• What support and training is provided and is it appropriate and effective?</li> <li>• Is the CQI workforce capacity and capability sufficient to meet the needs of the NT Aboriginal PHC sector?</li> </ul>
Change management strategies	<ul style="list-style-type: none"> <li>• What change management strategies have been used to implement the CQI program?</li> <li>• How effective have these strategies been?</li> </ul>
Other barriers and enablers	<ul style="list-style-type: none"> <li>• 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)?</li> </ul>

## 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	<ul style="list-style-type: none"> <li>• What are the key theoretical and practical dimensions of CQI in NT PHC?</li> <li>• To what extent are activities implemented under the CQI Strategy consistent with CQI theory and practice?</li> <li>• To what extent are activities implemented under the CQI Strategy in line with nationally agreed standards?</li> <li>• Is CQI undertaken as part of a continuous cycle: e.g. plan, do, study, act?</li> </ul>
Alignment with the priorities and needs of stakeholders	<ul style="list-style-type: none"> <li>• What are the needs and priorities of the different stakeholders, at all levels of the system?</li> <li>• How well does the Strategy meet these?</li> <li>• How could it better meet these needs and priorities?</li> </ul>
Fit with the problem(s) it is intended to solve	<ul style="list-style-type: none"> <li>• What are the priority problems that CQI is intended to solve?</li> <li>• How well does it address these problems?</li> </ul>
Fit with the broader context of Aboriginal PHC reform in the NT	<ul style="list-style-type: none"> <li>• How integral is the CQI Strategy to other PHC reforms, and how has this changed over time?</li> <li>• Does the CQI contradict any of the other reforms?</li> <li>• To what extent is CQI embedded as ‘business as usual’ in the NT Aboriginal PHC system?</li> </ul>

## 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	<ul style="list-style-type: none"> <li>• How is the CQI investment being distributed and targeted?</li> <li>• Is it targeted at poor quality, or seen as an improvement tool for all services?</li> <li>• How well does this reflect needs or priorities?</li> <li>• What impact has the CQI investment had on priority problems?</li> </ul>
Similar outputs, activities or outcomes for fewer resources	<ul style="list-style-type: none"> <li>• How much funding has been allocated and spent?</li> <li>• What are the additional transactional costs of the CQI Strategy? How much routine staff time (managers and clinicians) is spent on CQI activities?</li> <li>• Were any alternative approaches considered to improve quality in Aboriginal PHC in the NT? What were these? Why were these not pursued?</li> <li>• 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)</li> </ul>
Duplication or synergy arising from overlap or interaction with other programs	<ul style="list-style-type: none"> <li>• How does the CQI Strategy interact with other programs or investments operating in the NT Aboriginal PHC sector?</li> <li>• What are the main areas of overlap or complementarity, and where are the gaps?</li> </ul>