National Appraisal of Continuous Quality Improvement Initiatives in Aboriginal and Torres Strait Islander Primary Health Care

Final Report

March 2013

Marilyn Wise ~ Sandra Angus ~ Elizabeth Harris ~ Sharon Parker

The texture in the painting represents the many textures, layers, levels and processes that we all have within the canvases of our lives; similar to the many levels, methods and processes used in the area of health promotion.

While I was painting this work, I was thinking about our health, our capacity to sustain our health and how many gaps are still evident in promoting our health. Yet, just like the trees during a bushfire depicted in this painting, we are also strong and resilient and have many strategies already in place that can help us grow strong and healthy, even after a setback.

I felt reassured in knowing that many health promotion strategies have already been put in place to protect us and to bring about positive change through individual, community and social change practices. Regardless of the gaps we might identify—like those caused by a bushfire—we need to continually work together locally and nationally to grow and to improve our community's health.

The blue (water) at the bottom of the painting represents the health promotion initiatives that have already been developed and put in place, which increase our chances of survival. The water also represents our need for further ongoing sustainable health promotion initiatives such as human resources (a strong workforce) and health promotion resources (the 'fire fighters' and the 'fire hoses'), which all act to protect and sustain our future, encourage new growth, and promote good health and wellbeing.

Sandra Kaye Angus
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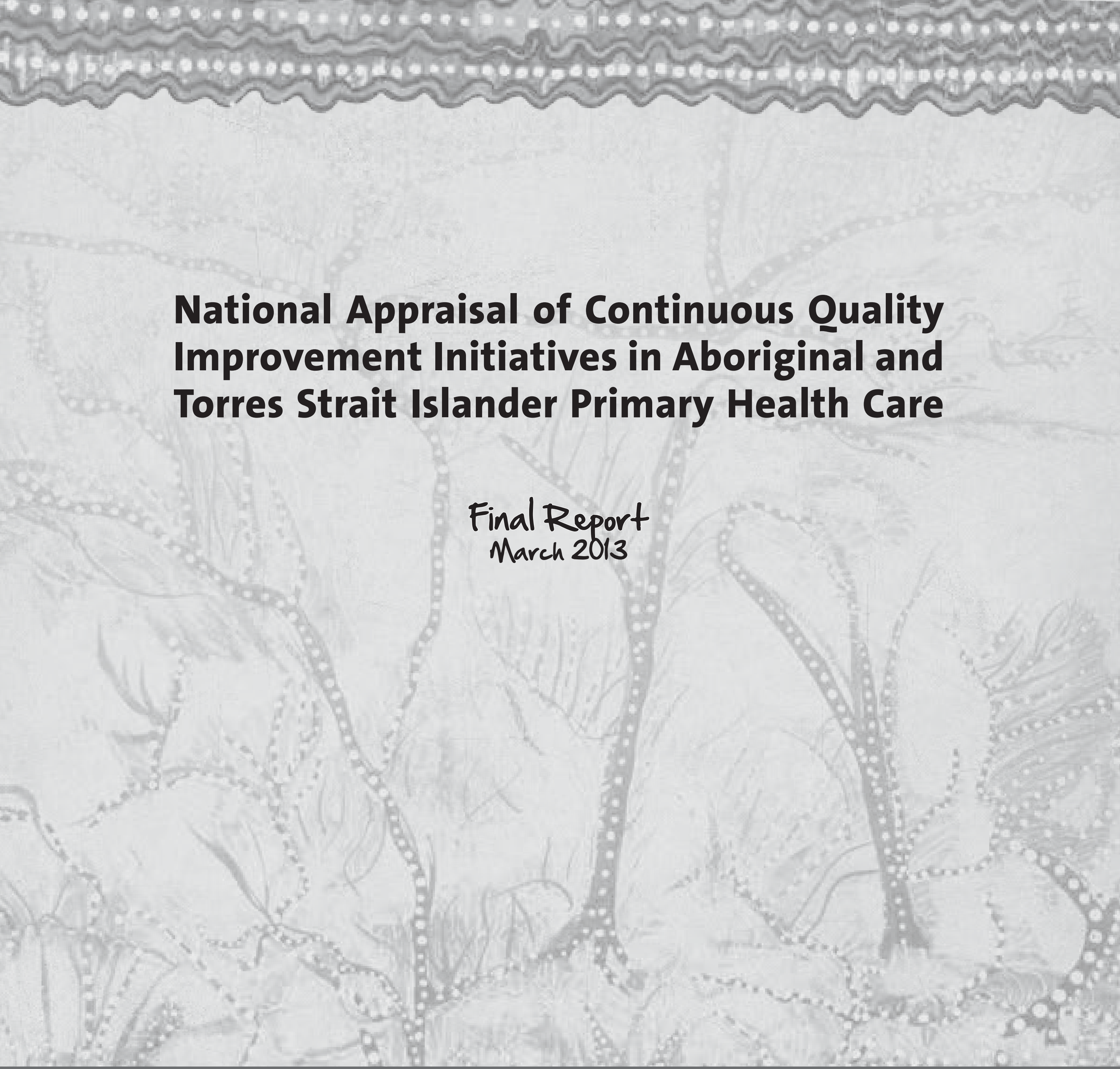
Sandra Kaye Angus (Wiradjuri, b. 1954)
***Regeneration*, 2012**
Oil on stretched canvas (textured)
45cm x 45cm



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Prepared for the Lowitja Institute by
Associate Professor Marilyn Wise, Ms Sandra Angus, Dr Elizabeth Harris and Ms Sharon Parker

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Australia's National Institute for Aboriginal and Torres Strait Islander Health Research

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An Australian Government Initiative

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Figures and tables

Abbreviations

ABCD	Audit and Best Practice for Chronic Disease
ABCDE	ABCD Extension
ACCHS	Aboriginal Community Controlled Health Service
AGPAL	Australian General Practice Accreditation Limited
AH&MRC	Aboriginal Health & Medical Research Council of New South Wales
AHCSA	Aboriginal Health Council of South Australia
AHCWA	Aboriginal Health Council of Western Australia
AHPACC	Aboriginal Health Promotion and Chronic Care
AMS	Aboriginal Medical Service
AMSANT	Aboriginal Medical Services Alliance of the Northern Territory
APCC	Australian Primary Care Collaboratives
CAT	Clinical Audit Tool
CQI	Continuous Quality Improvement
DDCAT	Dual Diagnosis Capacity in Addiction Tool
DoHA	Australian Government Department of Health and Ageing
EHSDI	Expanding Health Service Delivery Initiative
EQHS-C	Establishing Quality Health Standards Continuation
ISO	International Organization for Standardization
KPI	Key Performance Indicator
MUSIQ	Model to Understand Success in Quality
NACCHO	National Aboriginal Community Controlled Health Organisation
NTAHF	Northern Territory Aboriginal Health Forum
OATSIH	Office of Aboriginal and Torres Strait Islander Health
OCHRE	Online Community Health Reporting Environment
One21seventy	National Centre for Quality Improvement in Indigenous Primary Health Care
PaRROT	Pathways to Rural and Remote Orientation and Training
PDSA	Plan–Do–Study–Act
PENCAT	PEN Computer Systems' Clinical Audit Tool
QAIHC	Queensland Aboriginal and Islander Health Council
QIC	Quality Improvement Council
RACGP	Royal Australian College of General Practitioners
SWOT	Strengths, Weaknesses, Opportunities, Threats
UniSA	University of South Australia
VACCHO	Victorian Aboriginal Community Controlled Health Organisation
WANADA	Western Australian Network of Alcohol and Other Drug Agencies

Definitions

Continuous Quality Improvement

Continuous Quality Improvement (CQI) is a generic concept that describes:

> *an ongoing cycle of gathering and analysing data on how well organisational systems, clinical services, and health promotion programs are functioning (by comparing performance against external standards or benchmarks), and developing improvements—a set of cyclical activities involving examination of existing processes, change, monitoring the apparent effects of the change and further change* (Lilford, Warren & Braunholtz 2003 in Bailie et al. 2007a:525).

The Lowitja Institute's website (2012) describes CQI as 'a system of regular reflection and refinement to improve processes and outcomes that will provide quality health care'.

Accreditation

The Cooperative Research Centre for Aboriginal Health described accreditation as 'formal recognition through a process of external review that certain standards have been achieved by an organisation and that an accreditation system needs to have:

- an approved set of standards
- a regular review process that assesses the extent to which the standards have been achieved, and
- criteria against which accreditation is awarded' (CRCAH 2008:52).

Differentiating between CQI and accreditation

CQI is a generic concept describing a method and process that is primarily used *internally* by organisations and professions. It enables health service managers and clinicians to audit their own organisational and clinical practices, to review and compare performance with a standard that may be an internal baseline or an external standard or guideline.

Accreditation is a method and a process by which independent, *external* assessors (through licensed agencies determine whether a service meets agreed standards of quality, care and safety (that have been established by an officially authorised professional body).

Acknowledgments

Many thanks to all who have contributed to this report (please see page 16):

- the reference croup members
- the CQI Coordinators, Facilitators and practitioners
- the Lowitja Institute team
- the peer reviewers.

Executive Summary

In 2011 the Lowitja Institute commissioned the Centre for Primary Health Care and Equity at The University of New South Wales to conduct a national appraisal of Continuous Quality Improvement (CQI) initiatives in Aboriginal and Torres Strait Islander primary health care.

The National Appraisal of CQI Initiatives in Aboriginal and Torres Strait Islander Primary Health Care (the Appraisal Project) focused on the following questions:

1. What were the recent and/or emerging national, regional and local quality improvement initiatives and major strategic directions relevant to Aboriginal and Torres Strait Islander primary health care in each jurisdiction?
2. What has been the extent/nature of uptake/engagement by Indigenous primary health care in various jurisdictions of recent and emerging quality improvement initiatives?
3. What have been major barriers and facilitators to uptake/engagement?
4. What factors are critical in improving the acceptability, feasibility, effectiveness and sustainability for supporting CQI in the Aboriginal and Torres Strait Islander primary health care sector—including both Aboriginal Community Controlled Health Services (ACCHSs) and government managed services?

National Reference Group

A National Reference Group was established to provide advice on the conduct of the project (please see page 16).

Aboriginal and Torres Strait Islander primary health care

Appropriate access to primary health care can narrow the life expectancy gap and may offset some of the harmful health effects of the socio-economic disadvantage and inequality experienced by Aboriginal peoples and Torres Strait Islanders over the more than 200 years since colonisation (Dwyer, Silburn & Wilson 2004; Griew et al. 2008).

In 2010–2011 more than 150 Aboriginal community-controlled primary health care services and more than 80 non-community-controlled health organisations funded by OATSIH provided primary health care services to Aboriginal and Torres Strait Islander people (AIHW 2012a:2). In addition, state/territory-funded primary health care services and private general practices provided primary health care to Aboriginal people and Torres Strait Islander people. It is a large, complex sector.

Continuous Quality Improvement (CQI)

Continuous Quality Improvement (CQI) is a generic concept that describes:

> *an ongoing cycle of gathering and analysing data on how well organisational systems, clinical services, and health promotion programs are functioning (by comparing performance against external standards or benchmarks), and developing improvements—a set of cyclical activities involving examination of existing processes, change, monitoring the apparent effects of the change and further change* (Lilford, Warren & Braunholtz 2003 in Bailie et al. 2007a:525).

The Lowitja Institute (2012) describes CQI as 'a system of regular reflection and refinement to improve processes and outcomes that will provide quality health care'.

CQI has evolved over the past two decades as a method for health service managers and health professionals to improve:

- the capacity and/or readiness of services and their systems to meet pre-determined goals or performance standards (Key Performance Indicators)
- the quality of clinical treatment/care provided to patients with specific diagnoses (e.g. diabetes) or with specific needs (e.g. antenatal care) in comparison with a pre-determined standard (e.g. a state average or new evidence of relationships between improved care and health outcomes) (UK Prospective Diabetes Study Group 1998)
- the quality of health promotion programs and their delivery (e.g. a smoking cessation program, or a program to increase participation in physical activity) in comparison with normative quality standards or a pre-determined goal
- the quality of community-based care provided to, for example, new parents by Aboriginal Health Workers in comparison with a pre-determined normative guideline.

Over the past decade there has been growing emphasis on building an organised, structured approach to the use of CQI to enhance the effectiveness of the Aboriginal and Torres Strait Islander primary health care sector. This has built on a history of support for, and experience in, conducting quality improvement by ACCHSs (CRCAH 2008:15).

The literature

A review of the literature was conducted to:

- report on the efficacy and effectiveness of CQI in Aboriginal and Torres Strait Islander primary health care
- report on CQI initiatives in Aboriginal and Torres Strait Islander primary health care in each jurisdiction and the extent of uptake by primary health care services
- identify barriers and facilitators of the uptake and/or engagement
- identify factors that were critical in improving the acceptability, feasibility and effectiveness of CQI in the Aboriginal and Torres Strait islander primary health care sector—both ACCHSs and government-managed.

Efficacy and effectiveness

The literature confirmed that the concept of CQI was relevant to Aboriginal and Torres Strait Islander primary health care, that it was feasible to conduct CQI within services and with clinicians, managers and providers, and that there were improvements in the delivery of services and in the quality of clinical care following the conduct of CQI cycles (see Appendix 7).

Facilitators and barriers

There were many facilitators of, and barriers to, the uptake of CQI across the Aboriginal and Torres Strait Islander primary health care sector over the course of a decade.

The appraisal

The interviews conducted for the Appraisal Project revealed a high level of correspondence between the responses of interviewees and the literature about the facilitators and barriers to the uptake of CQI by individual services and across jurisdictions.

The Appraisal found that various models of CQI were being implemented and that there were variations in the level of understanding of the different models and elements of CQI being used. Even within jurisdictions more than one model of CQI is being conducted as services select the models that best suit their requirements and resources.

Some, but not all, jurisdictions had established a specialist state/territory-wide infrastructure to lead and guide services to undertake CQI in the Aboriginal and Torres Strait Islander primary health care sector. But in all jurisdictions initiatives to develop capacity to conduct CQI were being developed through partnerships between the community-controlled and government-managed sectors.

Facilitators of engagement in CQI included leadership, the commitment of senior management, the appointment of staff in designated positions, the advocacy of champions, policy support and new funding, access to accurate, comprehensive data, and the availability of standards (including KPIs) or tools to use in auditing and assessing local performance. Access to national and state/territory networks of CQI practitioners and researchers also facilitated the uptake of CQI by individual services and by jurisdictions.

The most commonly identified barrier was the lack of certainty about recurrent funding to sustain the systems that had been developed to conduct CQI. The lack of secure funding had flow-on effects on the capacity of jurisdictions and services to recruit and retain a skilled CQI workforce. Other barriers were confusion on the part of some managers and practitioners about the different models of CQI and different tools, resources, and methods being used in its conduct, and about the differences between accreditation and CQI. A further barriers encountered in some jurisdictions had been the difficulty in identifying sufficiently clearly in advance the capabilities that would be needed by services to undertake CQI.

The extent of uptake of CQI

There are limited quantitative data available on the national uptake of CQI across the Aboriginal and Torres Strait Islander primary health care sector but the data that are available point to encouraging signs of progress. The voluntary uptake by ACCHSs of the Community Improvement Program, the Healthy for Life Program, APCC, and the Audit and Best Practice for Chronic Disease (ABCD) project was confirmation of this grassroots interest in clinical CQI among Indigenous services (Bailie et al. 2008).

For example, the demand to participate in the Healthy for Life program exceeded the program budget, with 100 services receiving funding across 61 sites, 80 per cent of which were located in a rural area and 70 per cent of which were ACCHSs (Urbis Keys Young 2006). The ABCD project commenced with 12 ACCHSs in the Top End of the Northern Territory in 2002 and by the end of 2009 was supporting the participation of more than 60 ACCHSs from four states/territories, with the tools developed by the project also being used by another 60 primary health care services (Bailie et al. 2010).

The APCC Program reported that more than 1000 general practices and 53 Aboriginal Medical Services had participated in one (or more) of the 13 waves conducted between 2005 and 2011. Eighty-three per cent of the Divisions of General Practice participated.

The Queensland Aboriginal and Islander Health Council was a founding partner of a Closing the Gap Collaborative and in 2011 reported that, of 21 ACCHSs with medical clinics in Queensland, 13 (62%) were participating in the Collaborative, along with 17 general practices from seven Divisions of General Practice in areas with high Aboriginal and Torres Strait Islander populations (General Practice Queensland & QAIHC 2012).

In 2012, 200 health centres across the country were registered with One21seventy and were using the tools, training and support to conduct CQI (One21seventy 2012a). Uptake of the One21seventy model of CQI has been greatest in the Northern Territory, Queensland and South Australia. In Queensland 75 facilities (both government managed and community controlled) in 12 regions were using One21seventy tools and processes in October 2012. Although not all have yet used a clinical audit tool, most are using the Systems Assessment Tool. In the Northern Territory, 60–70 per cent of CQI practitioners engaged in the Northern Territory CQI program were using One21seventy in 2012 (see table 3, page 57).

In the period 2010–2012 a total of 156 One21seventy systems assessment audits were conducted in Queensland; 67 were conducted in the Northern Territory, 13 were conducted in South Australia, seven were conducted in Western Australia and six were conducted in New South Wales. The other states/territories had not conducted any One21seventy systems assessment audits during that period.

In the same period, 664 One21seventy clinical audits were conducted in Queensland, 293 were conducted in the Northern Territory, 66 were conducted in New South Wales, 38 were conducted in South Australia and 25 were conducted in Western Australia.

As a further proxy measure of the extent to which the Aboriginal and Torres Strait Islander primary health care sector is engaged in quality improvement activities, in 2010–2011 234 Aboriginal and Torres Strait Islander primary health care services funded by OATSIH (most of which were ACCHSs) had achieved accreditation—most of them against the RACGP standards assessed by Australian General Practice Accreditation Limited (AGPAL) (AIHW 2012a:6).

Where is the system for CQI in Aboriginal and Torres Strait primary health care up to?

The Appraisal Project did not have access to a full range of information on CQI initiatives in Aboriginal and Torres Strait Islander primary health care in each jurisdiction. Nonetheless, taken together with the evidence of the efficacy of CQI identified in the literature, the appraisal illustrates that over the past decade (and more) many core elements of a system for CQI in the Aboriginal and Torres Strait Islander primary health care sector have been put in place (Powell, Rushmer & Davies 2009; Kaplan et al. 2012; Phillips et al. 2010). Although the elements are not distributed uniformly across the nation, there are encouraging signs of progress.

The domains identified by Kaplan et al. (2012) in the Model to Understand Success in Quality (MUSIQ) were combined with the domains of the New South Wales health capacity building framework (NSW Health 2001) and used as standards against which to compare progress in the development of an organised, structured system for CQI in Aboriginal and Torres Strait Islander primary health care. Taken as a whole the system for CQI in Aboriginal and Torres Strait Islander primary health care is comprised of three levels: the external environment, the macro-system (federal/state/territory health departments, and NACCHO and the state/territory community-controlled affiliates), and the micro-system level (individual primary health care services).

The analysis undertaken by this appraisal confirmed that at each of the three levels, there is evidence that the CQI system in Aboriginal and Torres Strait Islander primary health care has begun to emerge. Many elements of such a system are in place, even if only partially. There are policies supportive of CQI in place and opportunities arising from national health care reform. A specialist CQI workforce is developing, and services have access to technical support (including training) and to data infrastructure. Some ACCHSs have appointed staff to conduct (or to oversee the conduct of) CQI and/or others have worked in partnership with external groups (General Practice Queensland & QAIHC 2012:4–5; Maari Ma Health Aboriginal Corporation 2011; Nunkuwarrin Yunti 2011; Couzos & Murray 2008).

There are organisations to develop evidence-based audit tools, to identify evidence-based, relevant performance indicators and to expand training to include the use of new tools. These are being used by jurisdictions and services to fit their needs and the available resources. In some jurisdictions there has been a decision to use One21seventy almost exclusively as the provider for training and support; in others, individual services decide for themselves between the One21seventy and the APCC models, or to use the AGPAL-administered clinical governance standards.

There are variations among the states and territories in the organisation of CQI initiatives. Some have based their CQI infrastructure in the Aboriginal community-controlled sector, others in the government health sector. Some have established state/territory overseeing committees that comprise senior managers in the community-controlled and government health sectors and senior clinicians. Others have worked primarily through the existing partnerships between the government and community-controlled sectors in their states or territories.

Some jurisdictions have appointed designated CQI staff to facilitate, guide and support the roll out of CQI across Aboriginal and Torres Strait Islander primary health care services. In these jurisdictions, Coordinators work at state/territory or regional levels, and Facilitators work with eight to ten primary health care services to build capacity to conduct CQI. In other jurisdictions the roles of Coordinator and Facilitator are combined; in others, no designated CQI appointments have been made. The Coordinators and Facilitators are, in some states/territories, appointed by government; in others, by the community-controlled health sector.

The barriers to the strengthening and expansion of CQI identified by interviewees were similar to those identified in the literature. Unsurprisingly, the most critical of these was the lack of secure, recurrent funding—and the flow-on effect of this on workforce capacity and sustained action.

The data available to this Appraisal Project point to there being widespread interest in and initial uptake of CQI across the Aboriginal and Torres Strait Islander primary health care sector in both community-controlled and government services. However, although there are some

ACCHSs in which CQI has been adopted as a core component of the service delivery and of clinical care, this is not, yet, universally so. Most audits have been conducted with a high level of engagement by external Facilitators—albeit, with the support of service managers and clinicians. This is not surprising or disappointing given the time needed for the diffusion of innovations across a population or organisation or system. It does, though, point to actions that are needed to enable individual primary health care services to undertake CQI routinely as an element of their core business.

To develop a new method or intervention (i.e. CQI), to identify the technical support and training needed by the organisations and workforces that will be responsible for implementation, to raise it on to policy agendas, to achieve policy commitment, and to build the organisational capacity and workforces to deliver it, is a major undertaking in the health sector (and for any sector). The extent of the achievement in rolling out CQI in the Aboriginal and Torres Strait Islander primary health care sector to date should not be underestimated. A strong platform has been established and real momentum has been created in some jurisdictions.

The learning framework

For the future we added an analysis of the findings of the Appraisal Project using a learning framework (Glasenberg 1999) that identifies three different but integrated types of learning that characterise the processes of change in complex systems. The three types of learning are technical, conceptual and social, and they occur concurrently. The analysis and implications for the CQI system are summarised below.

Technical learning

Technical learning is the knowledge, skills, tools and resources (including information technology) needed to introduce and use a new 'method' or 'technology' or deliver a new service. In the case of CQI for Aboriginal and Torres Strait Islander primary health care, there has been a large investment in technical learning over the past decade.

For the future: there will be ongoing demand for technical learning—for new guidelines and audit tools, for the evaluation of the efficacy (and effectiveness) of CQI, and for expanded opportunities for training and professional development for the workforce.

As well, there will be added demand for technical learning to support services and professionals/clinicians to make the changes in policies and practices that are indicated by their CQI audits. This will mean testing theoretical models and evidence, and gradually building the tools and resources to support these activities to bring about change within organisations and professional practices.

And there will be demand for technical learning to expand the systems assessment component of CQI by continually updating evidence on the critical attributes and benefits of the Aboriginal and Torres Strait Islander primary health care system—as a system (or systems).

Conceptual learning

Conceptual learning focuses on understanding the logic of the relationships between an innovation (such as CQI), its goals, and the steps that are necessary both for the uptake of the innovation and for it to succeed in reaching its goals. Conceptual learning identifies why change is needed, what change is needed and how change will be implemented.

For the future: there will be demand for conceptual learning to identify ways in which Aboriginal communities, Torres Strait Islander communities, Aboriginal Health Workers, Torres Strait Islander Health Workers, and other Aboriginal and Torres Strait Islander health professionals and service managers learn, adapt and apply innovations in their workplace and work.

There will be demand for increasing Aboriginal and Torres Strait Islander leadership of, and active participation in, the conduct of CQI, both to enhance the efficacy of CQI and to sustain CQI within services.

There will be demand for conceptual learning to identify ways in which the non-Indigenous primary health care workforce can work in respectful partnership with their Aboriginal and Torres Strait Islander colleagues and with communities to conduct CQI.

Social learning

Social learning deals with the relationships within and between organisations and individuals who are working together on complex problems. Social learning is what takes place when new norms develop within organisations and communities—creating, in the case of CQI, new expectations of what constitutes quality care within services and among professionals, and among community members.

For the future: sustaining and expanding the social learning opportunities that have been created for those engaged in the CQI 'field' will be important—networking, conferences, newsletters, training and web-based interaction, for example.

Opportunities need to be created to increase social learning across the Aboriginal and Torres Strait Islander primary health care sector to reach managers, clinicians, other health workers and communities—to persuade and motivate participation in CQI and to reinforce the benefits of CQI.

In summary, although the Appraisal Project was able to capture only a partial picture of the CQI initiatives being undertaken in and by the Aboriginal and Torres Strait Islander primary health care sector, there has been success in building a system for CQI over the past decade. One characteristic of this system is that it is not dependent upon a single agency, or a single conceptual model, or a single delivery system or a single profession. The system for introducing and delivering CQI routinely includes the Aboriginal community-controlled and the government-managed primary health care services, and in some jurisdictions, specialist CQI leadership and strategic direction. Much of the technical support necessary for CQI is being provided by private and not-for-profit organisations. The workforce delivering CQI is comprised of multiple professionals from a variety of disciplines. There is a growing research program and evidence base to support the work. The conduct of CQI has been proven to contribute to improving the quality of the services delivered to, and clinical care received by, Aboriginal and Torres Strait Islander clients and communities.

A summary analysis of gaps in the current, evolving system and proposals for closing these follows.

Aboriginal and Torres Strait Islander presence in the governance and practice of CQI

The progress

A large number of principles and policies defined by, for example, NACCHO, the Lowitja Institute, the National Health and Medical Research Council, and the ABCD and ABCDE (ABCD Extension) programs affirm the evidence of what works in improving the health of Aboriginal peoples and Torres Strait Islander peoples. Among these, the principle of Aboriginal control of governance and decision-making is the most significant. Aboriginal leadership and Torres Strait Islander leadership are vital to success (Closing the Gap Clearinghouse, 2012) and CQI initiatives, too, must be designed and delivered in respectful partnership with Aboriginal Health Workers and Torres Strait Islander Health Workers and communities.

These are benchmarks of best practice. The One21seventy CQI initiative (and before that, the ABCD and ABCDE programs) has been (and remains) committed to high levels of Aboriginal and Torres Strait Islander engagement—in understanding the need for, methods of and benefits of CQI and in its conduct.

The Aboriginal community-controlled sector in each jurisdiction has been engaged in CQI. In most jurisdictions the ACCHS peak affiliates are members of jurisdiction-wide committees overseeing the strategic direction of CQI and its implementation; in some jurisdictions ACCHS peak affiliates are hosting the designated CQI leadership; and in other jurisdictions the ACCHS peak affiliates have undertaken CQI independently. In all jurisdictions, some individual services have taken up CQI without, necessarily, being connected with a jurisdiction-wide approach.

The gap

There has been a gap in the level of engagement by Aboriginal and Torres Strait Islander Health Workers in the conduct of CQI. One further vital focus for the next phase of implementation and development is to add weight and impetus to increasing the extent to which the leadership, strategic direction for and implementation of CQI in Aboriginal and Torres Strait Islander primary health care is in Aboriginal and Torres Strait Islander hands.

Bailie et al. suggest that it is specific features of CQI that make it well suited to the Indigenous sector—the focus on participation, on customers/consumers, and an approach to capacity building that adheres to the values and principles of Aboriginal and Torres Strait Islander peoples are the most important of these (Bailie et al. 2010).

The aim, now, is to make sure that all Aboriginal and Torres Strait Islander primary health care services are able to benefit from the use of CQI—and, hence, to be sure that all Aboriginal people and Torres Strait Islander people receive the high-quality primary health care services they require to become and to stay healthy across their life spans.

External environment: Support for the concept and conduct of CQI

The progress

The appraisal has confirmed that there is a growing appreciation (among policy makers, service managers, clinicians, researchers and practitioners) of both the need for, and benefits of, using CQI to improve the quality of services (and their organisation and management), of clinical care, and of the health promotion delivered by the Aboriginal and Torres Strait Islander primary health care sector.

The appraisal has confirmed that the core elements of a national system for CQI in Aboriginal and Torres Strait Islander primary health care have been established, and that in most jurisdictions, initial steps have been taken to add to that system.

The National Centre for Quality Improvement in Indigenous Primary Health Care (One21seventy), the ABCD National Research Partnership, the Improvement Foundation, the RACGP and the Lowitja Institute constitute a strong organisational base from which to provide technical leadership for CQI in the sector. Both the community-controlled primary health care sector and the government-managed sector have taken steps in conducting CQI, and most jurisdictions have established committees/forums/partnerships to lead and provide strategic direction for CQI—and some have been able to establish a skilled CQI workforce that is networked to support services across the jurisdiction to conduct CQI. The policy and funding support provided by OATSIH, in particular, has been significant, with those jurisdictions that were able to fund services' registration to receive CQI tools, training, and support from One21seventy (or another provider) demonstrating the greatest progress to date.

The gap

It is relatively early days in the evolution of what is, essentially, a new system that needs to be integrated into the core business of all Aboriginal and Torres Strait Islander primary health care services if it is to achieve its aims. The magnitude of the system required is indicated by the size of the Aboriginal and Torres Strait Islander primary health care sector alone, without reference to the professions, policy makers and research institutions that must also support and contribute to the changes. There is some uncertainty about the sustainability of the system—about the continuation of the policy commitment and financial support that have been so important to the evolution of the system to date.

In the external environment, and across the macro-systems and micro-systems in the Aboriginal and Torres Strait Islander primary health care sector, there are policy makers, managers and clinicians who have not been convinced by evidence of the benefits of CQI, or who have been confused by the multiple models of CQI, or who have experienced CQI as burdensome or problematic, or who do not believe that CQI is necessary to their services or work. There are Aboriginal and Torres Strait Islander community boards and Health Workers who do not feel well informed about CQI and its potential benefits to their communities.

Macro-system capacity to initiate and conduct CQI

The progress

The macro-systems (national and jurisdictional) that have been established already will be vital in the next phase of the dissemination of the system for CQI in Aboriginal and Torres Strait Islander primary health care. The leadership of senior managers, the advocacy of champions, the creation of a culture supportive of CQI, the establishment of systems to provide technical support to services in the conduct of CQI, the building of data infrastructure, and the establishment of a designated CQI workforce are all elements in the macro-systems that have been built in jurisdictions to date.

The gap

Not all jurisdictions have yet been able to develop a macro-system that includes each of these elements. Even in those that have been able to do so, the system has not yet been fully integrated into the core business of both the community-controlled and government-managed Aboriginal and Torres Strait Islander primary health care sectors.

Micro-system capacity to initiate and conduct CQI

The progress

Many Aboriginal and Torres Strait Islander primary health care services have been engaged in the conduct of at least one cycle of CQI. Services have elected to use different CQI models. Some have developed cultures supportive of CQI and have integrated a focus on CQI into their management systems, staff development and accountability systems.

The gap

Although many services have allowed at least one CQI cycle to be conducted and have participated in the reviews of findings and plans for organisational change, they have not yet moved to take up CQI as a part of their own core business. For some, there has been disappointment that it has not proven possible to act on the recommendations of a CQI audit; for others, the implementation of CQI has demanded scarce time and resources; and yet others have been suspicious of the uses to which the data generated by CQI are put.

These responses are all to be expected in the early phase of introduction of an innovation in an existing, complex system. A gap will arise between services that do engage in CQI and those that do not if there is not continuing work with community boards, with service managers, with health professionals and with administrators to embed CQI within the core business of their primary health care services.

Proposed actions

The actions below are intended as suggestions for the consolidation and expansion of the use of CQI in Aboriginal and Torres Strait Islander primary health care.

External Environment: Sustain and build on existing policy directions, investment and practice

- Sustain federal and jurisdictional policy commitment to, and allocation of, recurrent funding for the elements of the CQI system necessary to sustain and expand CQI in the Aboriginal and Torres Strait Islander primary health care sector.
- Secure investment for at least a decade to maintain and expand the designated, skilled CQI workforce—and particularly, the number and proportion of Aboriginal and Torres Islander health professionals with the capacity to conduct CQI. This is particularly important to facilitate CQI in small ACCHSs and government-managed primary health care services.
- Secure investment for the continued development of standards, protocols and audit tools to address emerging issues.
- Secure investment for research and evaluation to build the evidence for CQI and the factors facilitating its routine implementation in the Aboriginal and Torres Strait Islander primary health care sector.
- Incorporate knowledge and skills for CQI in undergraduate health professional training, and in ongoing professional development.

Macro-system: Expand Aboriginal and Torres Strait Islander presence in the governance and practice of CQI

- Work with NACCHO, peak affiliates and jurisdictional Aboriginal and Torres Strait Islander health partnerships to develop Aboriginal and Torres Strait Islander-defined standards for the governance of Aboriginal and Torres Strait Islander primary health care services and programs, together with protocols and audit tools.
- Conduct CQI cycles to assess the extent to which the Aboriginal and Torres Strait Islander primary health care system meets the standards for governance and identify changes to address gaps.
- Conduct research with Aboriginal Health Workers to identify factors influencing their decisions (to participate or not), and to identify factors that facilitate or hinder their active engagement in CQI.
- Work with NACCHO and peak affiliates to develop a social marketing strategy to inform Aboriginal and Torres Strait Islander community boards and community members about CQI and to create demand for its inclusion in the core business of Aboriginal and Torres Strait Islander primary health care services.

Macro-system: Expand the range of audit tools, resources, and training, and increase access to them

- Test methods to support practitioners to implement the actions arising from the findings of CQI.
- Invest in developing and testing theory-based strategies for organisational change and changes in professional practice.
- Move to harmonise the software platforms, and audit tools and methods, to enable comparability across services and jurisdictions, to reduce duplication of resources and effort, and to facilitate the use of data to report on progress towards meeting KPIs at jurisdictional and national levels.
- Continue to use CQI to enhance the quality of data systems, and the quality of data, and to make data accessible and useable for CQI.
- Sustain the organisations responsible for developing evidence-based audit tools, protocols, training, databases and technical support.

Macro-system: Expand knowledge of, and capacity to conduct, CQI

- Sustain and expand the ABCD National Research Partnership.
- Support the jurisdictions that have, through their partnerships between the community-controlled and government sectors, established a macro-system infrastructure for CQI to retain and build on this. The role of the community-controlled sector must be central.
- Support jurisdictions that have not yet established a CQI macro-system to do so. Build on the experiences (successes and struggles) of other jurisdictions.
- Expand opportunities for training and support in CQI (formal and informal) for Aboriginal Health Workers and Torres Strait Islander Health Workers, and for ongoing professional development.
- Promote engagement of private general practitioners in CQI for Aboriginal and Torres Strait Islander patients.
- Promote engagement of Medicare Locals in CQI for Aboriginal and Torres Strait Islander patients and communities.

Micro-system: Focus on embedding CQI in core business

- Apply evidence-based methods to increase the chances of successful uptake of CQI within primary health care services (Ovretveit et al. 2002).
- Use CQI as a method to assess and reinforce the integration of CQI in the core business of primary health care services.
- Create Aboriginal and Torres Strait Islander community/patient/carer demand for the use of CQI— for example, by demonstrating use of patient care pathway mapping tools (Kelly et al. 2012) or the development of tools to enable Aboriginal and/or Torres Strait Islander clients to assess the quality of the chronic conditions care they receive (Gooley 2012a, 2012b).
- Establish a system requiring services to report publicly on the conduct of CQI and outcomes achieved.

Introduction

In 2011 the Lowitja Institute commissioned the Centre for Primary Health Care and Equity, The University of New South Wales, to conduct a national appraisal of Continuous Quality Improvement (CQI) initiatives in Aboriginal and Torres Strait Islander primary health care. The intention was to engage the Aboriginal and Torres Strait Islander primary health care sector (Aboriginal community-controlled and government-managed) in identifying actions to build the capacity of the Aboriginal and Torres Strait Islander primary health care sector to conduct and benefit from CQI routinely and sustainably.

The aims of the project

The National Appraisal of CQI Initiatives in Aboriginal and Torres Strait Islander Primary Health Care (the Appraisal Project) focused on the following questions:

1. What were recent and/or emerging national, regional and local quality improvement initiatives and major strategic directions relevant to Aboriginal and Torres Strait Islander primary health care in each jurisdiction?
2. What has been the extent/nature of uptake/engagement by Indigenous primary health care in various jurisdictions of recent and emerging quality improvement initiatives?
3. What have been major barriers and facilitators to uptake/engagement?
4. What factors are critical in improving the acceptability, feasibility, effectiveness and sustainability for supporting CQI in the Aboriginal and Torres Strait Islander primary health care sector—including both Aboriginal Community Controlled Health Services (ACCHSs) and government-managed services?

Definitions and descriptions

Continuous Quality Improvement

Continuous Quality Improvement (CQI) is a generic concept that describes:

> *an ongoing cycle of gathering and analysing data on how well organisational systems, clinical services, and health promotion programs are functioning (by comparing performance against external standards or benchmarks), and developing improvements—a set of cyclical activities involving examination of existing processes, change, monitoring the apparent effects of the change and further change* (Lilford, Warren & Braunholtz 2003 in Bailie et al. 2007a:525).

The Lowitja Institute (2012) describes CQI as 'a system of regular reflection and refinement to improve processes and outcomes that will provide quality health care'.

CQI has evolved over the past two decades as a method for health service managers and health professionals to improve:

- the capacity and/or readiness of services and their systems to meet pre-determined goals or performance standards (Key Performance Indicators)
- the quality of clinical treatment/care provided to patients with specific diagnoses (e.g. diabetes) or with specific needs (e.g. antenatal care) in comparison with a pre-determined standard (e.g. a state average or new evidence of relationships between improved care and health outcomes) (UK Prospective Diabetes Study Group 1998)
- the quality of health promotion programs and their delivery (e.g. a smoking cessation program, or a program to increase participation in physical activity) in comparison with normative quality standards or a pre-determined goal

- the quality of community-based care provided to, for example, new parents by Aboriginal Health Workers in comparison with a pre-determined normative guideline.

Accreditation

The Cooperative Research Centre for Aboriginal Health described accreditation as 'formal recognition through a process of external review that certain standards have been achieved by an organisation and that an accreditation system needs to have:

- an approved set of standards
- a regular review process that assesses the extent to which the standards have been achieved and
- criteria against which accreditation is awarded' (CRCAH 2008).

'Accreditation uses standards that are broad statements of what is expected of an organisation against which services are assessed and finally accredited or not accredited' (CRCAH 2008:54). Standards can be established by industry or profession (e.g. medicine, nursing) or have their basis in legislation (e.g. as in handling drugs). Although systems of accreditation are voluntary, some include elements that are mandated by law.

The assessment of services is conducted by a licensed, external body that reviews information provided by individual health services and conducts site visits to inspect compliance with the standards for which the external body is responsible—e.g. the Royal Australian College of General Practitioners (RACGP) or the International Organization for Standardization (ISO). In order to obtain accreditation, services must demonstrate that they meet the standards.

Differentiating between CQI and accreditation

CQI is a generic concept describing a method and process that is primarily used *internally* by organisations and professions. It enables health service managers and clinicians to audit their own organisational and clinical practices, to review and compare performance with a standard that may be an internal baseline or an external standard or guideline. It then requires managers and/or clinicians to reflect on the findings and to act to sustain good practice or to improve practice where gaps are found. The cycle of audit, review and action is, or can be, continuous—although the topics of the audits may differ from year to year.

Accreditation is a method and a process by which independent, *external* assessors (through licensed agencies such as the Australian General Practice Accreditation Limited [AGPAL] or the Quality Improvement Council [QIC]) determine whether a service meets agreed standards of quality, care and safety (that have been established by an officially authorised professional body, e.g. RACGP). The assessments are conducted at regular intervals—and provide a 'point-in-time' snapshot of an organisation's capacity to deliver high-quality, safe primary health care services (including its capacity to conduct CQI).

Multiple organisations have established health care standards and are engaged in the accreditation of health care services, including Aboriginal and Torres Strait Islander primary health care services. In the Aboriginal and Torres Strait Islander primary health care sector, the accreditation standards set by RACGP for primary health care services have been used by 74 per cent of the services accredited (AIHW 2012a:6). AGPAL is the accreditation agency associated with RACGP. In 2012 a set of standards for remote area Aboriginal and primary health care services was developed for administration by AGPAL to complement the existing standards.

Models of CQI used in Australia

The conduct of CQI requires a conceptual model describing methods and processes, a skilled workforce, audit/assessment tools, a system for collecting, analysing and reporting on data, and a set of standards, guidelines or benchmarks against which to compare individual and/or organisational performance. Organisations such as the Improvement Foundation and the National Centre for Quality Improvement in Indigenous Health (One21seventy) provide technical resources and support to primary health services as a complete package including training, audit tools, and technical support. The Aboriginal Health Promotion and

Chronic Care (AHPACC) partnership initiative in Victoria provides guidelines for services and an AHPACC Continuous Quality Improvement Tool. The Victorian Healthcare Association provides clinical governance resources, and other organisations provide IT platforms and/or electronic medical record systems (e.g. Communicare or Ferret).

Below is a brief summary of three models of CQI used by different primary health care services in Australia in 2012.

The One21seventy model

The success of the Audit and Best Practice for Chronic Disease (ABCD) and the ABCD Extension (ABCDE) participatory action research projects, which tested the feasibility and efficacy of CQI in Aboriginal and Torres Strait Islander primary health care, led to the establishment in November 2009 of a service support organisation, the National Centre for Quality Improvement in Indigenous Primary Health Care (One21seventy). One21seventy was underwritten by the Menzies School of Health Research as a not-for-profit organisation and offers its services on a fee-for-service basis.

One21seventy came out of research funded by the Lowitja Institute and operates out of the Menzies School of Health Research. Its purpose is to provide national leadership for, and to contribute to, building the organisational and workforce capacity of Aboriginal and Torres Strait Islander primary health care services to conduct and benefit from CQI.

One21seventy provides:

- clinical audit tools and protocols
- an organisational systems assessment tool
- training in use of the tools
- facilitation of action planning and goal setting
- online data services for easy interpretation and reporting
- other services upon negotiation (One21seventy 2013a).

The clinical audit tools also enable health centres to collect the data they need for reporting against jurisdictional key performance indicators. These tools are reviewed and updated regularly. Each audit tool has an accompanying protocol, which provides a detailed step-by-step guide to the use of the tool and a guide to the evidence base for the tool. One21seventy convenes a working group to develop and review each audit tool and its associated protocol.

The clinical audit tools include:

- vascular and metabolic syndrome management for type 2 diabetes, coronary heart disease, chronic heart failure, chronic kidney disease and hypertension
- maternal health
- child health (3 months – <15 years)
- preventive health
- acute rheumatic fever/rheumatic heart disease
- mental health.

Additional program, system, and community needs assessment tools have also been developed, including:

- a Health Promotion Assessment Tool, which is used to systematically describe and assess how well activities and projects align with good practice, assess how well organisational systems are functioning, and plan how to improve systems that support good practice;
- a Health Centre and Community Survey to collect information on the operating environment of each local health centre, such as its location, population size, and governance arrangements;
- a Systems Assessment Tool, which is used to collect information about the state of a health centre's systems that are required to support good clinical care. The types of systems assessed include delivery systems design, information systems and decision support, and self-management support (One21seventy 2013b).

Australian Primary Care Collaboratives

With Australian Government investment of an initial $19 million and subsequent $23 million for development and implementation, the Improvement Foundation (2012) in partnership with RACGP delivers the Australian Primary Care Collaboratives

(APCC) Program. Based on the Breakthrough Series Collaborative methodology developed in the United States by the Institute of Healthcare Improvement, the Improvement Foundation adapted and applied the methodology as the framework for the APCC Program.

Groups of general practices form Quality Improvement Collaboratives to participate in an organised, multifaceted approach to quality improvement that has five essential features:

- there is a specific topic or issue selected because there is evidence of large variations in care or gaps between best and current practice
- clinical experts and experts in quality improvement are available to provide expert advice
- a critical mass of multi-professional teams from multiple sites is engaged to share and compare data and experiences
- clear and measureable targets are established
- changes (in practice) are tested on a small scale to advance reinvention.

Finally, collaborators must participate in a series of structured activities 'to exchange knowledge and experience and build skills' (Schouten et al. 2008:2). The APCC is not specific to Aboriginal and Torres Strait Islander primary health care services, but more than 50 Aboriginal Community Controlled Health Services (ACCHSs) have participated in at least one of the waves (Knight et al. 2012:948).

Expert reference groups have developed program measures for the following priority issues: diabetes, chronic heart disease, general prevention measures, chronic obstructive pulmonary disease, and chronic disease prevention and self-management. Using Pen Clinical Systems and the Pen Clinical Audit Tool, the APCC collects measures from practices' clinical software and prepares reports on trends over time (within a single practice) and/or comparisons with other practices within the program—or with external benchmarks (Improvement Foundation 2010).

The Improvement Foundation has worked specifically to develop an Indigenous model of a Quality Improvement Collaborative.

Clinical governance

Clinical governance is a:

> *system through which (NHS) organisations are responsible for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish* (Scally & Donaldson 1998: 62).

RACGP (2011) included clinical governance standards in its accreditation standards for general practices published in 2010 and builds on Australian and international evidence of the effectiveness of clinical governance as a method of quality improvement in health care.

Over the period since 2006 the Victorian Healthcare Association (2009–2013) has also developed a series of policies, clinical indicators, reporting guidelines, audit tools, and training resources on the application of clinical governance in community health.

A recent systematic review of the impact of models of clinical governance on the quality of primary health care found a variety of positive outcomes (accessibility, capability [of services], effectiveness, safety). The study recognised that the Aboriginal sector in Australia has pioneered the development of locally relevant performance indicators—the National Aboriginal Community Controlled Health Organisation (NACCHO) Quality Use of Medicines program, for example (Phillips et al. 2010:606).

Common to each of these models of CQI, and to accreditation, is the need for independently developed standards, guidelines or indicators against which to assess the performance of individuals or groups of services or professionals in order to identify gaps (and/or strengths).

Performance indicators

Essential to each method of quality improvement above is the use of pre-determined standards or benchmarks against which to compare performance.

These standards or benchmarks may be key performance indicators—quantitative measures of clinical service delivery or qualitative measures of the organisation and delivery of services.

Key Performance Indicators

Key Performance Indicators (KPIs) are measures of performance—objective outcome measures or best practice standards against which the performance of a local service or program or of a group (or system) of services can be compared (e.g. proportion of children who have been fully immunised or the number/proportion of women receiving appropriate antenatal, intra- and post-partum care and clinical care in the first year of a baby's life (Steenkamp et al. 2010).

In 2006 the National Aboriginal and Torres Strait Islander Health Performance Framework was established with KPIs and these have been used to report on jurisdictional and national progress in Aboriginal and Torres Strait Islander health.

More recently, the Council of Australian Governments, as part of the National Indigenous Reform Agreement, agreed to the development of specific Indigenous primary health care KPIs. The indicators are intended to enable monitoring of this part of the health system's contribution towards achieving 'Closing the Gap' targets. Initially, KPIs will provide measures of the extent to which various general indicators of individual health and health-related behaviours among the Indigenous population are being captured by a targeted small number of government-funded, Indigenous-specific primary health care services. In addition to providing standards against which to assess the performance of individual services or care streams, KPIs are also an indicator of jurisdictional and national progress towards meeting agreed national priority health goals (AIHW 2012b).

Quality of Care Indicators

Quality of Care Indicators are best practice standards or guidelines that have been defined to guide the diagnosis, treatment and care for specific health problems or for specific types of care or patient groups. The indicators are used to guide professional practice, and can also be used as benchmarks against which to measure/assess and compare services or health professionals—for example, the quality of the delivery of a diabetes education program or a maternal and infant care program (Roubideaux et al. 2008; Steenkamp et al. 2010).

Differentiating between CQI and reporting on KPIs

All processes and methods to improve the quality of primary health care services require standards or benchmarks against which to compare current practice. The standards represented by KPIs, or clinical guidelines, or service management guidelines, or goals and targets are used by agencies and services that are conducting accreditation or CQI, or that are reporting on progress. The standards can be the same (or similar) although the purposes may differ.

Furthermore, the data generated by CQI audits can be used by services to meet both their internal requirement to assess the quality of their services, and external reporting requirements such as reporting on progress on related KPIs in the National Aboriginal and Torres Strait Islander Health Performance Framework (or jurisdictional KPIs).

CQI is, primarily, an internal process undertaken by service managers and clinicians to examine, compare and improve their own (or their services') practice or organisational capacity. CQI uses external standards as a benchmark against which to compare local performance and to identify gaps or room for progress. The data generated for CQI through the audits provide service managers and clinical/health promotion service providers with specific, direct feedback on their own performance.

KPIs are used to assess the extent to which the collective actions undertaken by the services in a sector (e.g. the Aboriginal and Torres Strait Islander primary health care sector) meet jurisdiction-wide or national goals or targets—KPIs. The data generated by CQI audits can contribute to the reports made by services as an accountability measure, but used in this way they do not contribute specifically to quality improvement within a service.

Method

National Reference Group

A National Reference Group was established to provide advice on the conduct of the Appraisal Project. The following organisations and people were invited to participate:

- National Aboriginal Community Controlled Health Organisation NACCHO) and the peak community-controlled health organisations in each state and territory
- Office of Aboriginal and Torres Strait Islander Health (OATSIH), Australian Government Department of Health and Ageing (DoHA)
- Director/Manager Aboriginal Health in each of the Ministries/Departments of Health (Aboriginal Health) in each jurisdiction
- Aboriginal academics with experience in community-based primary health care service delivery and/or quality improvement.

Invitations were sent by letter and by email, and followed up by telephone. However, only some of the organisations and jurisdictions decided to participate. Significantly for the project, NACCHO declined to participate, explaining that it was not possible to give priority to this project given other pressures on the organisation. At the request of two jurisdictions we completed detailed application forms for consideration by each organisation's Board or Research Ethics Committee. In one case the organisation decided to participate in the Reference Group; in the other case, the organisation decided not to do so. With the exception of New South Wales, however, the Reference Group included at least one member from each state and territory, and from the federal government.

The Chair and National Reference Group members were:

- Professor Ross Bailie, Menzies School of Health Research (Queensland)—Chair
- Professor Mick Adams, Adjunct Professor, School of Public Health, Queensland University of Technology
- Ms Melissa Boag, Department of Health, Victoria
- Dr Christine Connors, Northern Territory Department of Health
- Ms Kerry Copley, Aboriginal Medical Services Alliance of the Northern Territory
- Ms Samantha Davidson Fuller, Australian Capital Territory Medicare Local
- Dr Bronwyn Fredericks, Central Queensland University and community member
- Dr Hugh Heggie, Northern Territory Department of Health
- Ms Jeanette James, Department of Health, Tasmania
- Ms Ru Kwedza, Queensland Health
- Dr Daniel McAullay, Aboriginal Health Council of Western Australia
- Ms Nicole McCartney (Western Australia) for Ms Jenni Collard, Department of Health, Western Australia
- Ms Yvonne Mills, Health Directorate, Australian Capital Territory Government
- Ms Lorraine Parsons, Department of Health, Victoria
- Dr David Scrimgeour, Aboriginal Health Council of South Australia
- Mr John Shevlin, Office of Aboriginal and Torres Strait Islander Health, DoHA
- Ms Josephine Smith, Health Directorate, Australian Capital Territory Government

The Lowitja Institute Program Leader and Program Manager were:

- Ms Gail Garvey (Program Leader, the Lowitja Institute)
- Dr Liz Izquierdo (Program Manager, the Lowitja Institute).

The Reference Group met by teleconference twice and was updated by email and telephone. It reviewed and commented on a draft literature review and on a draft final report. Individual members of the Reference Group also provided advice, guidance, and support throughout the Project.

The literature review

The aim of the literature review was to synthesise current literature that identified and described the major features of CQI initiatives that had been implemented in Australia—with particular emphasis on those implemented by Aboriginal and Torres Strait Islander primary health care services. It was intended to identify facilitators of, and barriers to, the implementation of CQI, and to identify factors that are critical in improving the acceptability, feasibility, effectiveness and sustainability for supporting CQI in the Aboriginal and Torres Strait Islander primary health care sector—including both ACCHSs and government-managed services.

The search strategy

We searched Medline, ATSIHealth, and the Rural and Remote Health Database. Our initial search was done in November 2011 and covered the period 2006 to 2011 which was deemed to be appropriate as it coincided with targeted Commonwealth health policy for Aboriginal and Torres Strait Islander people (the Healthy for Life Program). The full search strategy applied to Medline and the website search details are displayed in Appendix 1. As the ATSIHealth and Rural and Remote Databases support less comprehensive search strategies, we combined a number of different terms and varying combinations of terms used in the Medline search for both databases.

This yielded 64 citations. The abstracts of these citations were reviewed for relevance and imported into an EndNote database for management. The full texts of the most relevant articles were obtained for further review and their reference lists scanned for additional publications.

In November 2012 the search was re-run and additional efficacy and effectiveness terms added. This yielded no additional citations. In addition to the search for peer reviewed literature, we also looked for evidence of national and state-based CQI programs from websites (Appendix 1), including health and government agencies and peak Indigenous organisations. The search for published and program literature was supplemented by a search of references, and for other literature referred to throughout the publications. Program specific websites were searched for additional background and associated reports. This iterative approach continued until no new information meeting our criteria was forthcoming.

Ethics approval and project methodology

The Appraisal Project received ethics approval from The University of New South Wales, the Aboriginal Health Council of Western Australia (AHCWA) and the Aboriginal Health Council of South Australia (AHCSA). The Aboriginal Medical Services Alliance of the Northern Territory (AMSANT) and the Victorian Aboriginal Community Controlled Health Organisation (VACCHO) required us to submit detailed, formal requests outlining the project's purposes and methods (including ethical considerations). AMSANT agreed to participate; VACCHO did not. Tasmania, the Australian Capital Territory and Queensland Health agreed to participate under the UNSW ethics approval. QAIHC decided not to participate. The Aboriginal Health and Medical Research Council and the New South Wales Department of Health decided not to participate in the interviews.

Ten telephone interviews were conducted with members of the Reference Group, people who were nominated by reference group members, or people who either approached the project team or whom the project team approached directly. All interviewees were engaged actively in the development of policy supporting CQI in Aboriginal and Torres Strait Islander primary health care, and/or in the implementation of CQI in Aboriginal and Torres Strait Islander primary health care. At least one representative from each jurisdiction except New South Wales was interviewed (see Appendix 2 for the semi-structured interview schedule.)

A group discussion was held at the Northern Territory Aboriginal Health Key Performance Indicators Collaborative and CQI Workshop in April 2012, with two CQI Coordinators, 11 CQI Facilitators and two senior policy makers from Northern Territory Health (see Appendix 3 for semi-structured interview schedule). The project team also presented and discussed the interim findings of the Appraisal Project to the Coordinators and Facilitators.

Two group interviews by videoconference were held with 16 CQI Facilitators and one Coordinator in Queensland, and two telephone interviews were held with another Coordinator in Queensland (see Appendix 4 for semi-structured interview schedule).

The project team also presented interim findings in a plenary presentation at the Lowitja Institute's National Conference on CQI in May 2012, and conducted a small group discussion with three participants from South Australia, two from Queensland and one from the Australian Capital Territory (see Appendix 5). The project team also spoke informally with key people and groups about their perceptions of what is needed to strengthen and sustain CQI in Aboriginal and Torres Strait Islander primary health care into the future.

In all, 49 people were interviewed (or participated in group discussions), and the Project Team spoke informally with a further 12 people to ascertain their perspectives on the facilitators and barriers to the uptake of CQI in Aboriginal and Torres Strait Islander primary health care (see Appendix 6 for the names and jurisdictions of people interviewed.) Members of the Reference Group also provided comments on drafts of the report.

Table 1 and Table 2 outline the participation of jurisdictions in the Appraisal Project by sector (Aboriginal community-controlled health sector and government-managed health sector).

Table 1: Aboriginal community-controlled health sector participation in the Appraisal Project by jurisdiction

Project component	**Jurisdiction**								
	National (NACCHO)	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Reference Group		✓		✓		✓			✓
Group interviews—face to face				✓					
Telephone interviews				✓		✓	✓		
Individual interview		✓							
Informal discussion	✓				✓				
Comment on draft documents						✓			✓

Table 2: Government health sector participation in the Appraisal Project by jurisdiction

Project component	**Jurisdiction**								
	National (NACCHO)	ACT	NSW	NT	QLD	SA	TAS	VIC	WA
Reference Group	✓	✓		✓	✓	✓	✓	✓	✓
Group interviews—face to face				✓	✓	✓			
Telephone interviews	✓			✓	✓	✓	✓	✓	✓
Group interview—video-conference, teleconference					✓				
Comment on draft documents				✓	✓				✓

Background

Aboriginal and Torres Strait Islander health and primary health care sector

The Australian population included an estimated 562,681 Aboriginal and Torres Strait Islander citizens in 2010, of whom more than 75 per cent lived in urban areas; slightly more than 23 per cent lived in remote and very remote locations (ABS 2009). Over the next two decades the Aboriginal and Torres Strait Islander population is expected to have the highest growth in major cities and inner regional areas, particularly among children aged zero to four years, and people aged 55 years and over (Biddle & Taylor 2009).

The gap in life expectancy between Aboriginal and Torres Strait Islander and non-Indigenous women is 9.7 years; between Aboriginal and Torres Strait Islander men and non-Indigenous men, it is 11 years. There has been an improvement of 3.6 years in life expectancy among Aboriginal women since 2000 but a smaller improvement in life expectancy among Aboriginal men (AMA 2011).

Appropriate access to primary health care can narrow the life expectancy gap and may offset some of the harmful health effects of the socio-economic disadvantage and inequality experienced by Aboriginal peoples and Torres Strait Islanders over the more than 200 years since colonisation (Dwyer, Silburn & Wilson 2004; Griew et al. 2008). Griew et al. (2008) reported on the significant contribution of comprehensive, high-quality primary health care services to these improvements in the health and wellbeing of Aboriginal and Torres Strait Islander communities.

Aboriginal and Torres Strait Islander communities have, over decades, succeeded in establishing community-controlled health services.

> *NACCHO is the national peak body representing over 150 Aboriginal Community Controlled Health Services (ACCHSs) across the country on Aboriginal health and wellbeing issues. It has a history stretching back to a meeting in Albury in 1974.*
>
> *An Aboriginal Community Controlled Health Service (ACCHS) or an Aboriginal Medical Service (AMS) is a primary health care service initiated and operated by the local Aboriginal community to deliver holistic, comprehensive, and culturally appropriate health care to the community which controls it (through a locally elected Board of Management). Aboriginal communities operate 150 ACCHSs in urban, regional, and remote Australia. They range from large multi-functional services employing several medical practitioners and providing a wide range of services, to small services which rely on Aboriginal Health Workers and/or nurses to provide the bulk of primary care, often with a preventive, health education focus. The services form a network, but each is autonomous and independent both of one another and of government.*
>
> *Local Aboriginal community control in health is essential to the definition of Aboriginal holistic health and allows Aboriginal communities to determine their own affairs, protocols and procedures. NACCHO represents local Aboriginal community control at a national level to ensure that Aboriginal people have greater access to effective health care across Australia. NACCHO provides a coordinated holistic response from the community sector, advocating for culturally respectful and needs based approaches to improving health and wellbeing outcomes through ACCHSs* (NACCHO 2012).

In 2010–2011, 236 primary health care services (including Aboriginal community-controlled services and non-community-controlled health organisations) received funding from the

Australian Government through OATSIH to provide a range of primary health care services to Aboriginal and Torres Strait Islander people (AIHW 2012a:2). In addition, the community health sector and primary health care sector (primarily through general practice) in each state/territory provide primary health care to Aboriginal and Torres Strait Islander communities, clients and patients through a combination of specific and universal services and programs.

A timeline of the history of Aboriginal health policy from 1901 to 2009 illustrates the extensive information that has been available to governments and health professionals about the determinants of health of Aboriginal peoples and Torres Strait Islanders, and the range of structures, policies and programs that have been implemented in response (Fredericks & Legge 2011:50–6).

Towards self-determination

Aboriginal and Torres Strait Islander community-controlled health services were established based on the principles of self-determination and community control. The principles have guided the evolution of the services over time, so that the services provide an enhanced set of activities to patients and clients compared to those provided by mainstream general practices (Rosewarne et al. 2007). Vos et al. (2010:53) constructed a league table of 19 cost-effective health interventions for the Indigenous population using the Indigenous concept-of-benefit instrument (developed under the auspice of an Indigenous Steering Committee). Calculations were based on recognition that the *'lifetime health impact of…interventions delivered…by ACCHSs is 50% greater than if these same interventions were delivered by mainstream health services, due to improved Indigenous access'* (Vos et al. 2010:54, emphasis added).

Griew et al. (2008:8) found that 'primary health care interventions that show success at local levels demonstrate genuine local Indigenous community engagement that maximises participation up to, and including, full community control'. The Productivity Commission and the Closing the Gap Clearinghouse confirmed this finding in their reviews of progress and evidence of 'what works' to close the gap in Indigenous disadvantage (Steering Committee for the Review of Government Service Provision 2011; Closing the Gap Clearinghouse 2012:5).

AMSANT (2007) identified a set of core services to be provided by remote primary health care services in 2007. And, although not specific to Australian Indigenous primary health care, the Canadian Working Group on Primary Healthcare Improvement identified 'critical attributes and benefits of a high-quality primary health care system' based on evidence available in 2009 (McMurchy 2009). Although none of these recommendations and proposals has been adopted as a set of national standards for Aboriginal and Torres Strait Islander primary health care, they each point to the central significance of Aboriginal and Torres Strait Islander governance of initiatives intended to improve their health, including primary health care.

Initiatives to maintain and improve the quality of Aboriginal and Torres Strait Islander primary health care

There has been a longstanding commitment in Australia to ensure the quality of all health care services, including primary health care. The World Health Organization endorsed CQI as one of the core skills needed by the health care workforce in the twenty-first century to ensure that health care organisations are well prepared to provide innovative care for chronic conditions (WHO 2005).

Over the past decade, CQI has evolved as a way to enhance the effectiveness of quality improvement initiatives in the Aboriginal and Torres Strait Islander primary health care sector. CQI involves the generation of local, service-specific data that can be used to modify service organisation and delivery, and/or professional practice at local levels. There have been high levels of ACCHS support for the application of quality review and accreditation processes when opportunities for CQI are emphasised (CRCAH 2008:15). There is evidence, too, of the implementation of quality improvement initiatives by Aboriginal and Torres Strait Islander primary health care services (CRCAH 2008:15).

CQI, as a method and a process, offers a framework for a common language about quality improvement in Aboriginal and Torres Strait Islander primary health care, identifies a standard or guideline that represents best practice, provides a system of data collection, analysis and reporting, raises awareness of the quality of care by services, and builds state-funded infrastructure for quality assurance.

In addition to the uptake of CQI by individual services there has been growing policy commitment and investment by governments to support primary health care services, including ACCHSs, in taking action to improve the quality of service delivery and care. Among these actions has been support for services to be accredited. The Cooperative Research Centre for Aboriginal Health (now the Lowitja Institute) established the Aboriginal and Torres Strait Islander Health Sector Accreditation and Quality Standards Project in 2006 (CRCAH 2008). The project found widespread agreement across the Aboriginal community-controlled health sector that voluntary accreditation containing a CQI element 'is of great benefit to the recipients of a health service as a means of ensuring an agreed standard of quality, care and safety' (CRCAH 2008:6–7). The project found that, of the organisations that had been consulted in the project and that had commenced or completed accreditation, all had retained a positive view of its benefits (CRCAH 2008:5). The RACGP and the Quality Improvement Council (QIC) were recognised as the two most relevant agencies in the accreditation sector (CRCAH 2008:61).

In 2007 OATSIH funded the Establishing Quality Health Standards program to support the participation of community-controlled organisations in CQI programs. The program included funding to enable organisations (such as the Queensland Aboriginal and Islander Health Council) to appoint Quality and Accreditation Facilitators, to enable NACCHO and affiliates to provide local support, and to use grants (Accreditation Support Grants) to help achieve quality accreditation (QAIHC 2012). By 2010–2011 more than 70 per cent of Aboriginal and Torres Strait Islander primary health care services had been accredited, most of them by AGPAL using the RACGP standards (AIHW 2012a:6).

Accreditation was a vehicle for ensuring that CQI was embedded in the core business of primary health care services (CRCAH 2008:53). By the mid-2000s there was growing international literature on the importance of a system approach to improve the quality of care in primary health care settings. And there was growing experience of implementation of CQI by the Aboriginal and Torres Islander primary health care sector.

AHCWA had implemented a management framework, and the Western Australian Network of Alcohol and Other Drug Agencies (WANADA) had developed and implemented a quality framework. The ABCD study had been implemented in the Northern Territory, and through its extension, the ABCDE study, in 60 services across the country. The APCC Program had been established and included Aboriginal Medical Services in its 'waves' of data collection and comparative analysis, and in reporting on improvements in practice. The Victorian Healthcare Association established the Clinical Governance in Community Health Project, and the Aboriginal community-controlled health sector (particularly, the Kimberley Aboriginal Medical Services) had implemented clinical governance with a concerted and long-term development of capacity and personnel to drive clinical governance activities (Phillips et al. 2010). Each of these contributed to evidence of the feasibility and efficacy of conducting CQI in Aboriginal and Torres Strait Islander primary health care services.

As well, OATSIH began to require Aboriginal and Torres Strait Islander primary health care services that were receiving OATSIH funding to incorporate CQI as a core element of program delivery and reporting. And the ABCD National Research Partnership began to generate evidence about the design of quality improvement tools and resources, and about the implementation of CQI in the Aboriginal and Torres Strait Islander primary health care sector.

In 2006 the National Aboriginal and Torres Strait Islander Health Performance Framework was developed setting out KPIs in three categories: health status and outcomes, determinants of health and health system performance. These KPIs are used to measure and report on national and jurisdictions' progress towards improving the health of Aboriginal and Torres Strait Islander people (AHMAC 2012).

Several developments since 2008 have heightened the potential value of a review/appraisal of CQI initiatives to identify what is needed to sustain and expand on work carried out to date, including:

- the National Health and Hospitals Reform Commission Report's strong focus on primary care and its recommendations, which include reference to the value of quality improvement initiatives
- the National Primary Health Care Strategy's reference to the value of quality improvement
- the COAG National and Jurisdictional Partnership Agreements on Closing the Gap in Indigenous Health, which included a commitment of $1.6 billion over four years by the states and territories and the federal government to the implementation of a Chronic Disease Package for Aboriginal and Torres Strait Islander peoples. This is being rolled out through mainstream general practice (including Medicare Locals) and Aboriginal Medical Services. This new funding and the establishment of new positions in Medicare Locals and Aboriginal Medical Services create opportunities to strengthen quality improvement activities relevant to Indigenous primary health care (DoHA 2012a).

In 2012–2013 the Australian Government will invest more than $382 million in approximately 300 organisations (178 of which are community controlled) to deliver comprehensive primary health care and other health services tailored to meet the needs of Aboriginal and Torres Strait Islander Australians (DoHA 2012a). As well, $291.2 million of joint Commonwealth/state/territory funding has been committed over six years to improve the delivery of, and access to, services in remote Indigenous priority communities, through the National Partnership Agreement on Remote Service Delivery (DoHA 2012a).

In 2011–2012 the federal budget included $35 million allocated until June 2015 under the Establishing Quality Health Standards Continuation measure—an extension of the original program. The purpose was to continue support for eligible organisations to achieve accreditation/certification under mainstream standards relevant in the Australian health care environment (DoHA 2011).

These investments are complemented by the preparation of a National Aboriginal and Torres Strait Islander Health Plan, which will, among other things, define actions necessary to strengthen Aboriginal and Torres Strait Islander primary health care—with particular emphasis on improving early detection and treatment of disease (particularly chronic disease) (DoHA 2012c).

There is a strong body of knowledge and experience in the use of CQI by ACCHSs and by other primary health care organisations providing services to Aboriginal and Torres Strait Islander patients and communities. Recent reforms by the federal government are building on four decades of work to build an Aboriginal and Torres Strait Islander primary health care system, to extend the range, reach and delivery of services, and to improve their effectiveness.

Why is improving the quality of Aboriginal and Torres Strait Islander primary health care necessary?

There is still evidence that Aboriginal people and Torres Strait Islanders do not have access to primary health care commensurate with their needs.

Aboriginal and Torres Strait Islander children under 15 years of age have comparatively low rates of access to primary care, particularly those aged under five years (Deeble 2009), and the utilisation of Medicare benefits and subsidised medicines through the Pharmaceutical Benefits Scheme are also markedly lower for Aboriginal peoples and Torres Strait Islanders, with total expenditure in

2006–2007 being 35 per cent less and 56 per cent less per capita respectively than for other Australians (AIHW 2009). The use of the Medicare Benefits Schedule Aboriginal and Torres Strait Islander Health Assessment items is also low (DiGiacomo et al. 2010). It has been estimated that less than 12 per cent of eligible Aboriginal people and Torres Strait Islanders received these assessments in 2009–2010 (Russell 2010). There are also low rates of access to specialist follow-up medical care when it is needed (Deeble 2009).

Aboriginal peoples and Torres Strait Islanders continue to experience significant barriers to accessing high-quality primary health care (Fredericks & Legge 2011; AMA 2011).

Services need to be available in locations that are accessible to their intended clients. In 2008, 71 per cent of Aboriginal and Torres Strait Islander adults living in remote areas had no access to public transport, and 46 per cent reported problems accessing health services because of transport and distance (ABS 2010). In non-remote locations, 55 per cent of Aboriginal people and Torres Strait Islanders reported that appointments were not available when needed, and that waiting times were too long (ABS 2010). Poor linkages, communication and coordination between primary health care services can also restrict availability (Scrimgeour & Scrimgeour 2008).

Cost is a major factor determining Aboriginal peoples' and Torres Strait Islanders' access to primary health care services, particularly in urban settings (Scrimgeour & Scrimgeour 2008). In 2008, 37.5 per cent of Aboriginal peoples and Torres Strait Islanders living in non-remote locations, and 16.5 per cent living in remote locations, reported that they had problems accessing health services because of their cost (ABS 2010).

The extent to which health care services recognise, respect and incorporate Aboriginal or Torres Strait Islander cultural values in the design and delivery of their services is a factor that affects whether Aboriginal peoples and Torres Strait Islanders access the service (Houston 2004; Lumby & Farrelly 2009).

These summary data confirm a continuing need to ensure that the primary health care services available to, and provided for, Aboriginal people and Torres Strait Islander people are of high quality, and that there are, still, considerable gaps to be overcome.

A Review of the Literature

The literature was reviewed in two stages. The first of these focused on identifying evidence of the efficacy and/or effectiveness of CQI as a method and a process to improve the quality of Aboriginal and Torres Strait Islander primary health care service delivery and to improve the quality of clinical care (see Appendix 7 for more detail).

In 1995 the Inala Community Health Centre (under the leadership of its first Aboriginal medical practitioner) began using a quality improvement approach to improve the accessibility of its services for Aboriginal clients and patients. The success of the CQI work resulted in the establishment of the Inala Indigenous Health Service, which has continued to use CQI to improve the quality of care delivered to its patients. In 2005 the service was a participant in the Healthy for Life Program and used the ABCD model to conduct CQI, resulting in significant reductions in risk factors among patients with diabetes (Hayman 2010).

The Healthy for Life evaluation (Urbis 2009) reported a number of service improvements that had been prompted or enabled by the program. These included new approaches to service delivery such as targeted clinics and peer support; new approaches to care planning and coordination and improved inter-agency relationships; improved information systems for recall; development of resources such as templates, checklists and health promotion resources; improved management of staff; and increased training and capacity building.

The ABCD project was developed specifically for use by Aboriginal and Torres Strait Islander primary health care services. Evaluation of the project showed that the use of CQI resulted in significant improvements in the quality of care and in improved outcomes in relation to diabetes (HbA1c testing once every six months improved from 41 per cent to 74 per cent; the delivery of guideline scheduled services for diabetes improved from 31 per cent to 54 per cent) (Bailie et al. 2007a; Si et al. 2010; Gardner et al. 2011) and some improvement in preventive health services (Si et al. 2007).

Using published data from the ABCD project and other sources, Access Economics estimated that on a forward projection of 15 years, the potential economic value of the health gain from a 4.6 per cent improvement in Indigenous diabetes management (well within that achieved within the ABCD project) would be $746.2 million (in Disability Adjusted Life Years saved). In addition, there would be an associated $705.1 million in financial savings from workplace productivity and other resources saved. Of this, $345.5 million could be attributed to the impact of the research (One21seventy 2012b).

The APCC Program reported on the experiences of health services participating in the APCC Closing the Gap local waves in Queensland, Victoria, New South Wales and South Australia. It found evidence of notable improvements across the 60 participating health services (mainstream and ACCHSs) from baseline to month ten. Some improvements identified were:

- an overall improvement from 8 per cent to 12 per cent in 'the percentage of Aboriginal and Torres Strait Islander peoples that had undergone a health assessment in the last 12 months', and an overall improvement in the 'smoking status assessed' measure for patients with diabetes—by month ten, 43 per cent of patients with diabetes had a smoking assessment recorded a 33 per cent improvement on baseline for the 'smoking status not recorded' measure, an important first step in appropriately targeting interventions at the health service level
- a 30 per cent improvement on baseline for patients with diabetes who were recorded as having an influenza immunisation

- an improvement from 27 per cent to 34 per cent in the measure recorded by health services of ‘the percentage of patients on the diabetes register with a blood pressure recorded within the previous 12 months and whose last recorded blood pressure was less than or equal to 130/80’ (Improvement Foundation 2011).

The APCC (2011) approach has been reported as contributing to:

- improved patient care through better management of chronic disease
- increased best practice care through better use of information systems (both medical and business systems)
- evolving roles among practice staff to better meet patient demand
- a cultural shift from individual patient care to population-based care.

A more recent report on the quality of the APCC Program confirmed positive impacts on patients’ health, on the clinical care provided to patients, on data recording and on disease coding—across more than 1300 general practices and 53 Aboriginal Medical Services (Knight et al. 2012:951).

In addition to improvements in the quality of care delivered and in patient health, the APCC reported on a range of improvements in the organisation of health services resulting from its work. These included the development and standardisation of clinical software data extraction tools, a new web portal for reporting and feedback on quality improvement indicators for the Aboriginal community-controlled sector and greater inclusion of quality improvement in the strategic plans of divisions of general practice. There were also improvements in all of the risk factors/health issues that were the topics of audit and review, except access (Knight et al. 2012:948). The Improvement Foundation, which provides the technical support to the APCC Program, has also now developed an Indigenous model of a Quality Improvement Collaborative.

A systematic review of evidence of the impact of models of clinical governance on the quality of care in Australian general practice and primary care found that interventions at different levels (national, regional, service or multi-level) could improve the capability of care—particularly when it was used in auditing easier-to-systematise care processes (as in, for example, prescribing practice) than when it was used in auditing harder-to-systematise processes (as in, for example, chronic disease management). There was evidence, though, of improvements in chronic disease outcomes (Phillips et al. 2010:604).

In summary, there is evidence that the use of CQI can lead to positive improvements in one or more domains of quality in Aboriginal and Torres Strait Islander primary health care—the quality of clinical and service data being collected; the routine inclusion of preventive health practices in clients’ treatment regimens; screening and patient management (including recall and referral); the outcome of care; the prescribing of medicines; the organisation of primary health care systems including capacity building; the training and engagement of staff in programs; and the redesign of work processes to ensure they are locally appropriate and meaningful. The evidence also confirmed that CQI had been acceptable and useful to Aboriginal and Torres Strait Islander primary health care service providers and managers.

It is necessary to note, too, that the conduct of research to evaluate the impact and outcomes of CQI in Aboriginal and Torres Strait Islander primary health care services has been relatively recent. There has not been sufficient time (or resources) to implement CQI on a scale that is sufficiently large to enable rigorous evaluation of effectiveness in terms of improved population health outcomes.

The next stage of the literature review focused on:

1. synthesising current literature that identified and described recent national, regional and local initiatives and major strategic directions relevant to Aboriginal and Torres Strait Islander primary health care in each jurisdiction

2. identifying the extent/nature or uptake/engagement by Aboriginal and Torres Strait Islander primary health care in various jurisdictions of recent and emerging CQI initiatives

3. identifying major barriers and facilitators to the uptake/engagement in CQI
4. identifying factors that are critical in improving the acceptability, feasibility and effectiveness for supporting the CQI in the Aboriginal and Torres Strait Islander primary health care sector—both ACCHSs and government-managed.

CQI programs have been a feature of the Aboriginal and Torres Strait Islander primary health care landscape in Australia for the past decade. More recently, CQI has been incorporated into general practice through initiatives that provide reimbursement for their participation. See Appendix 8 for a comprehensive description of each program, including their fundamental principles and key features, and aspects relating to implementation and measurement.

National policy and funding support for CQI

Since 2002 the federal government, through OATSIH, has implemented policies to reduce the incidence and prevalence of chronic disease in Aboriginal and Torres Strait Islander communities, and to improve the health of mothers and babies, in particular. Each of these large programs included the use of CQI as a mechanism both to improve service delivery and to improve the quality of health care provided by Aboriginal and Torres Strait Islander primary health care services. The Continuous Improvement Projects and Healthy for Life Program supported services to use CQI—assisting with access to guides and tools for clinical audits, systems assessment and process mapping, and templates for data collection, evaluation and reporting, together with access to trained quality improvement facilitators (Bailie et al. 2008).

Beginning in 2008, the Council of Australian Governments agreed to invest $1.6 billion in a National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes (COAG 2008). The COAG Agreement committed each jurisdiction to prepare all organisations providing primary health care services to Aboriginal and Torres Strait Islander populations for accreditation against national minimum service standards, and to improve the quality of Aboriginal and Torres Strait Islander identification in key vital and administrative data sets. The Commonwealth committed to providing funding to support services to achieve these reforms.

The Program Management and Evaluation Branch of the Australian Government Department of Health and Ageing is responsible for establishing and managing the Aboriginal and Torres Strait Islander Chronic Disease Fund to improve the prevention, detection and management of chronic disease to improve life expectancy. The role includes funding the development and implementation of Indigenous-specific clinical practice and clinical support guidelines for the management of chronic disease prevention and primary care management (DoHA Aboriginal and Torres Strait Islander Health 2013).

In the Northern Territory the Expanding Health Service Delivery Initiative (EHSDI) (NT Dept of Health 2008) supported the coordinated delivery of primary care services and better health for Aboriginal and Torres Strait Islander people living in the Northern Territory, with a focus on children's health. This program, combined with Stronger Futures, was recently extended, making funding to support the implementation of CQI across all Aboriginal and Torres Strait Islander primary health care services potentially secure for a further ten years. An evaluation of the Northern Territory experience of implementing CQI is currently under way and its findings will influence the extent and/or focus of recurrent funding.

In the 2011–2012 federal budget $35 million was allocated until June 2015 to the Establishing Quality Health Standards Continuation measure to continue support for eligible organisations to achieve accreditation / certification, and to develop national KPIs for Indigenous-specific primary health care services. NACCHO has a defined role in the Establishing Quality Health Standards Continuation EQHS-C program, to ensure that the standards and processes that are developed do meet the requirements of Aboriginal and Torres Strait Islander services (DoHA 2011).

Although not focused specifically on Aboriginal and Torres Strait Islander health and health promotion through primary care, the Australian National Preventive Health Agency has included CQI among its capacity building goals. This will ensure the incorporation of CQI as a component of each of its preventive programs.

Structures to develop technical resources and system support

The Australian Health Ministers' Advisory Council, through the states and Commonwealth Research Issues Forum, the Cooperative Research Centre for Aboriginal Health, and the Commission for Safety and Quality in Healthcare, was the initial investor in the ABCD project. The project developed CQI tools for clinical audit and system assessment, developed and carried out training in CQI for health professionals, and provided technical support to services undertaking CQI (to assist in reporting on findings and using data to guide service development). These systems and audit tools were used by the services funded through the Continuous Improvement Projects and the Healthy for Life program (Bailie et al. 2007b).

The ABCD National Research Partnership began in 2010 with five-year funding from the National Health and Medical Research Council. The partnership is a national collaboration of health services, research organisations and organisations responsible for health policy, and is intended to support efforts across states and territories to strengthen CQI across the country. Among the research to be carried out by the partnership are projects to develop and test new audit tools, to identify the characteristics of health services that undertake CQI routinely and to identify factors that underlie variation in health care practice.

The National Aboriginal and Torres Strait Islander Health Performance Framework established the indicators to be used to assess progress in improving Aboriginal and Torres Strait Islander health—both nationally and within each jurisdiction. The KPIs used in the framework are grouped in three tiers—health status and outcomes; the determinants of health; and health system performance (AHMAC 2012). National reports have been published biennially since 2006.

The National Institute of Clinical Studies developed a Barrier Tool to help health professionals identify the barriers to applying evidence and changing practice within Australian health care settings. The tool can be adapted to particular services and to address specific health/clinical issues (National Institute for Clinical Studies 2006).

Summary: An emerging system for CQI

The literature search revealed a growing number of national policy initiatives over the past decade supporting or requiring Aboriginal and Torres Strait Islander (and, indeed, all) primary health care services to conduct CQI systematically and routinely—to improve the capacity of services to deliver primary health care effectively and efficiently, to improve the quality of clinical care and population health, and to demonstrate progress towards achieving the benchmarks set out in KPIs. Many of the policy initiatives have included funding support for the introduction of (or extension of) interventions (programs and services) that include the conduct of CQI, although this has not always been explicit. In some cases services have been expected to allocate resources for CQI from within those required for program development, delivery and evaluation.

There has been ongoing support for accreditation and CQI from NACCHO and its peak affiliates and NACCHO is playing a significant role in supporting ACCHSs to undertake accreditation and CQI.

There has also been national policy support and funding for organisations to provide the technical resources, training and support necessary for the conduct of CQI. The National Centre for Quality Improvement in Indigenous Primary Health Care (One21seventy) and the Improvement Foundation are two such organisations. In Victoria the Victorian Healthcare Association, and the Victorian Department of Health and VACCHO (in partnership), have invested in technical resources and in supporting services to conduct CQI. Overwhelmingly, though, the major policy drivers have been national to date.

Facilitators and barriers in the uptake of, and engagement in, CQI

The literature search revealed a wide range of facilitators and barriers to the uptake of, and engagement in, CQI in Aboriginal and Torres Strait Islander primary health care in Australia (and in other regions and countries). The ABCD and ABCDE projects and the APCC Program were enhanced by the addition of research to assist and support the initiatives, and each has published papers in which they identified factors that facilitated or presented barriers to the conduct of CQI within and by individual primary health care services. The findings from these studies formed the platform for the review, below.

The facilitators identified were operating at national, jurisdictional and/or regional levels. The decisions to undertake CQI, and to establish the systems and support necessary to do so, were driven by a combination of government policy, funding and senior managerial support that translated into recurrently funded CQI specialist positions, administrative support and material support (e.g. office accommodation). These were important facilitators of the uptake of CQI at the level of individual services and across a number of services.

Policy support and funding were, arguably, the most important facilitators of the uptake of CQI by Aboriginal and Torres Strait Islander primary health care services. However, the implementation of CQI required the active commitment of senior management in the health sector and within organisations, including within professions and teams. Strong regional management was identified as important (Gardner et al. 2011). Managers who exercised judgment about how they went about motivating staff achieved more, as did managers who introduced programs incrementally ('chipping away over time'). Effective managers engaged staff in building a shared organisational vision, making sense of what ABCD would mean for their own roles (Gardner et al. 2010; Urbis 2009).

Champions who advocated for CQI and its benefits were seen to be effective when they had authority to act and to make decisions to effect change. Strong clinical leadership for Continuous Improvement Projects activities and processes within funded services was one facilitator of success (Urbis Keys Young 2006; Gardner et al. 2011). The influence of medical champions operated through peer-based networks and the participation of clinicians was a crucial foundation for success in CQI (Gardner et al. 2010). Evidence affirming CQI's role in improvements in care (and/or in health outcomes) was helpful in increasing the engagement of clinicians and population health practitioners in CQI (Gardner et al. 2011).

Among the Healthy for Life participating organisations, those that had low staff turnover, limited structural changes and a history of effective action were all more likely to have undertaken CQI (Urbis 2009) than organisations that were less stable. Recurrently funded, designated CQI positions and sufficient resources to build and sustain a network of services and people committed to CQI were important facilitators, as were office accommodation, information systems (Urbis 2009) and efficient administrative systems.

Services that were part of a strong network for CQI were better insulated from barriers that otherwise might have obstructed efforts (Gardner et al. 2011). A combination of strong internal linkages among core staff (responsible for CQI) and strong external linkages was found to facilitate the uptake of CQI. Support from a local service system, including formal and informal partnerships (Urbis 2009), was important to the success of CQI in individual services.

Formal partnerships and consortia were found to offer Healthy for Life sites better access to scarce resources and the capacity to effect change at a regional or health-system level. The success of a partnership appeared to lie less in the formal architecture of the partnership model and more in the processes of working together—healthy working relationships, shared goals, clearly articulated roles and authorities for decision making, and effective communication mechanisms (Urbis 2009).

The availability and accessibility of accurate data and to electronic systems for data collection, management and reporting also facilitated the uptake of CQI. The capacity to compare performance across services involved in CQI, using aggregated data, allowed monitoring of progress and measurement of the impact of newly developed state-based chronic disease strategies that also fed into national performance reporting processes (Gardner et al. 2010).

Ready access to guidelines and audit tools, and technical and professional support, was important. Formal agreements between services (or groups of services) and organisations providing these forms of technical expertise (including training, information technology support, support with data collection and analysis etc.) were shown to be useful facilitators of practice (Gardner et al. 2010). The agreements also guaranteed access to clear protocols and tools to use in conducting audits, and for analysing and reporting on findings.

In response to a long-recognised need for a national, efficient, effective web-based system for data collection and management (for a variety of purposes, including CQI), OATSIH developed the Online Community Health Reporting Environment—OCHREStreams (OATSIH 2011). It is a single web platform that is intended to enable Aboriginal and Torres Strait Islander primary health care services to report on progress on a large number of OATSIH-funded programs, including those requiring CQI. As of February 2012, health services participating in the Healthy for Life and Australian Nurse–Family Partnership programs were required to submit their program reports via OCHREStreams.

A stable, skilled workforce that included managers, clinicians and health workers was one of the most significant factors influencing the uptake of CQI. A network of skilled, trained Facilitators working at regional and local levels to initiate and support services to undertake CQI has been critical to the conduct of CQI by individual services (Gardner et al. 2011). The level, skill and experience of Facilitators, and their approaches to working with the funded services (Urbis Keys Young 2006), made a significant difference to the likelihood of services undertaking CQI.

Training in the use of audit tools and processes was essential to assist staff and teams to develop new skills and ways of evaluating their services (Gardner et al. 2011), as was ongoing, responsive support to assist with problem-solving at any time in a CQI cycle. There was evidence of greater uptake of CQI when project managers and hub coordinators were able to train staff in different sites and to directly assist services to conduct audits, deliver the system assessment and interpret data (Gardner et al. 2010). No-blame, experience-based learning was critical in stimulating change (Gardner et al. 2011). Regular workshops are a regular feature of effective training, getting different services together not only for training but also for discussions about each service's issues and difficulties and to look at each other's data to compare performance. And across all evidence of effective training was an emphasis on good communication with skilled Facilitators, particularly around the introduction of new concepts and approaches (Urbis Keys Young 2006).

A further group of factors related to the internal capacity of individual health services to conduct CQI. The Continuous Improvement Projects and the ABCD program evaluations found that within a service the involvement of all staff in the conduct of CQI facilitated uptake (Gardner et al. 2011). Effective communication, consultation and cohesion among staff members about the conduct of CQI, and the provision of positive feedback to staff on progress and achievements, were also facilitators of the uptake of CQI.

The APCC 'approach to quality improvement was popular with GPs [general practitioners] and other general practice staff. 'Ownership' of the changes and their implementation details, tested through PDSA [Plan–Do–Study–Act] cycles, increased practice enthusiasm' for CQI. Changes in professional practice or in service delivery that showed improvements over short periods of time encouraged practices to achieve positive results' (Ford & Knight 2010:91).

The APCC experience also showed that expanded roles for staff—particularly the role of practice nurses—had become part of the existing service delivery system within general practice. The active engagement of as many staff as possible in the conduct of CQI facilitated its uptake and effectiveness in leading to improved quality of care provided by services (Ford & Knight 2010).

Many of the services involved in Healthy for Life had taken some steps towards CQI before implementing the Healthy for Life Program, with some having had considerable exposure to CQI methods through other programs, which was an advantage (Urbis 2009). Understanding CQI (through previous experience) and cultural readiness to change were found to be prerequisites for the ready uptake of CQI by clinicians and managers, and for success in improving the quality of care (Urbis 2009). Beyond this, a more generalised willingness within services to adopt changes and try new approaches (Urbis Keys Young 2006) predicted the likelihood of services taking up CQI.

The ABCD project found that the absorptive capacity of services—the capacity to provide a 'combination of formal expertise, technical infrastructure, organisational know how and informal networks' (Gardner et al. 2010:6)—was associated with the successful uptake and use of CQI.

Summary of facilitators

The literature confirmed that factors at each level at which action is needed to conduct CQI were significant drivers of the uptake of CQI—beginning with policy commitment and investment. The literature highlighted the significance of leaders, champions (advocates) and managers who were committed to CQI and who worked both at jurisdiction-wide levels and with individual services to develop the organisational and workforce capacity to conduct CQI.

The literature illustrated that the technical support offered by APCC or One21seventy was necessary for both the specialist CQI workforce and for service managers and clinicians within services. This included ready access to tools and data collection systems, and support in the conduct of audits and in interpreting and acting on results facilitated uptake of CQI.

Some facilitators of the uptake of CQI were not specific to CQI itself—but were, rather, features of individuals, services or the primary health care sector as a whole. The stability of the workforce, a culture of support for the workforce to engage in new initiatives, and a system that reassures and builds the confidence, as well as the competence, of staff in conducting CQI (or any new activity) were all identified as facilitators of the uptake of CQI. These are characteristics of learning organisations more generally, but apply equally to the uptake of CQI.

Many facilitating factors were internal to services or teams, where leadership, communication, teamwork and a culture of commitment to CQI all influenced the uptake and engagement of CQI by services.

Barriers to the uptake of CQI

The literature also revealed a range of barriers to the uptake of CQI.

Some services (and managers/clinicians) were sceptical about the purposes of CQI. A minority of services became disillusioned with Healthy for Life and the ABCD project because of the reporting requirements and believed that the program was more concerned with the generation of data than with achieving improvement in health outcomes (Gardner et al. 2010).

In addition lack of organisational support, lack of support from key clinical staff, restricted access to patient information by different health professionals, lack of support and training, and poor communication with OATSIH and Facilitators (Urbis Keys Young 2006) were all identified as barriers to the ongoing conduct of CQI by services.

One of the most challenging barriers to the routine uptake of CQI by Aboriginal and Torres Strait Islander primary health care services was the lack of availability of a stable, skilled workforce. Many Aboriginal and Torres Strait Islander primary health care services in rural and remote areas experience high staff turnover. The challenge of recruiting and retaining a skilled workforce in rural and remote primary health care services is not particular to CQI but it does affect the capacity of services to undertake CQI. Even where designated CQI positions had been established, short term funding meant that health workers were reluctant to take them up because they did not offer secure employment.

High staff turnover led to a lack of 'corporate knowledge' about CQI within health services (Urbis 2009) and even if new staff could be employed they were not always ready or willing to undertake a leadership role in the conduct of CQI. Moreover, high staff turnover also limited the capacity of services to explain CQI to communities and to engage communities actively in CQI.

Some services reported that in addition to the loss of corporate knowledge and skills that resulted from high staff turnover, they were also working with inadequate data capture systems and were operating in an environment where they knew there was a lack of appropriate services for referral. In some cases the responsibility for the CQI program was left to the manager if no Coordinator was available and if there was a lack of consistent staff to take on responsibility for the program (Gardner et al. 2011).

The geographic dispersion of participating services posed logistical and management challenges to supporting hub coordinators and health services at the regional level. Facilitators (sometimes known as hub coordinators) require integrated management, clinical and research support and this is not always readily available (Bailie et al. 2010). For example, regionally based block training is a barrier for Aboriginal staff who expressed a preference for on-the-job, apprentice-style training (Allen and Clarke 2011).

Understanding the need for CQI, committing to its practice and engaging in its conduct requires primary health care workers to be clear about 'what CQI is' and what is involved in its conduct. Phillips et al. found that lack of consensus among primary care workers about the meaning (in their study) of clinical governance was a barrier to its expanded use in Aboriginal and Torres Strait Islander primary health care (Phillips et al. 2010). And the evaluation of the implementation of the Healthy for Life initiative found that some services spoke of having been 'caught unawares' by what Healthy for Life actually required of them in terms of 'systems work' and data collection (as opposed to clinical service delivery)—not only in the initial planning processes, but also on an ongoing basis (Urbis 2009). Most services had struggled with the organisational process of conducting CQI (to a greater or lesser extent) and some had stalled (Urbis 2009).

If centre managers were ambivalent, it did not matter if hub coordinators trained staff and assisted them to undertake audits or run feedback sessions—the ambivalence still meant that the implementation of the CQI cycle tended to be delayed or to stagnate.

In terms of motivation to participate in CQI, some staff/services questioned the results of ABCD audits and asked whether they reflected care that had actually been delivered, or whether the data just reflected inadequate documentation of that care. Among nurses and Aboriginal Health Workers who were engaged in the work, some did not see CQI as their role (Gardner et al. 2010). In some instances, services involved in ABCD operated a combination of paper-based and computerised systems. This had a significant impact on the amount of time involved for participation and it also impacted on the results of audits and this occasionally caused disputes among the staff (Gardner et al. 2010). Some services reported that they viewed the auditing as a method for policing and checking up on the work of health professionals—rather than as a method for improving the quality of care.

Others found that the ABCD tools had captured information that was beyond the capacity or role of the service to address (Gardner et al. 2010) and were, as a result, sceptical of the usefulness of having conducted an audit. Some teams felt that the audit and its findings meant they had less autonomy to make decisions about the way care was provided and that this meant they were less likely to be motivated to continue to undertake CQI (Gardner et al. 2011). Some services found that the implementation of CQI was complex, messy, resource intensive and time consuming (Gardner et al. 2010, 2011).

Summary of barriers

The literature identified a range of barriers to the uptake of CQI in the Aboriginal and Torres Strait Islander primary health care sector at both jurisdictional and individual service levels. Among the most important of these were:

- difficulty in recruiting and retaining a skilled workforce, a difficulty compounded by insecure funding for CQI positions
- a combination of some confusion on the part of service managers and health workers/clinicians about CQI and lack of clear understanding of the capacity required by services to conduct CQI
- scepticism or ambivalence about the purposes and benefits of CQI.

As the focus of some services, health workers and clinicians, and of governments, began to shift towards building a system-wide, organised approach to the use of CQI by Aboriginal and Torres Strait Islander primary health care services, the literature began to identify the factors either facilitating or posing barriers to this evolution. Federal and state/territory government policy support, increased funding and the gradual development of designated organisational capacity for CQI—at service level and, in some jurisdictions, at state/territory level—were identified as facilitators. Organisations/companies dedicated to supporting Aboriginal and Torres Strait Islander primary health care services to conduct CQI emerged—Improvement Foundation and One21seventy, for example—complementing and supplementing the work of accreditation agencies, and of services. A structured, CQI-specific implementation research program was funded (the ABCD National Research Partnership) to support the development and roll out of CQI. Other organisations also developed audit tools, performance guidelines and standards or indicators and assisted services to conduct CQI (e.g. Victorian Healthcare Association, DoHA, National Prescribing Service).

Specialist CQI organisations, combined with the peak agencies (NACCHO and its affiliates, and the Commonwealth/state/territory health ministries/departments), professional associations and non-governmental organisations, have played roles in moving CQI from being the preserve of a small number of services to being on the national primary health care policy agenda, with the expectation that CQI will become a component of the core services of all Aboriginal and Torres Strait Islander primary health care services.

It has been a complex, demanding task for multiple organisations and people to develop the audit tools, to persuade, motivate and skill health care providers and managers to undertake CQI, to persuade governments and private industry to invest in the tools, training, and support necessary, and to conduct and evaluate the outcomes of CQI.

Analysis of the Interviews and Discussions

After a decade of action to facilitate and extend the uptake of CQI by Aboriginal and Torres Strait Islander primary health care services, the Appraisal Project was established to identify the actions being taken across the country, and to review what has been learned from that experience. The Appraisal Project also identified factors that had enhanced the capacity of Aboriginal and Torres Strait Islander primary health care services to conduct CQI, to benefit from its application, to integrate CQI into their core business and to sustain their commitment to and investment in CQI over time.

The following is the analysis of the interviews and discussions with policy makers, managers, Coordinators, Facilitators and health workers engaged in CQI in seven jurisdictions in either the community-controlled or government-managed health sector.

What CQI programs, models, tools and standards are being used by Aboriginal and Torres Strait Islander primary health care services?

Respondents named multiple methods, audit tools, organisational change tools, reporting frameworks, standards, electronic medical record systems and funding programs in response to this question. The responses—grouped to illustrate where each 'fits' in a CQI cycle—were:

- CQI models or programs
  - One21seventy
  - APCC
  - clinical governance
  - Improvement Foundation
- funding programs
  - Healthy for Life Program
  - Indigenous Chronic Care Package
  - Closing the Gap
  - Expanding Health Service Delivery Initiative (EHSDI)
- audit tools
  - Dual Diagnosis Capacity in Addiction Tool (DDCAT)
  - Perinatal Service Flowchart
  - Aboriginal Health Promotion and Chronic Care Partnership (AHPACC) tool
  - PEN Computer Systems' Clinical Audit Tool (PENCAT)
- methods for assessment and planning for change
  - Plan–Do–Study–Act (PDSA)
  - Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis
  - Business Objects
- ACCHS CQI principles, framework, elements
  - Continuous Quality Improvement Principles, Framework and Elements (Anyinginyi Health Aboriginal Corporation n.d.)
- electronic health record/practice management software
  - Communicare—an integrated electronic health and practice management system
  - PCIS—practice management software
  - PIRS—Patient Information Recall System
- accreditation standards and accreditation agencies
  - AGPAL
  - Accreditation for Remote Services—standards for accreditation of Aboriginal and Torres

    Strait Islander primary health care; the accreditation process will be undertaken by AGPAL and Australian Council on Healthcare Standards (ACHS)

- methods to support organisational/professional change
    - » Six hats thinking
    - » 8ways model
    - » Business Objects
- reporting frameworks
    - » Quality KPI report, the national KPI trial.

These responses imply that health professionals, policy makers and practitioners who are engaged in CQI view it in a variety of ways. For some, CQI is synonymous with a conceptual model of a structured method and process to audit performance, to review against standards or guidelines or performance indicators, and to take steps to improve on performance (or to sustain high levels of performance). Although One21seventy was the most commonly mentioned model among this group of responses, some services had opted for another model (e.g. clinical governance) or another provider (e.g. Improvement Foundation), or to work independently with audit tools relevant to specific needs (e.g. DDCAT). Some included in their understanding of CQI specific methods and tools to facilitate communication among managerial and professional teams to assess the need for, and to plan for, change.

Some viewed accreditation and CQI as interchangeable methods and processes; some viewed audit tools and their application as constituting CQI—systems assessment tools, and/or clinical audit tools. In addition, a variety of information technology and electronic health record systems were viewed as central to the conduct of CQI—with multiple versions of these being used by primary health care services.

How is CQI organised and managed in the jurisdictions?

Respondents were asked how CQI is organised and managed in their jurisdictions. We received information from each jurisdiction except New South Wales. The majority of respondents were from government-managed organisations. The information on New South Wales was taken from the website of the Aboriginal Health and Medical Research Council and the Maari Ma Aboriginal Health Service website.

Northern Territory

The Northern Territory Aboriginal Health Forum (NTAHF) has strategic oversight of the planning and development of the Aboriginal primary health care system in the Northern Territory. The Forum is a partnership made up of AMSANT, DoHA, and the Northern Territory Department of Health. With funding from OATSIH, through the Expanding Health Service Delivery Initiative (EHSDI), AMSANT and the government-managed sector have implemented the CQI program.

In 2008 NTAHF invested in a jurisdiction-wide approach to CQI and committed the organisations in the partnership to work together to improve health outcomes for all Aboriginal people in the Northern Territory through health system reform and the development of Aboriginal community controlled primary health care services which provide safe, high quality care and facilitate access to specialist, secondary and tertiary care.

The CQI program is governed by a Steering Committee whose membership includes representatives from each of the Forum Partners and clinicians working in primary health care. Under its guidance, the Northern Territory has become a national leader in developing the specialised infrastructure support and workforce capacity necessary to implement CQI across all ACCHOs and government-managed Aboriginal and Torres Strait Islander primary health care services within a jurisdiction. A strategic plan, the NT CQI Approach, was developed and includes principles, frameworks and key elements of an integrated approach to embedding CQI in routine primary health care—at territory-wide, regional and local service levels.

By 2012 significant infrastructure had been developed, including two Coordinator positions and 16 CQI Facilitator positions, working with groups of eight to ten services. Some of the CQI Facilitators are employed by the Department of Health and are managed by a CQI Projects Manager. Others are employed by ACCHOs and work with one or several health services within a region. As of December 2012, 190 health professionals in the Northern Territory and 25 Aboriginal and Torres Strait Islander Health Workers had been trained in the use of One21seventy audit tools and processes.

The CQI Coordinators support the implementation of CQI and provide mentoring and training in CQI principles and tools to the CQI Facilitators and primary health care teams. The Facilitators work with individual, local primary health care services (and their Boards and communities) to conduct CQI audits and facilitate the use of the data to bring about positive improvements in quality of care. Important parallel initiatives to CQI in the Northern Territory have included a regionalisation process based on the policy 'Pathways to Community Control' (Northern Territory Aboriginal Health Forum 2009) and the Northern Territory Aboriginal Health Key Performance Indicators Project.

NTAHF also developed a set of KPIs to:

- inform understanding of trends in individual and population health outcomes
- identify factors influencing these trends
- inform appropriate action, planning and policy development.

The processes of data collection, analysis and reporting on KPIs across all Aboriginal primary health care clinics began in 2009. The data used to report on the Northern Territory KPI and other clinical data are also used to inform quality improvement activities, PDSA cycles and changes to systems of health care delivery (Northern Territory Aboriginal Health KPI Information 2009).

In the Northern Territory some independent quality improvement initiatives have been undertaken by services independently of the national and jurisdictional initiatives. The Central Australian Aboriginal Congress has had a quality assurance/monitoring process in place for some years and the Sunrise Health Service Aboriginal Corporation (McConnel 2010), for example, used collaborative methods to achieve improvements in the quality of care it offers. Services are working to enhance their electronic information systems to enable them to conduct quality improvement and a number of Patient Information Recall System providers are also developing their systems to support the conduct of quality improvement.

Queensland

Queensland has invested in specialist infrastructure for CQI in Aboriginal and Torres Strait Islander primary health care through its Primary Health Care CQI Team. Queensland Health developed the Making Tracks to Close the Gap Policy and Accountability Framework to guide its work in closing the gap in Indigenous health outcomes. It included investment in the primary health care CQI program.

Queensland Health established a state-wide CQI Steering Committee at the executive level, with representation from participating hospitals and health services, a System Manager, Queensland Aboriginal and Islander Health Council (QAIHC), GP Queensland and the Royal Flying Doctor Service.

In addition, a specialist CQI team was established by Queensland Health to support the improvement of quality of care provided to Aboriginal and Torres Strait Islander clients, using the One21seventy model and tools, and a coordinated approach. Comprising two Coordinators and 12 locally based Facilitators, the CQI team provides support for the implementation of the One21seventy CQI cycle, including the training and technical and professional support required by Aboriginal and Torres Strait Islander primary health care services to conduct and benefit from CQI.
In October 2012, 75 services across Queensland, including government departments, community health centres, the Royal Flying Doctor Service and ACCHSs, were conducting CQI with the support of the Primary Health Care CQI Team. The implementation of CQI in Queensland Health is aligned with the production of evidence-based clinical guidelines (e.g. *Primary Clinical Care Manual* (Queensland Government 2011), *Chronic Disease Guidelines* (Queensland Government 2010), and the Pathways to Rural and Remote Orientation and Training (PaRROT) package (Queensland Government 2012).

Closing the Gap funding enabled Queensland Health to implement a strategic and coordinated approach to CQI. Two Coordinators are responsible for jurisdiction-wide implementation—providing training, governance, data analysis and regular state-wide networking, and contributing to the development of shared resources. The Coordinators also support services to link to One21seventy for technical advice, and ensure that CQI results and experiences contribute to the state's obligations on accreditation and reporting on Queensland's progress on national KPIs.

The Facilitators work locally with up to eight individual primary health care services to conduct CQI and to support services through the PDSA cycle using the One21seventy framework. Both government-managed and community-controlled health services now conduct CQI and a strong partnership and collaborative network is in place.

The Queensland Health Primary Health Care CQI Team provided the information above.

The Queensland Aboriginal and Islander Health Council (QAIHC), in partnership with GP Queensland, and supported by the Improvement Foundation, formed the Queensland Close the Gap Collaborative, to implement an evidence-based approach to quality improvement in Queensland. In its first year's work in 2011, the Collaborative reported that 13 of 21 ACCHSs with medical clinics were participating in the Collaborative, along with 17 general practices. Participating practices were collectively seeing around 40,000 Aboriginal and Torres Strait Islander clients in 2011 (General Practice Queensland & QAIHC 2012:4–5).

South Australia

The Aboriginal Health Council of South Australia (AHCSA), the University of South Australia (UniSA) and SA Health became signatories to the ABCD National Research Partnership and the One21seventy program in 2010. With funding from SA Health, a Research Officer was appointed to UniSA. Working closely with ACHSA, the Research Officer's role includes recruiting and supporting Aboriginal and Torres Strait Islander ACCHSs to conduct CQI using the One21seventy model, tools and support system, and developing a research program that has salience to participating local health services and the policy context. SA Country Health also recently committed to engaging Medicare Locals in CQI—using the One21seventy model.

An active South Australian Regional Steering Committee oversees the ABCD National Research Partnership, which includes all local partners (UniSA, AHCSA, SA Health). The Committee is supported by the ABCD National Research Partnership Coordinating Centre. AHCSA and SA Health are represented on the ABCD National Research Project Management Committee, demonstrating their commitment to the concept and practice of CQI.

In June 2012, nine ACCHSs in South Australia were participating in the ABCD National Research Partnership and were registered with One21seventy. The Lowitja Institute and SA Health have supported this with short-term funding to support health centre staff training and workshops. Two additional services registered with One21seventy in July 2012, following their transition to becoming community-controlled services. The majority of staff members driving the CQI activity in each of these services are Aboriginal.

Important though One21seventy has been to the initiation and sustainability of CQI in and by Aboriginal and Torres Strait Islander primary health care services, it is not the only provider of tools, training and technical support for services in South Australia. Other organisations also provide training, audit tools and information technology platforms to support the conduct of CQI, and some ACCHSs in South Australia use these in preference to One21seventy.

The goal for the first phase of the ABCD National Research Partnership is to ensure that Aboriginal and Torres Strait Islander Health Workers and communities have a good understanding of CQI, why it is important and the benefits it will bring. Each of the nine services registered with One21seventy has a designated CQI contact person. Over time it is intended that designated CQI Facilitator positions will be established—some within individual services (large, comprehensive services) and others working with groups of smaller services. The Chief Executive

Officers of many Aboriginal and Torres Strait Islander primary health care services have often been enthusiastic initially about the potential of CQI for their services, but the reality of investing designated time and staff has proven to be difficult. Only services with internal drivers to lead the process have been able to conduct CQI audits at the time of this project.

From the beginning there has been a conscious effort to ensure that Aboriginal Health Workers play leadership roles in the CQI conducted by and in the individual ACCOs, although it is proving to be challenging to engage Aboriginal Health Workers in CQI leadership roles. The Aboriginal Health Worker workforce in South Australia is small and heavily committed, few Aboriginal Health Workers have had access to training in CQI, and competing priorities make it difficult to find time to devote to CQI. However, it is recognised that the full engagement of Aboriginal Health Workers in CQI will be central to the sustained success of quality improvement initiatives.

Experience to date confirmed that across South Australia there is still a need to build understanding among health service managers, Aboriginal Health Workers and communities about what CQI is, and about the skills and resources needed by individual services. It will be necessary, too, to enable health workers to have hands-on experience for two to three years (or to conduct two or three cycles) in order to build sufficient capacity to sustain the conduct of CQI routinely. Funding is needed to support this.

The decision to sign up with the ABCD National Research Partnership (and One21seventy) in South Australia was a result of the collaboration between AHCSA (in particular, the Public Health Medical Officer), SA Health and UniSA. This collaboration gave CQI legitimacy and individual ACCHSs participated on that basis. The decision was to take a 'testing' approach to see whether this will work for South Australia and individual services. The Research Officer position was developed as a hybrid position—offering a practical resource to support and to build capacity by working in partnership with ACCHSs, as well as developing a locally relevant research program. The current research in South Australia will comprise case studies from which learning will be drawn to further build the capacity of the ACCHSs to conduct CQI, as well as to develop deeper understanding of the barriers and enablers to CQI in the South Australian context.

Western Australia

WA Health intends to develop performance targets for Aboriginal health outcomes. This was outlined in the WA Health Activity Purchasing Intentions document and service plan in 2012 (Government of Western Australia 2012:20). Responsibility for developing the targets and reporting on progress sits within the Performance, Activity and Quality Division of WA Health. The details were to be discussed with government-managed health services (including primary health care services) in 2012–2013.

The Western Australian Department of Health's Office of Safety and Quality in Healthcare is responsible for all quality improvement programs within WA Health. There are no quality improvement initiatives specifically being conducted through that office by and with Aboriginal primary health care services. Most WA Health quality improvement programs focus on clinical service audits of hospital-based services and programs. The only program with a specific Aboriginal focus is the consumer value program, which manages patient-first documents.

In addition, across the Aboriginal community-controlled health sector there has been a concerted and long-term development of capacity and personnel to undertake clinical governance activities. The Kimberley Aboriginal Medical Services developed clinical indicators and was among the ACCHSs considered to be in the vanguard of clinical governance in Australia (Couzos & Murray 2008). The Aboriginal Health Council of Western Australia (AHCWA) was funded by the Commonwealth to promote the uptake of Medicare Benefits Schedule Aboriginal and Torres Strait Islander Assessment Items, Chronic Disease Management items and follow-up items as part of the Indigenous Chronic Disease package. CQI was at the core of this project (AHCWA 2011:30). AHCWA has also implemented a Management Framework, and the Western Australian Network of Alcohol and Other Drug Agencies (WANADA) has developed and implemented a Quality Framework for use across the network.

The Directorate of Aboriginal Health within WA Health provided funding through Curtin University to coordinate the Western Australian engagement in the ABCD National Research Partnership. Through this funding the project team is able to support interested Aboriginal Medical Services to obtain training and technical support to use the One21seventy toolkit. As of late 2012, three to four Aboriginal Medical Services and two West Australian Community Health Service sites were being supported with the implementation of CQI around their chronic disease programs.

Victoria

The Aboriginal Health Promotion and Chronic Care (AHPACC) partnership between VACCHO and the Victorian Department of Health supports Aboriginal community-controlled health organisations and government-managed community health services to work together to improve health outcomes for Aboriginal people in Victoria with, or at risk of, chronic disease.

In 11 partnership sites across the state, services and programs have been developed and delivered to communities, and there has been investment in building the organisational and workforce capacity of each of the partner services to undertake CQI.

An AHPACC CQI assessment tool has been developed based on success factors identified in a review in 2010–2011. It is a systems assessment tool designed to assist services to assess and reflect on the extent to which their programs and services are accessible to, and responsive to, community needs in relation to chronic disease prevention. The AHPACC now requires all services seeking funding from the AHPACC 2011–2014 funding round to demonstrate how they have used the CQI assessment tool—or how they plan to use it in the future.

The Victorian Healthcare Association has been developing standards and processes for the conduct of clinical governance in the community health sector since 2007. Although the standards are not specific to the Aboriginal and Torres Strait Islander primary health care sector, they can be used equally by the community-controlled sector.

New South Wales

The information included here was obtained primarily from the 2011–2012 Annual Report of the Aboriginal Health & Medical Research Council of New South Wales (AH&MRC 2012:9).

AH&MRC has given priority to ensuring that all its Member Services are accredited and has assisted Member Services to achieve both clinical and organisational accreditation under the Commonwealth's Establishing Quality Health Standards Continuation (EQHS-C) measure. In 2011, 35 Member Services were reported to have RACGP accreditation, (a 34% increase over the previous year), and 30 Member Services were engaged and working towards QIC accreditation in 2011 (AH&MRC 2012:10).

In 2011–2012, through the establishment of the AH&MRC Continuous Quality Improvement (CQI) program, the AHMRC laid the foundations for strengthening capacity and quality in service delivery. In addition to carrying out detailed needs assessments with ACCHSs, the AH&MRC conducted workshops to support each ACCHS's use of the Clinical Audit Tool (CAT) for ongoing quality improvement (AH&MRC 2012:9).

Encouragingly, too, the Maari Ma Health Aboriginal Corporation in far western New South Wales began implementing CQI in 2005, beginning with the ABCD program and moving to the One21seventy model to measure quality and progress in implementing the Far West Chronic Disease Strategy. Since then, the annual cycle of clinical file audits, system assessment, feedback and goal setting has become embedded as standard practice in the Maari Ma local health services (Maari Ma 2011). Maari Ma is also a member of the ABCD National Research Partnership.

Tasmania and the Australian Capital Territory

Tasmania and the Australian Capital Territory are small jurisdictions with limited resources to enable them to purchase technical support (from One21seventy, for example). However, CQI activities have been taken by individual services, and, in 2012 the ACT Medicare Local and the Tasmania Medicare Local began to establish more formal CQI initiatives focusing on improving the quality of primary care available to and used by their Aboriginal and Torres Strait Islander patients, clients and communities.

How is CQI work funded?

The primary sources of funding to support and conduct CQI in the states and Territories and community-controlled affiliates have been new funds from OATSIH, Closing the Gap, EHSDI, and the jurisdictions' own departments, ministries of health and, in some cases, community-controlled peak affiliates.

With the exception of the Northern Territory (which received extended funding through the EHSDI until 2022), all jurisdictions expressed concern at the potential loss of federal funding when the current round of Closing the Gap funding ends in 2013.

The APCC Australian Primary Care Collaboratives Program was funded during 2012 for a further two years. Services that have been engaged in one (or more) of the waves associated with this program are likely to have continued funding for that period.

But funding for CQI, separately from funding to support services to become accredited or to support the implementation of specific programs, is uncertain at best.

Is CQI working? What changes are occurring as a result of implementing CQI?

Most respondents considered that CQI was working in their jurisdictions, although they based their decisions on different criteria.

Several had seen CQI result in improvements in the quality of data and a strengthening of the power of data to illuminate local issues, which had resulted in improvements in service delivery (senior bureaucrats). One senior bureaucrat had evidence of the success of the Healthy for Life initiative in her jurisdiction and identified improvements in service delivery as confirmation of this.

For one service administrator the application of the One21seventy Systems Assessment Tool had resulted in the preparation of a Cyclical Action Plan that included a set of principles and community/service defined needs that she regarded as an important improvement in the quality of service planning and delivery.

Several respondents reported that they judged CQI to be working by the extent to which CQI had been integrated into the core business of their organisations. In one service the CQI program had several champions, including the nurse, team leader, representatives from the Quality and Safety area, and community representatives.

Other indicators of success were that all staff report on CQI to area service managers, and that all staff, including Aboriginal Health Workers, nurses and administrators, were engaged in the conduct of CQI. CQI is always on the agenda at team meetings and regional meetings, and at meetings with external stakeholders. For some, indicators that CQI had worked was that staff members were keen to participate, and there had been a noticeable, positive shift in staff's thinking about CQI (senior clinician, CQI Coordinator, bureaucrat).

For another respondent the establishment of designated CQI positions for Coordinators and Facilitators was an indicator of success (senior clinician/bureaucrat).

One Coordinator commented that although there have been many challenges, positive changes have been made, proving that it is possible to improve the quality of care (CQI Coordinator).

Some respondents found it difficult to decide whether CQI was working or not—there had been insufficient time to be sure it had succeeded in their view. Others had received mixed feedback from services and clinicians, but agreed that more time (and more evaluation) is needed before they can decide whether CQI has worked (senior bureaucrats).

Overall, the criteria used to assess whether CQI had worked were a reflection of the roles that had been played by respondents in building the capacity of the Aboriginal and Torres Strait Islander primary health care sector to undertake CQI, the point to which the system to conduct CQI had evolved in their jurisdiction and the time over which action has been occurring. It is logical that the earliest phases of development of a system for CQI across a jurisdiction focus on building the capacity of the stakeholder organisations and staff and on disseminating the tools and resources (including audit tools, training, mentorship and support) necessary to enable services to participate. It is logical, too, that the second phase of development focuses on assisting services to conduct at least one CQI cycle, and to assess the benefits that flow from its use. A final phase of development would focus on the number of services engaged in CQI across a jurisdiction, the number of cycles being conducted, the impacts on the organisation and delivery of services and on the quality of care provided, and, ultimately, on the health of communities and populations. Different criteria to measure success apply at each phase of development.

What made it work?

Leadership was important to the uptake of CQI—strategic leadership, in either (or both) the community-controlled and government-managed Aboriginal and Torres Strait Islander primary health sector. Some respondents pointed to the importance of Aboriginal engagement in CQI—through their membership of health boards, as health professionals and service managers/administrators, and as community members. In some jurisdictions strategic leadership was provided by a state-wide committee or forum with membership from key stakeholder organisations (community controlled and government). In other jurisdictions, leadership was provided through a relevant portfolio in the government-managed health sector; in others it was provided by the board or management of a community-controlled service, or by a community-controlled peak affiliate. In all cases, such strategic leadership was significant in introducing the broad concept of CQI to the Aboriginal and Torres Strait primary health care sector, in securing and in overseeing the investment of resources in infrastructure to conduct CQI.

As well, the active commitment of senior health sector managers who understand and provide ongoing support for CQI had been important, including managers who recognise the differences between CQI and accreditation and who support the investment of separate funding in each. As well, leaders who invest in designated positions for CQI Coordinators and Facilitators, and who require routine and regular reports on progress, were considered necessary to success (senior bureaucrats/clinicians/CQI Coordinators). Champions have made a big contribution to building motivation and organisational capacity to conduct CQI. Regular reporting/advocacy about the efficacy of CQI and its benefits to the health sector and communities by all those involved was important (CQI Coordinator).

Policy support and new funding were important facilitators of the uptake of CQI. In some jurisdictions, funding had been used to establish a designated CQI infrastructure—with Coordinator positions and Facilitator positions to provide technical leadership, training, mentorship, advice, and the practical support needed by services and clinicians to conduct CQI. Recurrent funding for designated CQI positions had facilitated participation in CQI (senior clinician).

Funding has also been necessary to purchase training, tools, resources and technical support—sometimes from a provider organisation such as One21seventy or the Improvement Foundation, and sometimes from agencies that have developed audit tools for specific issues (CQI Coordinators).

Through the Healthy for Life Program, the ABCD program and One21seventy, considerable expertise has been developed in providing effective training for primary health care managers and health professionals in the conduct of CQI. In addition, the APCC Program has facilitated training for the services participating in its quality improvement waves. Training (and follow-up mentorship and support) was considered vital by all.

Where Coordinators and Facilitators had formed strong relationships with service providers, there was a greater likelihood of services conducting CQI. But there was limited evidence of individual services fully taking over the conduct of CQI from the specialist CQI Facilitators.

Communication within services and among CQI teams and networks, and across jurisdictions (at national forums), was another facilitator of participation and success. Team planning with everyone involved and regular face-to-face meetings of the CQI Facilitators were important to the sustainability of CQI, as was regular reporting on progress to service managers and other stakeholders (CQI Coordinator).

A national forum for CQI Coordinators, Facilitators, practitioners, policy makers, researchers and interested community members was also helpful (senior bureaucrat). Team training and outreach training had facilitated the practice of CQI—supported by mentorship and regular opportunities to share learning among specialist CQI staff and among health professionals and managers from individual services. These all contributed to building confidence among primary health care service staff in conducting CQI. The need for ongoing support from, for example, One21seventy or a state/territory Coordinator or Facilitator was also important (CQI Coordinators).

Access to accurate, relevant, comparable data was recognised universally as a facilitator. Being able to collect, manage and facilitate the use of data, including the ways in which data are presented, reflected upon and acted upon, are critical indicators of the success of CQI (clinician). The ABCD National Research Partnership is contributing to building national data sets that will allow comparison across individual sites/services and across jurisdictions (senior bureaucrat).

However, some respondents spoke of the large number of electronic practice management/patient record systems used by services. Although it is recognised as important for services to select systems that reflect their needs, it was proposed that there is a need to harmonise the systems so it is easier to aggregate and compare data. Having access to aggregated data (as a contributor and as a receiver) and being able to discuss with others in a secure environment was a further facilitator to the conduct of CQI. However, more work is needed to enable all services (ACCHOs, in particular) to acquire and use the tools necessary to collect data and to ensure their quality.

KPIs were helpful, in the view of some respondents, as benchmarks against which to assess jurisdictions' or services' performance. In the Northern Territory and Queensland there has been more than ten years' work by AMSANT, QAIHC and the government sector to identify KPIs. There are currently 12 quantitative indicators and seven qualitative indicators (on systems and processes) for use in the Northern Territory and Queensland, with a further two quantitative indicators about to be added. These KPIs were influential in the definition of the KPIs used in the National Aboriginal and Torres Strait Islander Health Performance Framework. The national KPIs provide a benchmark for comparison across jurisdictions.

The availability of relevant audit tools and technical support for the conduct of CQI was a significant facilitator—audit tools that 'fitted' the needs of particular services or that can help to solve particular problems were helpful (CQI Facilitator).

What were barriers to CQI working?

All respondents expressed concern about the lack of certainty about recurrent funding for CQI within the Aboriginal community-controlled and government-managed health sectors. The clear policy support for CQI being expressed through federal programs (and some state/territory programs) has been supported by investment funding until 2013. But uncertainty about future funding was already influencing the commitment to CQI in some jurisdictions—reducing the likelihood of investment in recurrent positions and in the licensing/training agreements that are necessary to ensure that CQI is embedded in the core business of the primary health care sector (CQI Coordinators, senior policy makers).

In the literature and in the discourse that has informed the Appraisal Project, CQI has been variously conceptualised as quality improvement, quality assurance, clinical governance, quality collaboratives, clinical quality improvement, service performance monitoring and national performance monitoring. Each of these is a model or form of CQI that has evolved for specific purposes, or to address explicit issues, and each contributes to improving the quality of health care systems and professional practice. However, this can be confusing to service managers and clinicians.

Some models of CQI have been adopted and developed by organisations that then go on to sell their products (including training, audit tools, technical support and ongoing mentorship) to health services. CQI is then viewed by some as if the products of these organisations represent the whole of CQI. Again, this can be confusing.

Among some Aboriginal Health Workers, there was limited opportunity to learn about, or to be trained in, CQI and to acquire the skills needed for its conduct. And there were still service managers and health workers who did not understand CQI, or who were not committed to its conduct (Aboriginal Health Workers, policy maker).

There has been confusion, too, on the part of some primary health care practitioners about the relationship between accreditation and CQI, although they each have separate policy drivers and funding streams. Although this confusion is being resolved as managers and health professionals become more familiar with both, it contributes to lack of clarity about, and commitment to, CQI within the Aboriginal and Torres Strait Islander primary health care sector.

Some policy makers and managers had found it difficult to understand the organisational and workforce capacity that is needed by services (and health professionals) to conduct CQI (senior bureaucrat). There was conceptual confusion about models of CQI, about the range of IT platforms and patient record/practice management systems available to support the work, and about the strengths and weaknesses of different providers of audit tools. Some service managers saw the data collection and reporting required for CQI auditing as an additional burden, competing with the requirement to report on KPIs and the demands of day-to-day service provision. Some have found it difficult to consider what information, technology, workforce skills, resources and tools are needed to conduct CQI—and to appreciate the potential benefits. The cost of CQI software (and the technical support and workforce development offered by the major providers) is a barrier to the uptake of CQI for some jurisdictions and services.

The emotional toll on staff attempting to introduce CQI into the work of already busy services was a barrier mentioned by some—attempting to bring about change in organisations that are under pressure was challenging and sometimes dispiriting (CQI Facilitators).

A skilled Aboriginal and Torres Strait Islander primary health care workforce is widely recognised as essential for future improvements in Aboriginal and Torres Strait Islander health. There has been commitment to, and engagement of, Aboriginal and Torres Strait Islander Health Workers and other Aboriginal and Torres Strait Islander health professionals, managers and administrators throughout the development and implementation of the ABCD project (and now, One21seventy). There are Aboriginal and Torres Strait Islander CQI Facilitators, practitioners and researchers undertaking CQI or related activities.

However, it has proven to be challenging to build and sustain a sector-wide Aboriginal and Torres Strait Islander CQI workforce. In the interviews and group discussions conducted for the Appraisal Project, the lack of Aboriginal and Torres Strait Islander participation in the governance of, and conduct of, CQI was identified as a barrier to the sustainability and effectiveness of CQI in Aboriginal and Torres Strait Islander primary health care (Aboriginal Health Workers, senior clinician, CQI Coordinator).

Related to, but separate from, the uncertainty about recurrent funding, is the ongoing challenge of recruiting and retaining staff. Among services enrolled in the EHSDI program in the Northern Territory, for example, a number of services found that they were unable to fill positions for which they had received funding. Aboriginal Health Worker roles were particularly difficult to fill. The number of registered Aboriginal Health Workers in the Northern Territory has declined from a peak of 431 in 1999 to 302 in 2008 (AHW Board NT n.d.). This appears to be due to a lack of promotion of the Aboriginal Health

Worker role and a lack of locally based training and professional development opportunities.

One respondent identified a continuing level of suspicion among some health professionals, service managers and some bureaucrats about collecting the data, where it goes and who it belongs to (senior bureaucrat). Another was unconvinced by evidence of the efficacy and effectiveness of CQI, questioning whether it is sufficient to warrant the widespread adoption of CQI across the Aboriginal and Torres Strait Islander primary health care system (public health professional).

Other respondents reported that a lack of follow through on recommendations for change had been a barrier to continued commitment to CQI (CQI Facilitators). One CQI Coordinator had found that the planning and organisational change components of the CQI cycle were the weakest part of the system—pointing out that even if systems assessment or clinical audits had been conducted, there were some services in which there was no clear evidence of routine implementation of the PDSA cycle. She had also found that some clinicians had expressed fear, shame, inertia or ignorance of what to change when the findings of the audits had been reported. Among managers, too, there had been expressions of shame, fear of loss of funding, greater scrutiny and external direction (CQI Coordinator).

Despite a significant financial investment in CQI through Closing the Gap funding and through other program funding, there have been some problems for individual services that need money to backfill positions when staff attend training and that need the assurance of long-term, recurrent funding rather than short-term project funding (CQI Facilitator).

Where funding is insecure and there has been no champion, local services, in particular, struggle to continue their participation in CQI (senior clinician). Fear of funding cuts limited the availability of staff, although there was hope that current positions (in some organisations that are members of the APCC) may be funded by other external organisations in the future. The limited time available within the current funding period to demonstrate its benefits to service providers and to managers—and hence to argue for sustained investment—was a further barrier to future progress (CQI Coordinator).

In some jurisdictions there were no designated, specialist CQI positions, and, in others, the positions that had been created would be unsustainable in the absence of the additional funding provided through Closing the Gap or another federal or state-wide program that included CQI within its requirements. Even where dedicated positions had been established, the fact that they were insecure meant it was impossible to build a system that has the capacity to do everything that is required (CQI Coordinator). High staff turnover meant CQI was an additional workload in already-busy services, and there was a loss of knowledge and skills and a need to rebuild them (clinician, bureaucrats).

What additional support and actions are needed to strengthen the system for CQI?

The actions respondents proposed for additional support to strengthen and expand the conduct of CQI in the core business of Aboriginal and Torres Strait Islander primary health care reflected their perspectives on the barriers that they had identified.

Although some jurisdictions have recognised and acted upon their commitment to CQI in Aboriginal and Torres Strait Islander primary health care with investment of staff time and money, others have not. There is a need for greater effort to encourage sustained commitment from senior managers/Chief Executive Officers in all jurisdictions.

There was almost universal agreement that secure funding (for at least a decade) is vital to strengthen and sustain CQI. Designated recurrent funding was, in the view of almost all respondents, a vital underpinning for the field. There is evidence that such a long-term commitment is needed to bring about the scale and intensity of changes required—in service delivery systems and in professional practice.

There is a need for further clinical and systems audit tools that address priority issues, including, for example, a tool to audit the extent to which primary health care services routinely check and record patients' Aboriginality (or other nationality or cultural grouping) (clinician).

There is a need to increase the capacity of services to use the findings of CQI audits as a catalyst for changes in organisation, delivery, or professional practice to improve the quality of patient care and service delivery. Service managers, administrators, and health professionals need access to effective training and support in the use of processes and tools that facilitate and sustain such changes (CQI Facilitator).

One clinician saw the need for primary health care services (particularly government-managed and private practices) to employ Aboriginal and Torres Strait Islander staff to enhance the cultural appropriateness and sensitivity of services, and to increase Aboriginal and Strait Islander employment opportunities) (clinician).

The development of a harmonised, comprehensive web-based system to capture, store and analyse data for both One21seventy and the APCC would be a very strategic innovation. A single system would allow for an effective and efficient exchange of large amounts of data that can be used for resource allocation and service planning, but it appears that, at present, the APCC system precludes the use of data in this way. This will require further investigation. Improving the accuracy and comparability of patient records and harmonising systems to enhance comparability among services and across jurisdictions is needed.

Secure, recurrently funded, designated CQI positions was one of the most common proposals for what is needed next, supported by training and networking (Coordinators, Facilitator, bureaucrat). Positions are required to provide leadership and active support for the conduct of CQI, including enabling and providing training—for managers, health professionals, mentors and technical staff. Training, using agreed protocols and curricula, could be offered in a variety of modes through organisations, including NACCHO.

The extent of uptake of CQI

The quantitative data available on the national uptake of CQI across the Aboriginal and Torres Strait Islander primary health care sector are limited. However, there are indicators of progress. The voluntary uptake by ACCHSs of Community Improvement Programs, the Healthy for Life Program, the APCC and ABCD was confirmation of this grassroots interest in clinical CQI among Indigenous services (Bailie et al. 2008).

The demand to participate in the Healthy for Life Program exceeded the program budget, with 100 services receiving funding across 61 sites, 80 per cent of which were located in a rural area and 70 per cent of which were ACCHSs (Urbis Keys Young 2006). The ABCD project commenced with 12 ACCHSs in the Top End of the Northern Territory in 2002 and by the end of 2009 was supporting the participation of more than 60 ACCHS from four states/territories, with the tools developed by the project also used by another 60 primary health care services (Bailie et al. 2010).

The APCC Program reported that more than a thousand general practices and 53 Aboriginal Medical Services had participated in one (or more) of the 13 waves conducted between 2005 and 2011. Eighty-three per cent of the Divisions of General Practice participated.

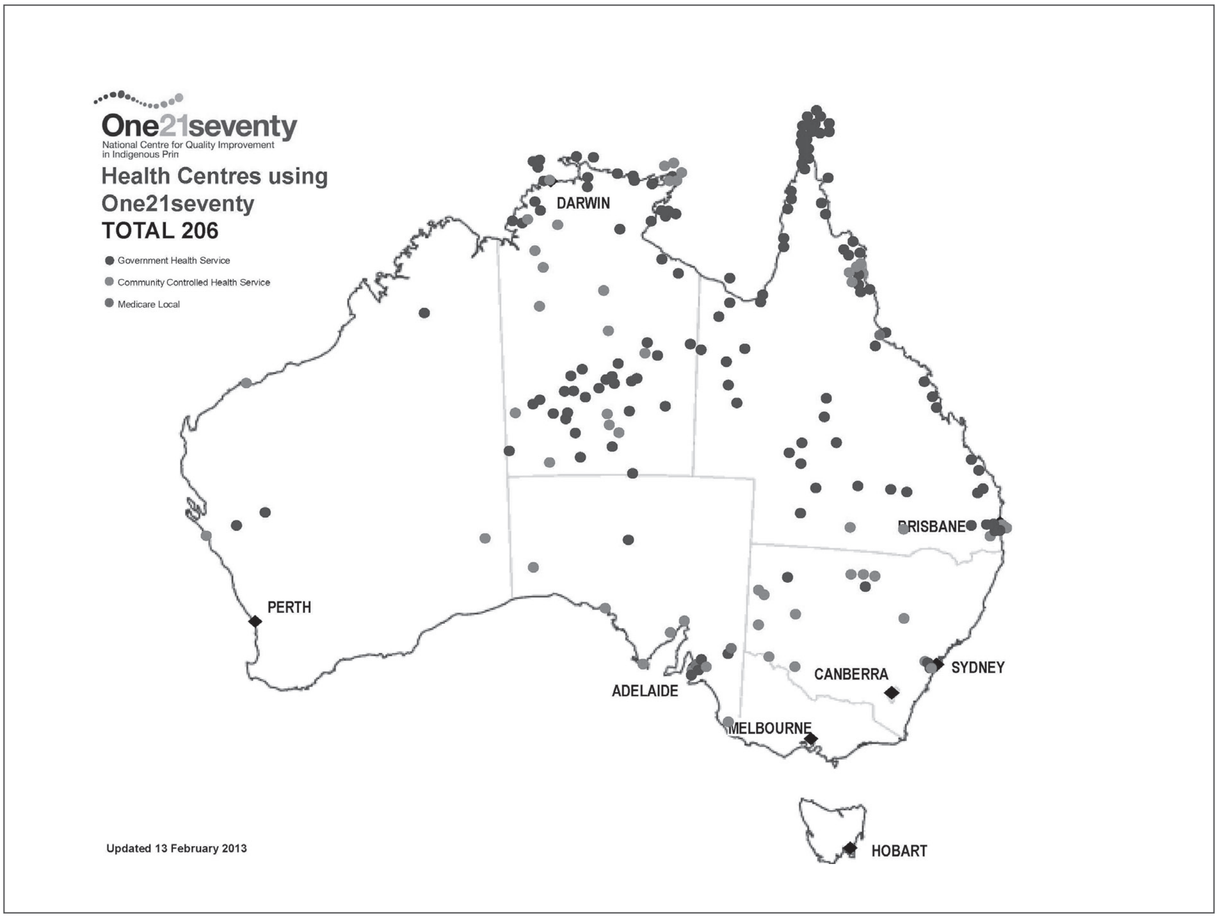
In Queensland QAIHC was a founding partner of the Closing the Gap Collaborative. In 2011 the Collaborative reported that, of 21 ACCHSs with medical clinics in Queensland, 13 (62%) were participating, along with 17 general practices from seven Divisions of General Practice in areas with high Aboriginal and Torres Strait Islander populations (General Practice Queensland & QAIHC 2012).

In Victoria the Clinical Governance in Community Health Project was established in 2006, establishing standards and supporting the conduct of clinical governance audits.

Phillips et al. (2010) reported early adoption of clinical governance in some Aboriginal community-controlled services and that the Kimberley Aboriginal Medical Services had been in the vanguard of implementing clinical governance with a concerted and long-term development of capacity and personnel to drive clinical governance activities (Couzos & Murray 2008).

Analysis of data on the uptake of One21seventy audits and training for the period 2010–2012 showed that, in 2012 200 health centres across the country were registered with One21seventy and were using the tools, training and support to conduct CQI (One21seventy 2012).

Figure 1: Health centres using One21seventy



Uptake of the One21seventy model of CQI has been greatest in the Northern Territory, Queensland and South Australia. In Queensland 75 facilities (both government-managed and community-controlled) in 12 regions were using One21seventy tools and processes in October 2012. Although not all have yet used a clinical audit tool, most are using the Systems Assessment Tool. In the Northern Territory 60–70 per cent of CQI practitioners engaged in the Northern Territory CQI program were using One21seventy in 2012.

Tables 3 to 6 provide detailed information about the use of the One21seventy support services and audit tools in the period 2010–2012.

Table 3: Number of One21seventy Systems Assessment Audits by jurisdiction, 2010–2012

Systems Assessment Audits	2010	2011	2012	Total
Northern Territory	13	31	23	67
New South Wales	1	3	2	6
Queensland	26	71	59	156
South Australia	2	8	3	13
Western Australia	2	2	3	7
Tasmania	0	0	0	0
Victoria	0	0	0	0
Australian Capital Territory	0	0	0	0
TOTAL	44	115	90	249

Source: One21seventy data prepared for the purposes of this report.

Queensland conducted the greatest number of One21seventy Systems Assessment Audits in the period 2010–2012, followed by the Northern Territory.

Table 4: Number of One21seventy clinical audits by jurisdiction, 2010–2012

Clinical audits	2010	2011	2012	Total
Northern Territory	38	125	130	293
New South Wales	26	30	16	72
Queensland	118	246	300	664
South Australia	3	12	23	38
Western Australia	9	10	6	25
Tasmania	0	0	0	0
Victoria	0	0	0	0
Australian Capital Territory	0	0	0	0
Total	194	423	475	1,092

Source: One21seventy data prepared for the purposes of this report.

Queensland primary health care services conducted the greatest number of clinical audits in the period 2010–2012, followed by the Northern Territory.

Table 5: Number of services by jurisdiction by audit tool used in conduct of two or more One21seventy CQI clinical audit cycles, 2010 and 2012

	Child health	Maternal health	Mental health	Preventive health checks	Rheumatic heart disease	Vascular & Metabolic Syndrome management	Total
Northern Territory	14	0	0	12	0	18	44
New South Wales	0	0	0	0	0	0	0
Queensland	30	29	2	26	20	83	190
South Australia	0	0	0	2	0	3	5
Western Australia	0	0	0	0	0	0	0
Tasmania	0	0	0	0	0	0	0
Victoria	0	0	0	0	0	0	0
Australian Capital Territory	0	0	0	0	0	0	0

Source: One21seventy data prepared for the purposes of this report.

The number of services that have conducted two or more One21seventy CQI cycles is a proxy measure of the extent to which CQI has been embedded in the core business of some primary health care services. Although the extent to which services have undertaken two or more cycles is dependent upon many factors, including the time since conducting their first CQI cycle, Table 5 demonstrates that the One21seventy CQI model has begun to be taken up more routinely by some services.

Table 6: Number of people by jurisdiction who completed One21seventy training, 2010–2012

	Number of people
Northern Territory	254
New South Wales	12
Queensland	379
South Australia	89
Western Australia	26
Tasmania	0
Victoria	0
Australian Capital Territory	0
Video-conferencing	29
Total	789

Source: One21seventy data prepared for the purposes of this report.

Table 6 reflects the pattern of uptake of the One21seventy model of CQI indicated in Tables 3 to 5. In November 2012 a further 25 Aboriginal Health Workers in the Northern Territory completed One21seventy CQI training.

Under the auspice of the ABCD National Research Partnership, new guidelines and audit tools have been developed. These have included mapping Aboriginal patients' journeys through their health care (Kelly et al. 2012), and assessing clients' perceptions of the quality of their chronic conditions care (Gooley 2012a and b). Other audit tools are in the process of development.

Where is the system for CQI up to?

The Appraisal Project did not have access to a full range of information on CQI initiatives in Aboriginal and Torres Strait Islander primary health care in each jurisdiction. Nonetheless, taken together with the evidence of the efficacy of CQI identified in the literature, the Appraisal Project illustrates that over the past decade (and more) many core elements (Powell, Rushmer & Davies 2009; Kaplan et al. 2012; Phillips et al. 2010) of a system for CQI in the Aboriginal and Torres Strait Islander primary health care sector have been put in place. Although the elements are not distributed uniformly across the nation, there are encouraging signs of progress.

This system is not based on the use of a single CQI model or on the use of a single set of tools and resources; nor is 'the system' a single organisation. Rather, the system is evolving from the different ways in which the community-controlled health sector and the state/territory health sectors are organising the roll out of, and conduct of, CQI. Several providers of CQI support are being used by the Aboriginal and Torres Strait Islander primary health care sector. Some jurisdictions have opted to use, primarily, a single model of CQI, but in all states and territories individual services have chosen support that is affordable and acceptable—culturally, clinically and administratively—and the CQI is, as a result, more likely to succeed (Powell, Rushmer & Davies 2009). The 'system' comprises three levels—the external environment, the macro-system (federal/state/territory health departments, and NACCHO and the state/territory community controlled affiliates) and the micro-system level (individual primary health care services) (Kaplan et al. 2012).

The domains of a model developed to understand success in quality (MUSIQ) (Kaplan et al. 2012), combined with the domains of the New South Wales health capacity building framework and the core elements of a system for CQI identified by Powell et al., were used as 'standards' against which to compare progress in the development of an organised, structured system for CQI in Aboriginal and Torres Strait Islander primary health care (NSW Health 2001; Powell, Rushmer & Davies 2009). The analysis confirmed that many elements of the system that were also defined as facilitators in the literature and by interviewees in the Appraisal Project are in place. There are policies supportive of CQI in place and opportunities arising from national health care reform. There is a specialist CQI workforce emerging, and services have access to technical support (including training) and to data infrastructure. Some ACCHSs have appointed staff to conduct (or to oversee the conduct of) CQI and/or others have worked in partnership with external groups (General Practice Queensland & QAIHC 2012; Maari Ma Health Aboriginal Corporation 2011; Nunkuwarrin Yunti of South Australia Inc. 2011; Couzos & Murray 2008).

There are organisations to develop evidence-based audit tools, to identify evidence-based, relevant performance indicators and to expand training in the use of new tools.

There are variations among the states and territories in the organisation of their CQI initiatives. Some have based CQI infrastructure in the Aboriginal community-controlled sector; some in the government health sector. Some use One21seventy almost exclusively as the provider for training and support; others use both One21seventy and the APCC models. Some have established state/territory overseeing committees comprising senior managers in the community-controlled and government health sectors and senior clinicians. Others have worked primarily through existing partnerships between the government and community-controlled sectors in their states or territories.

The barriers to the strengthening and expansion of CQI identified by interviewees were similar to those identified in the literature. Unsurprisingly, the most critical of these was the lack of secure funding—and the flow-on effect of this on workforce capacity and sustained action.

But to date, with the exception of some ACCHSs, there has been limited uptake of CQI as a core component of service delivery and clinical care. Most audits have been conducted with a high level of engagement by external Facilitators—albeit, with the support of service managers and clinicians. This is not surprising or disappointing given the time needed for the diffusion of innovations across a population or organisation—it does, though, point to actions that will be needed to enable individual primary health care services to undertake CQI routinely as an element of their core business.

To develop a new method or intervention (i.e. CQI), to identify the technical support and training needed by the organisations and workforces that will be responsible for implementation, to raise it in policy agendas, to achieve policy commitment, and to build the organisational capacity and workforces to deliver it is a major undertaking in the health sector (and for any sector). The extent of the achievement in rolling out CQI in the Aboriginal and Torres Strait Islander primary health care sector to date should not be underestimated. A strong platform has been established and real momentum has been created in some jurisdictions.

There were encouraging examples of service managers using the systems assessment to assist in decision making about improving service organisation and delivery, and inspiring examples of clinicians using clinical audits to improve clinical care. But to date, with the exceptions of some ACCHSs, there has been limited uptake of CQI as a core component of service delivery and clinical care. Most audits have been conducted with a high level of engagement by external Facilitators—albeit, with the support of service managers and clinicians. This is not surprising or disappointing given the time needed for the diffusion of innovations across a population or organisation—it does though, point to actions that will be needed to enable individual primary health care services to undertake CQI routinely—as an element of their core business.

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The learning framework—a contribution to next steps

For the future we added an analysis of the findings of the Appraisal Project using a learning framework (Glasenberg 1999) that identifies three different but integrated types of learning that characterise the processes of change in complex systems. The three types of learning are technical, conceptual and social, and they occur concurrently. This framework helps to reflect on the development of CQI as a method, and about how CQI contributes to the health of Aboriginal people and Torres Strait Islanders, and about how it is incorporated into the practice of health professionals and service managers, and across a whole sector.

Technical learning

Technical learning is the knowledge, skills, tools and resources (including information technology) needed to introduce and use a new ‘method’ or ‘technology’ or deliver a new service. In the case of CQI for Aboriginal and Torres Strait Islander primary health care, there has been a large investment in technical learning over the past decade. The learning has focused on the development of audit tools, guidelines and performance indicators, and on the establishment of systems/organisations to continue to develop new guidelines, tools and performance indicators that are relevant and responsive to the quality improvement needs of the Aboriginal and Torres Strait Islander primary health care sector.

Technical learning has also been necessary to ensure that all Aboriginal and Torres Strait Islander primary health care services have the hardware and software necessary to record and collect accurate, timely data for systems assessment and clinical/health promotion audits. Technical learning has resulted in the establishment of national KPIs (and the National Aboriginal and Torres Strait Islander Health Performance Framework).

Building a specialist, skilled CQI workforce has required technical learning to develop training curricula and support structures, and to set up the support structures needed to prepare audit reports, to assist CQI practitioners and to build systems to provide the workforce with access to the emerging knowledge in the field (e.g. networking and conferences).

In short, in this first decade of development there has been a high level of technical learning among policy makers, practitioners, managers, clinicians and researchers.

For the future: demand will be ongoing for technical learning to develop new guidelines and audit tools, to evaluate the efficacy (and effectiveness) of CQI, and to expand training and professional development for the workforce.

As well, there will be added demand for technical learning to support services and professionals/clinicians to make the changes in policies and practices that are indicated by their CQI audits. This will mean testing theoretical models and evidence and gradually building the tools and resources to support these activities to bring about change within organisations and professional practices.

And there will be demand for technical learning to expand the systems assessment component of CQI by continually updating evidence on the critical attributes and benefits of the Aboriginal and Torres Strait Islander primary health care system as a system (or systems).

Conceptual learning

Conceptual learning focuses on understanding the logic of the relationships between an innovation (such as CQI), its goals, and the steps that are necessary both for the uptake of the innovation and for it to succeed in reaching its goals. Conceptual learning identifies why change is needed, what change is needed and how change will be implemented.

The CQI in Aboriginal and Torres Strait Islander primary health care initiative has been based on two separate, but interdependent, cycles of conceptual learning: (1) a sound understanding of the logic of CQI and its contribution to improved service delivery and clinical practice, and (2) a sound understanding of the link between the governance of CQI, its universal inclusion in the core business of primary health care provided to Aboriginal and Torres Strait Islander communities, and maximising the benefits of CQI for Aboriginal people and Torres Strait Islander people.

The effective application of CQI knowledge needs to be based on conceptual understanding of the logic of the relationship between Aboriginal and Torres Strait Islander health, the accessibility and quality of primary care services, and the CQI cycle. Considerable conceptual learning has been associated with this first cycle.

However, the Appraisal Project has found more limited progress in the second cycle of conceptual learning. The One21seventy model of CQI was developed specifically with and for use in Aboriginal and Torres Strait Islander primary health care and is based clearly on principles of Aboriginal and Torres Strait Islander self-determination. This was not so for the APCC Program and clinical governance model, although both have proven useful in the sector and have demonstrated their commitment to working in respectful partnership with Aboriginal and Torres Strait Islander organisations and people.

However, the Appraisal Project found that the implementation of CQI remained, primarily, in the hands of non-Indigenous CQI practitioners, clinicians and managers. There are structural reasons for this—both the composition of the whole of the workforce in the Aboriginal and Torres Strait Islander primary health care sector, and a decline in the number of Aboriginal and Torres Strait Islander Health Worker positions. In addition, although there has been a high level of commitment to engagement of Aboriginal Health Workers in the conduct of CQI through the One21seventy model, it has proven challenging to recruit, retain and strengthen the Aboriginal and Torres Strait Islander CQI workforce. There are encouraging signs that this is beginning to change—it will, however, require continued focus. We were unable to ascertain the extent to which the APCC and clinical governance models had recruited and retained an Aboriginal or Torres Strait Islander CQI workforce.

The conceptual learning here lies in the distinction between viewing Aboriginal and Torres Strait Islander CQI as the development of CQI tools and processes with and by Aboriginal and Torres Strait Islander Health Workers and/or community input and viewing it as a method and process, the power of which will be enhanced by the active leadership of and engagement by Aboriginal and Torres Strait Islander Health Workers and managers (together with communities) to improve the quality of service delivery and professional practice. Aboriginal and Torres Strait Islander leadership of (or respectful partnership in) the implementation of CQI confers legitimacy on its use, and improves the quality of the CQI process itself by ensuring culturally specific interpretation of data and of actions needed to improve the quality of service delivery and clinical care.

There will be demand for expanded conceptual learning to recognise and give primacy to Aboriginal and Torres Strait Islander perspectives on the attributes and benefits of a high-quality primary health care system (see The Indigenous Health Service Delivery Template; Vos et al. 2010:52) and to determine the standards that will be used in assessing the performance of services or clinicians. The dimensions of health benefits that would be expected of a health intervention from an Indigenous perspective were described for the ACE-Prevention Project (Vos et al. 2010:53). Recent examples of tools enabling Aboriginal perspectives and Torres Strait Islander perspectives on the quality of the care they have received have been developed by Kelly et al. (2012) and (Gooley 2012a and b).

For the future: there will be demand for conceptual learning to identify the ways in which Aboriginal communities and Torres Strait Islander communities, Aboriginal Health Workers and Torres Strait Islander Health Workers, and other Aboriginal and Torres Strait Islander health professionals and service managers learn, adapt and apply innovations.

There will be demand for increasing Aboriginal and Torres Strait Islander leadership of, and active participation in, the conduct of CQI, both to enhance the efficacy of CQI, and to sustain CQI within services.

There will be demand for conceptual learning to identify ways in which the non-Indigenous primary health care workforce can work in respectful partnership with Aboriginal and Torres Strait Islander colleagues and with communities to conduct CQI.

Engaging in the second cycle of conceptual learning is a priority for the future.

Social learning

Social learning deals with the relationships within and between organisations and individuals who are working together on complex problems. Social learning is what takes place when new norms develop within organisations and communities—creating, in the case of CQI, new expectations of what constitutes quality care within services and among professionals, and among community members.

Social learning occurs within teams, among colleagues and, in the case of CQI, between health service providers and communities. The experiences of implementing each model of CQI—APCC (Knight et al. 2012:8-8), One21seventy and clinical governance (Phillips et al. 2010:606)—have demonstrated the importance of social learning in, first, engaging managers and clinicians (including Aboriginal Health Workers) in CQI, in maximising the participation of these groups in CQI processes, in building and retaining a skilled CQI workforce, and in conducting CQI cycles. Phillips et al. found the lack of consensus among primary care workers about the meaning of clinical governance, and limited leadership available in some jurisdictions to explain and demonstrate what clinical governance actually involved, were barriers to implementation. The lack of good information on practice in Australia is a critical constraint (Phillips et al. 2010).

For the future: sustaining and expanding the social learning opportunities that have been created for those engaged in the CQI 'field' will be important—networking, conferences, newsletters, training and web-based interaction, for example.

Opportunities need to be created to increase social learning across the Aboriginal and Torres Strait Islander primary health care sector to reach managers, clinicians, other health workers and communities—to persuade and motivate participation in CQI and to reinforce the benefits of CQI.

Towards a Sustainable System for CQI in Aboriginal and Torres Strait Islander Primary Health Care

The learning framework reaches behind the factors identified as facilitators and barriers to the uptake of CQI and to the formation of an organised, structured system to support and guide CQI in Aboriginal and Torres Strait Islander primary health care. It exposes the interdependence of, and interaction among, the cycles of learning that have informed the development of CQI in Aboriginal and Torres Strait Islander primary health care to date, and suggests some ideas for consideration in the future.

The Appraisal Project was able to capture only a partial picture of the CQI initiatives being undertaken in and by the Aboriginal and Torres Strait Islander primary health care sector. The project has, however, identified many factors that influence the success of CQI in that sector. One characteristic of the system is that it is not dependent upon a single agency, or a single model, or a single delivery system, or a single profession. It has been taken up by the Aboriginal community-controlled health sector, by the government-managed primary health care sector, and by private and not-for-profit providers and it has been implemented by multiple professionals from a variety of disciplines. There is a growing body of research and a growing evidence base, and it has shown itself to be able to contribute to improving the quality of the services delivered to, and clinical care received by, Aboriginal and Torres Strait Islander clients and communities.

A summary analysis of gaps in the current, evolving system and proposals for closing these follows.

Aboriginal and Torres Strait Islander presence in the governance and practice of CQI

The progress

A large number of principles and policies defined by, for example, NACCHO, the Lowitja Institute, the National Health and Medical Research Council, and the ABCD and ABCDE programs affirm the evidence of what works in improving the health of Aboriginal peoples and Torres Strait Islander peoples. Among these, some of the most significant are that governance and decisions about actions to be taken (by, in this case, primary health care services) must be introduced by Aboriginal leaders and Torres Strait Islander leaders, and designed and delivered in respectful partnership with Aboriginal Health Workers and Torres Strait Islander Health Workers and communities (Closing the Gap Clearinghouse 2012).

These are benchmarks of best practice. The One21seventy CQI initiative (and before that, the ABCD and ABCDE programs) has been (and remains) committed to high levels of Aboriginal and Torres Strait Islander engagement—both in understanding the need for, methods of, and benefits of CQI and in its conduct.

The Aboriginal community-controlled health sector in each jurisdiction had been engaged in CQI initiatives—sometimes as the host for a jurisdictional CQI initiative; sometimes as a partner on a state/territory steering committee;

and sometimes investing in and undertaking CQI independently of a formal jurisdictional approach.

The gap

There has been a gap in the level of engagement by Aboriginal and Torres Strait Islander Health Workers in the conduct of CQI. One further vital focus for the next phase of implementation and development will be to add weight and impetus to increasing the extent to which the leadership, strategic direction for and implementation of CQI in Aboriginal and Torres Strait Islander primary health care is in Aboriginal and Torres Strait Islander hands.

Bailie et al. suggest that it is specific features of CQI that make it well suited to the Indigenous sector; the focus on participation, on customers/consumers, and an approach to capacity building that adheres to the values and principles of Aboriginal and Torres Strait Islander peoples are the most important of these (Bailie et al. 2010).

The aim, now, is to make sure that all Aboriginal and Torres Strait Islander primary health care services are able to benefit from its use—and hence, to be sure that all Aboriginal people and Torres Strait Islander people receive the high-quality primary health care services they require to become and stay healthy and well across their life spans.

External environment: Support for the concept and conduct of CQI

The progress

The appraisal confirmed a growing appreciation (among policy makers, service managers, clinicians, researchers and practitioners) of both the need for, and benefits of, using CQI to improve the quality of services (and their organisation and management), of clinical care, and of the health promotion delivered by the Aboriginal and Torres Strait Islander primary health care sector.

The appraisal has confirmed that the core elements of a national system for CQI in Aboriginal and Torres Strait Islander primary health care have been established, and that in most jurisdictions, initial steps have been taken to add to that system.

The National Centre for Quality Improvement in Indigenous Primary Health Care (One21seventy), the ABCD National Research Partnership, the Improvement Foundation, the RACGP and the Lowitja Institute constitute a strong organisational base from which to provide technical leadership for CQI in the sector. Both the community-controlled primary health care sector and the government-managed sector have taken steps in conducting CQI, and most jurisdictions have established committees/forums/partnerships to lead and provide strategic direction for CQI—and some have been able to establish a skilled CQI workforce that is networked to support services across the jurisdiction to conduct CQI. The policy and funding support provided by OATSIH, in particular, has been significant, with those jurisdictions that were able to fund services' registration to receive CQI tools, training, and support from One21seventy (or another provider) demonstrating the greatest progress to date.

The gap

It is relatively early days in the evolution of what is, essentially, a new system that needs to be integrated into the core business of all Aboriginal and Torres Strait Islander primary health care services if it is to achieve its aims. The magnitude of the system required is indicated by the size of the Aboriginal and Torres Strait Islander primary health care sector alone, even before considering the range professions, policy makers and research and teaching institutions that must support and contribute to the changes. There is some uncertainty about the sustainability of the system—about the continuation of the policy commitment and financial support that have been so important to the evolution of the system to date.

In the external environment, and across the macro-systems and micro-systems in the Aboriginal and Torres Strait Islander primary health care sector, there are policy makers, managers and clinicians who have not been convinced by evidence of the benefits of CQI, or who have been confused by the multiple models of CQI, or who have experienced CQI as burdensome or problematic, or who do not believe that CQI is necessary to their service or work. Although there are some Aboriginal and Torres Strait Islander community boards and Health Workers who do feel well informed about CQI and its potential benefits to their communities, there are many who do not.

Macro-system organisational capacity to initiate and conduct CQI

The progress

The macro-systems (national and jurisdictional) that are established already will be vital in the next phase of the dissemination of the system for CQI in Aboriginal and Torres Strait Islander primary health care. The leadership of senior managers, the advocacy of champions, the creation of a culture supportive of CQI, the establishment of systems to provide technical support to services in the conduct of CQI, the building of data infrastructure and the establishment of a designated CQI workforce are all elements in the macro-systems that have been built in jurisdictions to date.

The gap

Not all jurisdictions have yet been able to develop a macro-system that includes each of these elements. Even in those that have been able to do so, the system has not yet been fully integrated into the core business of both the community-controlled and government-managed Aboriginal and Torres Strait Islander primary health care sectors.

Micro-system organisational capacity to initiate and conduct CQI

The progress

Many Aboriginal and Torres Strait Islander primary health care services have been engaged in the conduct of at least one cycle of CQI. Services have elected to use different CQI models. Some have developed cultures supportive of CQI, and have integrated a focus on CQI into their management systems, staff development and accountability systems.

The gap

Although many services have allowed at least one CQI cycle to be conducted and have participated in the reviews of findings and plans for organisational change, they have not yet moved to integrate CQI in to their core business. For some, there has been disappointment that it has not proven to be possible to act on the recommendations of a CQI audit; for others, the implementation of CQI has been demanding of scarce time and resources; yet others have been suspicious of the uses to which the data generated by CQI are put.

These responses are all to be expected in the early phase of the introduction of an innovation to an existing, complex system. A gap will arise between services that do engage in CQI and those that do not if there is not continuing work with community boards, with service managers, with health professionals and administrators to embed CQI within the core business of their primary health care services.

Proposed Actions

The actions below are intended as suggestions for the consolidation and expansion of the use of CQI in Aboriginal and Torres Strait Islander primary health care.

External environment: Sustain and build on existing policy directions, investment and practice

- Sustain federal and jurisdictional policy commitment to, and allocation of, recurrent funding for the elements of the CQI system necessary to sustain and expand CQI in the Aboriginal and Torres Strait Islander primary health care sector.
- Secure investment for at least a decade to maintain and expand the designated, skilled CQI workforce—and particularly, the number and proportion of Aboriginal and Torres Islander health professionals with the capacity to conduct CQI. This is particularly important to facilitate CQI in small ACCHSs and government-managed primary health care services.
- Secure investment for the continued development of standards, protocols and audit tools to address emerging issues.
- Secure investment for research and evaluation to build the evidence for CQI and the factors facilitating its routine implementation in the Aboriginal and Torres Strait Islander primary health care sector.
- Incorporate knowledge and skills for CQI in undergraduate health professional training, and in ongoing professional development.

Macro-system: Expand Aboriginal and Torres Strait Islander presence in the governance and practice of CQI

- Work with NACCHO, peak affiliates and jurisdictional Aboriginal and Torres Strait Islander health partnerships to develop Aboriginal and Torres Strait Islander-defined standards for the governance of Aboriginal and Torres Strait Islander primary health care services and programs, together with protocols and audit tools.
- Conduct CQI cycles to assess the extent to which the Aboriginal and Torres Strait Islander primary health care system meets the standards for governance and identify changes to address gaps.
- Conduct research with Aboriginal Health Workers to identify factors influencing their decisions (to participate or not), and to identify factors that facilitate or hinder their active engagement in CQI.
- Work with NACCHO and peak affiliates to develop a social marketing strategy to inform Aboriginal and Torres Strait Islander community boards and community members about CQI and to create demand for its inclusion in the core business of Aboriginal and Torres Strait Islander primary health care services.

Macro-system: Expand the range of audit tools, resources, and training, and increase access to them

- Test methods to support practitioners to implement the actions arising from the findings of CQI.
- Invest in developing and testing theory-based strategies for organisational change and changes in professional practice.

- Move to harmonise the software platforms, and audit tools and methods, to enable comparability across services and jurisdictions, to reduce duplication of resources and effort, and to facilitate the use of data to report on progress towards meeting KPIs at jurisdictional and national levels.
- Continue to use CQI to enhance the quality of data systems, and the quality of data, and to make data accessible and useable for CQI.
- Sustain the organisations responsible for developing evidence-based audit tools, protocols, training, databases and technical support.

Macro-system: Expand knowledge of, and capacity to conduct, CQI

- Sustain and expand the ABCD National Research Partnership.
- Support the jurisdictions that have, through their partnerships between the community-controlled and government sectors, established a macro-system infrastructure for CQI to retain and build on this. The role of the community-controlled sector must be central.
- Support jurisdictions that have not yet established a CQI macro-system to do so. Build on the experiences (successes and struggles) of other jurisdictions.
- Expand opportunities for training and support in CQI (formal and informal) for Aboriginal Health Workers and Torres Strait Islander Health Workers, and for ongoing professional development.
- Promote engagement of private general practitioners in CQI for Aboriginal and Torres Strait Islander patients.
- Promote engagement of Medicare Locals in CQI for Aboriginal and Torres Strait Islander patients and communities.

Micro-system: Focus on embedding CQI in core business

- Apply evidence-based methods to increase the chances of successful uptake of CQI within primary health care services (Ovretveit et al. 2002).
- Use CQI as a method to assess and reinforce the integration of CQI in the core business of primary health care services.
- Create Aboriginal and Torres Strait Islander community/patient/carer demand for the use of CQI— for example, by demonstrating use of patient care pathway mapping tools (Kelly et al. 2012) or the development of tools to enable Aboriginal and/or Torres Strait Islander clients to assess the quality of the chronic conditions care they receive (Gooley 2012a, 2012b).
- Establish a system requiring services to report publicly on the conduct of CQI and outcomes achieved.

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World Health Organization (WHO) 2005, *Preparing a Healthcare Workforce for the 21st Century*, WHO, Geneva.

Appendix 1: Ovid Medline Search Strategy and Websites Searched

Database: Ovid MEDLINE(R) <January Week 1 2006 to November Week 3 2011> Search Strategy. The search yielded 64 citations.

1	exp Quality Improvement/ (940)	14	10 or 11 or 12 or 13 or 14 (9134)
2	exp Total Quality Management/og [Organisation & Administration] (4410)	15	exp Primary Health Care/ (66820)
3	continuous quality improvement.mp. (1759)	16	exp Chronic Disease/ (207208)
4	Quality Assurance, Health Care/mt, og, st [Methods, Organisation & Administration, Standards] (13638)	17	exp Diabetes Mellitus, Type 2/ (70333)
5	"quality of health care"/ or "outcome and process assessment (health care)"/ or program evaluation/ or quality assurance, health care/ or quality improvement/ or quality indicators, health care/ (152499)	18	exp Kidney Failure, Chronic/ (72419)
6	exp "Delivery of Health Care"/mt, og [Methods, Organisation & Administration] (48798)	19	exp Men's Health/ (727)
7	"Process Assessment (Health Care)"/mt, og, st [Methods, Organisation & Administration, Standards] (620)	20	exp Maternal Welfare/ (5425)
8	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (197305)	21	exp Child Welfare/ (45020)
9	exp Health Services, Indigenous/ (1846)	22	exp Mental Health/ (18037)
10	exp Oceanic Ancestry Group/ (5902)	23	16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 (475386)
11	aboriginal.mp. (4397)	24	9 and 15 and 24 (128)
12	torres strait islander.mp. (351)	25	limit 25 to (english language and yr="2006 – Current")
13	aboriginal community controlled health services.mp. (28)		

Websites searched (6 and 9 January 2012)

- ABCD National Research Partnership Project, Menzies School of Health Research: www.menzies.edu.au/research/services-systems-and-society-0
- Aboriginal Health Council of South Australia (AHCSA): www.ahcsa.org.au/
- Aboriginal Health and Medical Research Council (AH&MRC): www.ahmrc.org.au/
- Aboriginal Health Council of Western Australia (AHCWA): www.ahcwa.org/
- Aboriginal Medical Services Alliance of the Northern Territory (AMSANT): www.amsant.org.au/
- Australian College of Health Service Management (NSW), Health Planning and Management Library, Reading List on Aboriginal Health Services 2011: www.achsm.org.au
- Australian Indigenous Health*InfoNet*: www.healthinfonet.ecu.edu.au/health-facts/population/publications/specific-topics/data-collection
- Australian Primary Health Care Research Institute (APHCRI): aphcri.anu.edu.au/
- The Lowitja Institute: www.lowitja.org.au/
- National Aboriginal Community Controlled Health Organisation (NACCHO): www.naccho.org.au/
- Office for Aboriginal and Torres Strait Islander Health (OATSIH): www.health.gov.au/oatsih
- Onemda VicHealth Koori Health Unit: www.onemda.unimelb.edu.au/index.html
- Primary Care Research Unit (PCRU), The University of Melbourne: www.gp.unimelb.edu.au/pcru/
- Queensland Aboriginal and Islander Health Council (QAIHC): www.qaihc.com.au/
- Tasmanian Aboriginal Health Service (TAHS): www.tacinc.com.au/
- Victorian Aboriginal Community Controlled Health Organisation (VACCHO): www.vaccho.org.au/
- Western Australian Network of Alcohol and other Drug Agencies: www.wanada.org.au/
- Winnunga Nimmityjah Aboriginal Health Service (ACT): www.winnunga.org.au/

Appendix 2: Telephone Interview Schedule

1. To your knowledge, are there CQI programs being used by Aboriginal and Torres Strait Islander primary health care services in your jurisdiction? Which programs are these?
2. How is CQI funded, organised and managed in your jurisdiction? For example, is there a state-wide or regional support system? Or is each service responsible for organising, conducting, and reporting on its on CQI activities?
3. Is CQI working, or not, in your view? How do you decide whether it is working or not?
4. What evidence is there about the results of CQI in your jurisdiction?
5. Why is it working (or not working)? What has been learned?
6. What additional support and actions are needed, in your view, to increase the uptake of CQI and to embed it in the routine work of the Aboriginal and Torres Strait Islander primary health care services and programs?
7. What year did CQI begin in your jurisdiction?
8. Is there a service that you would like to recommend for being promoted in a case study that identifies good practice in the area of CQI?

Appendix 3: Discussion Questions: Northern Territory Aboriginal KPI Collaboratives Workshop and CQI Facilitators' Workshop in Alice Springs, April 2012

1. What organisational capacity (including resources) is in place to lead, oversee, and facilitate the conduct CQI in Aboriginal and Torres Strait Islander primary health care in the Northern Territory?
2. What workforce capacity has been developed to conduct CQI in Aboriginal and Torres Strait Islander primary health care the Northern Territory? To what extent has the capacity of the Aboriginal Health Worker and Torres Strait Islander Health Worker workforce in the NT been built?
3. What IT platforms are being used in the conduct of CQI in the Northern Territory?
4. What CQI audit tools and data management/analysis systems are being used in the NT in the conduct of CQI?
5. What factors influence the availability of and access to the data necessary to conduct CQI effectively?
6. What are some examples of the use of CQI by Aboriginal and Torres Strait Islander primary health care services to improve health service delivery or the health of their patients/clients?
7. What factors facilitate the uptake and routine conduct of CQI by Aboriginal and Torres Strait Islander primary health care services?
8. What are barriers to the routine implementation of CQI by Aboriginal and Torres Strait Islander primary health care services?

Appendix 4: Video-conference and Telephone Interview Schedule, Queensland

1. To your knowledge, are there CQI programs being used by Aboriginal and Torres Strait Islander primary health care services in your jurisdiction? Which programs are these?
2. How is CQI funded, organised and managed in your jurisdiction? For example, is there a state-wide or regional support system? Or is each service responsible for organising, conducting, and reporting on its on CQI activities?
3. Is CQI working, or not, in your view? How do you decide whether it is working or not?
4. What evidence is there about the results of CQI in your jurisdiction?
5. Why is it working (or not working)? What has been learned?
6. What additional support and actions are needed, in your view, to increase the uptake of CQI and to embed it in the routine work of the Aboriginal and Torres Strait Islander primary health care services and programs?
7. What year did CQI begin in your jurisdiction?
8. Is there a service that you would like to recommend for being promoted in a case study that identifies good practice in the area of CQI?

Appendix 5: Discussion Guide for Participants at the National CQI Conference in Alice Springs, May 2012

These early, interim recommendations were presented and discussed with participants at the National Conference on CQI held in Alice Springs in May 2012.

Our findings to date have led us to develop early draft recommendations for 'what is needed next' to sustain and expand CQI in Aboriginal and Torres Strait Islander primary health care.

Please comment:

1. Which ones, if any, do you agree with? Why?
2. Which ones, if any, do you disagree with? Why?
3. What other recommendations do you think should be added?
4. Why?
5. Any other comments or questions?

Proposed draft recommendations:

- Reinforce policy support for CQI
- Continue the current work of CQI, including recurrent funding
- Ensure that current positions are sustainable
- Continue and support team and individual meetings and networking processes, including peer mentoring, team meetings and the national workshops – invest in workforce development
- Consider standardising assessment tools and standardising data collection systems
- Expand ABCD National Research Partnership
- Identify and promote services using best practice CQI.

Discussion Guide for Small Group

1. What has been learned about Aboriginal and Torres Strait Islander presence and control in CQI?

2. What has been learned about the elements of the system that is needed to initiate and conduct, routinely, CQI, and to make changes in clinical care, management, and preventive care;

3. What CQI is being done, where? and

4. What is needed next to increase Aboriginal and Torres Strait Islander presence in and control of CQI?

Appendix 6: Names of People Interviewed and their Jurisdictions

Ms Jo Newham, Project Coordinator, SA ABCD National Research Partnership Project, Aboriginal Health Council of SA Inc.	SA
Ms Nicole McCartney, Policy Officer, Aboriginal Health Division, Western Australian Department of Health	WA
Dr Hugh Heggie, Rural Medical Administrator; Senior Rural Medical Practitioner, Operations & Chronic Disease Portfolio, Remote Medical Unit, Top End Remote Health, NT Department of Health; Lecturer, Flinders University	NT
Adjunct Professor Mick Adams, Indigenous National Coordinator, Program of the Experience in the Palliative Approach (PEPA), School of Public Health, University of Queensland	QLD
Ms Melissa Boag, Senior Project Officer – Primary Health Programs, Aboriginal Health, Department of Health Victoria	VIC
Ms Lorraine Parsons, Manager Programs, Aboriginal Health Branch, Wellbeing Integrated Care and Ageing, Department of Health Victoria	VIC
Dr Christine Connors, Program Leader, Chronic Conditions Strategy Unit, Health Development Branch, NT Department of Health	NT
Dr Peter Larter, Aboriginal and Torres Strait Islander Health Project Officer, Closing the Gap – Aboriginal and Torres Strait Islander Health, Community Health, Medicare Local, Victoria	VIC
Ms Samantha Davidson-Fuller, AMS, Indigenous Health Team Leader & Program Officer, ACT Medicare Local	ACT
Ms June Heather Sculthorpe, AMS – Tacinc	TAS
Ms Jenny Hains, Menzies School of Health Research	QLD
Professor Ross Baillie, Senior Principal Research Fellow, Menzies School of Health Research	QLD
Mr John Shevlin, Assistant Secretary, OATSIH, Australian Government Department of Health and Ageing	ACT/National
Ms Kerry Copley, CQI Coordinator – Top End, AMSANT (Aboriginal Medical Services Alliance NT)	NT
Ms Ru Kwedza, State-wide Coordinator (Primary Health Care Continuous Quality Improvement) Primary Health Care Governance Team, Queensland Department of Health	QLD
Ms Louise Patel, CQI Coordinator, Central Australia, AMSANT (Aboriginal Medical Services Alliance)	NT

Mr John Loudon, CQI Projects Manager, NT Department of Health	NT
Ms Claire Kelly, Regional Coordinator Southern, Queensland Department of Health	QLD
Ms Sonja Street, Senior Project Officer, South West District, Queensland Department of Health	QLD
Ms Daphne Toby, Senior Health Worker, West Moreton District, Queensland Department of Health (identifies as Aboriginal)	QLD
Ms Matilda Christian, Chronic Care Coordinator, Mackay District, Queensland Department of Health (identifies as Torres Strait Islander)	QLD
Mr Nick McBride, Chronic Disease Care Coordinator, Cairns and Hinterland District, Queensland Department of Health	QLD
Ms Tammy Parry, Chronic Disease Strategy Coordinator, Mount Isa District, Queensland Department of Health	QLD
Ms Cherie Dimes, Primary Health Care Quality Coordinator, Mount Isa District, Queensland Department of Health	QLD
Ms Letitia Robinson, CQI Coordinator, Torres Strait and Northern Peninsula District, Queensland Department of Health	QLD
Ms Elisa Capaldi, Chronic Disease Strategy Coordinator, Cape York, Queensland Department of Health	QLD
Ms Morva Wong, Continuous Quality Improvement Coordinator, Torres Strait and Northern Peninsula District, Queensland Department of Health (identifies as Torres Strait Islander)	QLD
Ms Tomie Newie, Program Manager CQI, Torres Strait and Northern Peninsula District, Queensland Department of Health (identifies as Torres Strait Islander)	QLD
Ms Sheryl Hogan, Continuous Quality Improvement Officer, Torres Strait and Northern Peninsula District, Queensland Department of Health	QLD
Ms Tanya Morris, Chronic Disease Strategy Coordinator, Townsville District, Queensland Department of Health (identifies as Aboriginal)	QLD
Ms Kirsty Wiseman, Chronic Disease Strategy Coordinator, West Moreton District, Queensland Department of Health	QLD
Mr Michel Burgum, Chronic Disease Strategy Coordinator, Cape York, Queensland Department of Health	QLD
Ms Anna Cooney, Chronic Disease Strategy Coordinator, Metro South District, Queensland Department of Health	QLD
Ms Nina Cheyn, Health Promotion, Shoalhaven Division of General Practice	NSW

Ms Celia Gallo Ms Eva Williams Ms Bernie Eaton Ms Claire Johansson Ms Tracey Parkes Ms Jo Haddow Ms Clare Pietsch Ms Estrella Munoz Dr Christine Connors Ms Carli Pearson Ms Fran Ronan Ms Anne Bates Ms Robby Leyden	NT
Dr Noel Hayman	QLD
Ms Belinda Hampton	SA

People with whom we discussed CQI in Aboriginal and Torres Strait Islander primary health care

Mr Jason King, CEO, NACCHO	National/ ACT
Ms Donna Ah Chee, CEO, NACCHO	National/ACT
Dr Gary Sinclair, RMP	NT
Dr John Boffa, CAAC	NT
Ms Vicki Chamberlain	NT
Mr Warwick Beever	NT
Dr Liz Moore, Public Health, AMSANT	NT
Ms Melissa Hilton	NT
Ms Merilee Baker	NT
Ms Michelle Dowdon	NT
Ms Veronica King	NT
Ms Britt Hallenrud	NT
Ms Bronwyn Silver	NT

Appendix 7: Evaluation of National CQI Programs in Indigenous Primary Health Care

Program evaluation details	Outcomes evaluated and results reported
Continuous Improvement Projects (CIP) **Administering organisation/s:** Office for Aboriginal and Torres Strait Islander Health (OATSIH); Department of Health and Ageing (DOHA) **Evaluation:** Urbis Keys Young 2006. Evaluation of the Continuous Improvement Projects (CIP) for the Early Detection and Management of Chronic Disease for Aboriginal and Torres Strait Islander People	This evaluation was conducted using review of CIP data and documentation, in-depth consultations with CIP funded services, including a visit to three CIP sites and consultation with Facilitators and other stakeholders. The evaluation notes that it was not possible to solely attribute outcomes to CIP as other programs and opportunities could have contributed to the outcomes achieved. Outcomes were reported across 5 domains: **1) Development of Systems or strategies for targeting, screening or managing chronic disease** a) All services established a chronic disease register of some kind. Where these were in place prior to CIP, registers were improved in quality and being used for more activities than previously. Recall systems were being used to check up on some cohorts, to monitor specialist or allied health input and to monitor patients participating in smoking cessation or weight loss programs b) Specific clinic days devoted to screening c) Mobile outreach screening units d) 'Clinics within the clinic' for chronic disease screening with multidisciplinary staffing; i.e. diabetic educators and podiatrists e) Consistent protocols, checklists, triage procedures, clinical and staff guidelines and resources related to chronic disease management across services f) Increased use of existing resources for screening and management of chronic disease – Medicare Indigenous adult health assessments, diabetic Cycles of Care, Asthma 3+ plans, and Enhanced Primary Care items such as Care Plans; home visits and recall of patients g) Targeted screening at community centres in outlying communities, schools, prisons, women's groups, etc. **2) Established links with other services in the community with a role in chronic disease management or screening** a) MOUs to formalise links with other community services; and formalised regular meetings between services—specialists; mainstream GP services; RFDS; government agencies; family planning, drug and alcohol; Aboriginal women and elders groups; local bodies; peak bodies, etc.—resulting in shared resources, better use of resources, increased attendance and referral appointments **3) Patients with a greater role in self-management** This domain achieved less success overall with most services concentrating on system and organisational structures first, this being the next domain to concentrate on. Some services reported a increase in patient negotiated care plans and courses for diabetic patients

Program evaluation details	Outcomes evaluated and results reported
	4) Staff development and quality control processes a) Staff training has been encouraged to identify skills and capabilities in chronic disease identification and management b) Quality assurance processes have been introduced and/or strengthened across most services: documentation of service protocols and clinical guidelines, processes for orientation and induction of new staff, and training elements included in regular staff meetings and increased emphasis on evidence-based practice. **5) Integration of continuous improvement processes into core service delivery** Results for this domain were variable across services with many barriers and facilitators listed.
Healthy for Life (HfL) Program (CIP was superseded by this program) **Administering organisation/s:** The Office for Aboriginal and Torres Strait Islander Health (OATSIH), Department of Health and Ageing (DOHA) **Evaluation:** Urbis 2009. Evaluation of the Health for Life Program	This evaluation was conducted using : • consultation with all HFL sites funded in the first two funding Rounds (including 15 field visits) • consultation with six services that would be eligible for HFL but have not participated • consultation with 25 key stakeholders in the sector • a general invitation for people and organisations to submit written comments • a review of Program documentation, including data on service activity and Essential Indicators. **1) Data quality across the 11 Essential Indicators** More services were able to report valid aggregated data • Across all indicators (EI 1 to 11), the number of services reporting valid aggregate data increased from 11–27 services in June 2007 to 41–63 services in June 2008 • For chronic disease indicators (EI 9 to 11), the number of services reporting valid aggregate data increased from 11–27 services at June 2007 to 54–61 services at December 2007 and then to 57–63 services at June 2008. Indicators with particularly high levels of reporting include the chronic disease indicators and Adult Health Checks. Most others were reported on by two-thirds to three-quarters of services, only 45–47 services were able to report on risk factors during pregnancy (EI 4) at June 2008. **2) Progress towards health outcomes** The evaluation notes that the following are indicators of service activity (rather than health outcomes as such) but links these activities with improved health outcomes in the future. a) Short to medium term outcomes (1–4 yrs) • First attendance for antenatal care in the first trimester increased from 42.2% in June 2007 to 48.8% in June 2008 • Slight decline in the proportion of women first attending for antenatal care before 20 weeks – from 72.4% to 70.0% • 10% increase per year of adult and child health checks with associated plans for follow-up • 30% improvement in best practice service delivery for people with chronic conditions » *Regular clients with Type II diabetes who had an HbA1c test in the last six months*: inconsistent trend in this indicator, with a 44% incidence in June 2007, dropping to 42.9% in December 2007, rising to a 47.5% incidence in June 2008 and then dropping again to 41.6% in December 2008

Program evaluation details	Outcomes evaluated and results reported
	» *Regular clients with Type II diabetes who had a Blood Pressure (BP) test in the last six months*: this incidence dropped from 61.3% in June 2007 to 53.4% in December 2007. It then rose to 60.8% in June 2008 (a 14% increase in this six-month period) but then dropped again to 55.9% in December 2008 » *Regular clients with coronary heart disease who had a BP test in the last six months*: this incidence dropped from 67.9% in June 2007 to 61.7% in December 2007. It then rose to 67.2% in June 2008 (a 9% increase over the six-month period) but fell again in December 2008 to 65.1%. b) Longer term outcomes (5–10 yrs) • No increase in mean birth weight was achieved • The EI data showed a decrease in the proportion of low birth weight babies from 14.6% in June 2007 to 13.3% in June 2008, (representing a 9% decrease). However, at the same time, the data show an increase in the proportion of high birth weight babies from 1.6% in June 2007 to 5.2% in June 2008 (high birth weight carries its own set of risks, both for the mother and the baby). The proportion of normal birth weight babies has decreased from 83.8% to 81.5% • No reduction in selected behavioural risk factors in pregnancy (eg smoking, harmful alcohol intake) • No reduction in hospital admissions for chronic disease complications • Low range *HbA1c levels in regular clients with Type II diabetes*: the proportion of regular clients in the low-risk range (<=7%) increased from 28.2% in June 2007 to 32.5% in December 2007, representing a 15% improvement during the six-month time period. This proportion held steady at 32.2% in June 2008, but then dropped in December 2008 to 31.0% • Low range *BP test result (less than or equal to 130/80mmHg) in regular clients with Type II diabetes*: In the data at June 2007, June 2008 and December 2008, figures were collected on clients with a blood pressure result *less than or equal to* 130/80mmHg; in the intervening report (data at December 2007), the figures refer to clients with a blood pressure result *less than* 130/80mmHg. Based on the three comparable data points, the proportion of clients with Type II diabetes with a BP test result in the healthy range *fell* from 49.2% at June 2007 to 43.4% at June 2008, and then remained similar in December 2008 at 43.7% • *Low range BP test result (less than 140/90mmHg) in regular clients with coronary heart disease*: The proportion of clients with coronary heart disease whose BP test result was in the healthy range increased from 55.3% at June 2007 to 61.7% at December 2007, and then again to 63.3% at June 2008, representing a significant improvement over this time period. The December 2008 data show a slight settling, back to 62.4%.

Program evaluation details	Outcomes evaluated and results reported
Audit and Best Practice for Chronic Disease (ABCD) and Extension (E) Project **Administering organisation/s:** Menzies School of Health Research in partnership with the Cooperative Research Centre for Aboriginal Health and ATSI Health centres **Evaluation:** Schierhout, G., Brands, J. & Bailie, R. 2010, *Audit and Best Practice for Chronic Disease: Extension Project, 2005–2009: Final Report*, The Lowitja Institute, Melbourne.	This evaluation uses data collected from the use of the quality improvement tools in health centres from 2005 to 2009; data from community survey tools; report templates completed every quarter by regional Hub Coordinators responsible for overseeing implementation in a cluster or group of health centres; and purposively structured dialogue and in-depth interviews with implementers and other key informants. The audits of health centre performance focused on quality of care in relation to services for which there is the most substantial evidence base for effectiveness. These service components were selected on the basis of strong evidence for their relevance to clinical outcomes demonstrated elsewhere and in earlier data from this project. The evaluation notes the potential impact on service delivery by external factors such as federal policy changes and the introduction of MBS item numbers etc, and the disparity in performance by various health centres at baseline in respect to service delivery. **1) Service delivery** Over three rounds of data collection • The delivery of preventative services improved by 13% • The delivery of diabetes services improved by 6% • The delivery of scheduled early antenatal care and postnatal visits also showed improvement at each round of data collection — with a 15% difference between Round 1 and Round 3 for scheduled antenatal care and a 19% difference between Round 1 and Round 3 for postnatal visits. At the level of the health centre, among the 36 health centres with more than three rounds of audit data, 64% of health centres (n=23) increased their overall delivery of preventative health services by 10%+, 5% (n=2) declined by 10%+ and 31% (n=11) showed <10% change. Few services had more than three rounds of data and improvements in service delivery were not associated with the length of time in the program. Some services showed improvement early only to lose those gains later while other services excelled with one particular indicator only, e.g. follow up of abnormal results for proteinuria in the preventative audits. **2) Intermediate health outcomes** For all participating health centres taken together, at baseline, less than one-third of diabetic patients showed adequate glycaemic control at their last visit and less than two thirds had blood pressure below the target 140/90mmHg. For preventative services, the trend data indicated improved follow up on at least some of these measures—some 22% of adults with proteinuria had records of appropriate follow up in Round 1 compared to 39% in Round 2 and 63% in Round 3. However, in some other areas of follow up, little or no improvement was observed.

Program evaluation details	Outcomes evaluated and results reported
Australian Primary Care Collaboratives (APCC) Program **Administering organisation/s:** Improvement Foundation, funded by the Australian Government Department of Health and Ageing **Aim:** To find better ways to provide primary health care services to patients through shared learning, peer support, training, education and support systems.	The APCC Program involved both Aboriginal Controlled Health Services and mainstream General Practice across two phases. Although there is no formal evaluation, the results of the program have been made publicly available at http://www.apcc.org.au/about_the_APCC/program_results/ **Phase 1 Results** Phase 1 practices (phase 1 of the Program was delivered between 2005 and 2007 and was known as the National Primary Care Collaboratives) achieved outstanding results through their work with the Program. Results are relative to baseline data and national aggregates of all core waves as of December 2007 data submission: **Diabetes** • 97% improvement in the percentage of patients with HbA1c levels equal to or below 7% • 132% improvement in the percentage of patients with diabetes whose cholesterol was recorded below 4mmol/L • 101% improvement in the percentage of patients with blood pressure equal to or below 130/80mmHg • 84% improvement in the percentage of patients who have had a SIP claimed for them • 34% improvement on the number of patients on the diabetes register. **Coronary Heart Disease (CHD)** • 28% improvement in the percentage of patients with CHD recorded as being on aspirin medication • 26% improvement in the percentage of patients with CHD recorded as being on a statin medication • 52% improvement in the percentage of patients who have had a myocardial infarction in the last 12 months who are on a beta blocker medication • 50% improvement in the percentage of patients with CHD whose last recorded blood pressure was below 140/90mmHg • 45% improvement on the number of patients on the CHD register. **Access and Care Redesign** • 7% improvement in the percentage of patients seen by a GP on the day of their choice 35% improvement in the practice nurse 3rd available appointment. **Phase 2 Results (2008–2011)** **Diabetes** • The Diabetes Register shows a steady increase overall, as participants in the combined waves have continued to identify and improve the recording of patients with diabetes in their health service databases. • 7.15% improvement in the measurement of Blood Pressure • 9.56% improvement in the measurement of Cholesterol • 10.15% improvement in HbA1c measurement. **Coronary Heart Disease** • The CHD Register shows a steady increase overall, as participants in the combined waves have continued to identify and improve the recording of patients with Coronary Heart Disease in their health service databases. • Improvement of 10.52% for the Blood Pressure measure and 8.69% for the Cholesterol or LDL measure.

Program evaluation details	Outcomes evaluated and results reported
	Access and Care Redesign • The GP Third Available (The number of days at any given time until the third next appointment is available) measure remained relatively stable across all rounds of this wave, hovering at approximately 3 days • The unmet demand measure (The number of people whose appointment demands were not met) has decreased overall, which indicates an improvement in the measure, as health service involved in these combined waves have on average reduced the number of patients whose appointment demands were not met by 5.88. **Chronic Obstructive Pulmonary Disease** • Early variations to the register trend reflect the work participants have undertaken in initially reviewing and updating their COPD registers. A steady improvement of 13.87%* occurred across the wave, reflecting approximately 1,660 additional patients identified as having COPD. This increase indicates that participants have worked towards improving the coding of existing patients with COPD, and identifying and diagnosing additional patients with COPD • Over the course of the wave, there has been a slight improvement in the Smoking Status (Recorded) measure. While the recording of smoking status in patients is improving at a steady rate, the subsequent Smoking Status (Current Smoker) measure is not increasing at the same rate, which indicates more patients are identifying as non or ex smokers • 19.27% improvement in Spirometry measure (approximately 1,769 more people with COPD now having a spirometry recorded compared to the beginning of the wave) • A significant increase in the Pneumococcal Vaccine measure occurred since month 10. A review of the PDSA submissions indicates that a number of health services have focused on recalls and reminders for vaccination prior to the approaching winter months. The trend for influenza vaccine is not as strong; however, accuracy of the number of influenza vaccinations is fallible as many patients receive flu vaccinations at free clinics, which is not recorded in the clinical software. **Chronic Disease Prevention and Self Management** • 14.44% improvement in GP management plans • Waist Circumference Recorded shows a 3.89% improvement • BMI Recorded improved by 5.21% since month 3 • 4.47% improvement in the Smoking Status Recorded measure since the beginning of the wave.

The purpose of this table is to document the reported outcomes from Australian CQI programs in Indigenous Primary Health Care. This table contains those National CQI programs with a formal/independent evaluation or in the case of the APCC Program, where results have been made publicly available.

Although there is substantial analysis as to the factors which facilitate or hinder the implementation and conduct of these programs, this table focuses on the reported effectiveness of these programs; particularly those outcomes pertaining to service or organisational effectiveness and effectiveness in terms of positive impact on patient's health outcomes or engagement with services.

APPENDIX 8a. National CQI Programs in Indigenous Primary Health Care

Program details	Program description
Continuous Improvement Projects (CIP) for the Early Detection and Management of Chronic Disease for Aboriginal and Torres Strait Islander people **Administering organisation/s:** Office for Aboriginal and Torres Strait Islander Health (OATSIH); Department of Health and Ageing OATSIH centrally managed – CIP contracts managed at a state/territory level **Aim:** To enable services to identify, implement and monitor change in service systems and processes using a continuous improvement approach to service development; To identify critical success factors which support a best practice systems approach to chronic disease management in the Aboriginal and Torres Strait Islander primary health care context; and to document systems and processes for the purpose of informing other primary health care services. **National or state:** All states except Tasmania **Years:** Two rounds 2002–2003 and 2005–2006 **Services included:** Aboriginal Community Controlled Health Services (ACCHSs) **Funding:** CIP funds ($3,510,096) allocated to 13 ACCHSs	**Design/model:** Continuous improvement model **Key principles:** • Evidence based and cross discipline engagement to promote reciprocal learning • System focused as opposed to focus on the individual • Emphasis on greater clarity of roles and responsibilities • Incremental improvement over time and change management **Scope of the project including health conditions targeted:** Chronic disease **Key features of the program:** • Community leadership and ownership • Partnerships with other agencies • Early detection and management of chronic disease • Use of decision support and professional development • Self-management support for clients

Program implementation	Program measurement
Implemented – how? Baseline audit, review, process mapping and reporting against action plans – externally facilitated. **Tools used:** The Assessment of Chronic Illness Care (ACIC) and other tools developed through the ABCD Project **Workforce:** 10 independent Facilitators were recruited to assist individual ACCHSs to progress their CIP activities. The Facilitators • provide support and ongoing development opportunities to build the capacity of ACCHSs to undertake continuous improvement activities, to integrate continuous improvement activities into core business and to enhance the delivery of effective services for chronic disease • assist ACCHSs in the documentation of the CIP program • advise and provide feedback to OATSIH on measures to assist with CIP implementation. **Training, education and feedback:** Workshops for ACHS staff to bring services together, share information and develop ways to achieve high quality PHC relating to chronic disease.	**Method of measurement:** • Baseline audit of patient files • Reviews of systems for detection and management of chronic disease • Process mapping (some services only) • Development and reporting on the CIP activity using an Action Plan **Cycles/frequency:** Four strands of initial activity were undertaken by services **Types of data collected:** • Recording of screening, diagnosis and correct documentation relating to patients with chronic disease • Recording and analysis of the flow of patients and information through the service • Recording of an action plan and quarterly reporting against this plan • Additional data was collected via in-depth consultations with CIP-funded services, including a visit to CIP sites and consultation with Facilitators and other stakeholders. **Data management:** Unclear how documentation was collected or maintained. **Evaluation:** 2006 – OATSIH commissioned Urbis Keys Young to conduct an evaluation of the Continuous Improvement Projects (CIP).

Program details	Program description
Healthy for Life (HFL) Program (CIP was superseded by this program) **Administering organisation/s:** The Office for Aboriginal and Torres Strait Islander Health,Department of Health and Ageing **Aim:** Improve health outcomes for Aboriginal and Torres Strait Islander mothers, infants and children; reduce the incidence of chronic disease and enhance the quality of life for Indigenous people living with chronic disease **National or state:** National **Years:** Commenced 2005–06 funded for 4 years **Services included:** Aboriginal Community Controlled Health Services (ACCHSs), state/territory health services, and Divisions of General Practice. **Funding:** HFL-funded organisations receive initial funding of up to $100,000 for single sites (more for partnerships and consortia) to complete Phase 1 activities. Services could apply for annual funding of up to $400,000 for single sites (more for partnerships and consortia) for Phase 2.	**Design/model:** Population based health approach to early detection and management of chronic disease utilising QI to facilitate service development and capacity building. **Key principles:** • Evidence based • Focused on ongoing improvements over time • Services and communities identify their own areas of need and take ownership of responses to these needs. **Scope of the project including health conditions targeted:** Chronic disease and child and maternal health. Mens Health added in the 3rd round (2008) **Key features of the program:** • CQI program that provides some funding for service delivery' rather than 'a service delivery program that involves CQI reporting'. • HFL sites are required to monitor and review their baseline information and • revise their program plan according to changing priorities • Monitoring of activities in phase 1 by governing organisation which approves activities for phase 2 • Comprehensive web-based system for data collection and reporting.

Program implementation	Program measurement
Implemented – how? Plan, Do, Study, Act approach Phase 1 data is collected and used as the basis for a phase 2 proposal which is submitted to OATSIH for approval. **Tools used:** • The Healthy for Life Evaluation and Outcomes Framework • 11 essential reporting indicators **Workforce:** All ACCHS staff plus a national network of Support, Collection, Analysis and Reporting Function (SCARF) Support Officers (SSOs) and Regional Coordinators, as well as a HelpDesk. **Training, education and feedback:** Training was provided to HFL sites to help them develop their capacity to extract, collate and report their indicator data, use the web-based information system and interpret their OSCAR reports. SCARF Support Officers (SSOs) and Regional Coordinators, as well as a HelpDesk provided. SSOs work with services on site, by email and by telephone. The AIHW also provided training and technical support for SSOs, Regional Coordinators and HelpDesk staff (e.g. in relation to data quality and use of OSCAR).	**Method of measurement:** **Phase 1 – Know your starting point – Baseline data** 1. Mapping current activities and service systems that support child and maternal health and the prevention, early detection and management of chronic diseases both within the service and via linkages to other relevant service providers in the region 2. Developing a grounded understanding of the client experience when they enter, pass through and exit the service – this involves the use of quality improvement tools (eg process mapping) 3. Conducting clinical audits to determine the key child and maternal health and chronic disease issues affecting the service 4. Collecting measurements of the 11 HFL 'Essential Indicators'. **Phase 2 – Service delivery and periodic review – sets out** 1. The strategic long-term vision of the organisation in the delivery of child and maternal health and chronic disease care 2. The agreed priority areas for action to bring about improvement 3. Proposed strategies to address these key priorities 4. Roles and responsibilities (who will do what) 5. How the impact of the strategies will be measured 6. Estimated dates for milestones and completion 7. A detailed budget. **Cycles/frequency:** NA **Types of data collected** • Service data including staffing, infrastructure, leadership and management, information capability (use of information systems, recall systems and training) • Clinical data relating to indicators and access, services and management relating to child and maternal health and chronic disease. **Data management:** OATSIH Service Collection Analysis and Reporting (OSCAR) web-based system. This was specifically developed and allows services to input aggregate summary data and access reports. All members of the SCARF team have had input into the design, development and testing of OSCAR. The data are housed at AIHW. **Evaluation:** 2009 – OATSIH commissioned Urbis to conduct the evaluation of HFL.

Program details	Program description
Audit and Best Practice for Chronic Disease (ABCD) and Extension (E) Project **Administering organisation/s:** Menzies School of Health Research in partnership with the Cooperative Research Centre for Aboriginal Health and Aboriginal and Torres Strait Islander primary health care centres **Aim:** Implement a broad based continuous improvement program in Indigenous primary health care service settings which will support these services to assess and improve their systems for the delivery of best practice care for the prevention and management of chronic disease. **National or state:** Commenced in 12 remote Aboriginal and Torres Strait Islander community health centres in the NT and through an extension phase (2005–2009), 63 health centres in 4 states/territories. **Years:** 2002–2005 (initial phase) and 2005–2009 (extension phase) **Services included:** Aboriginal community-controlled, government and non-government organisations, and general practice. **Funding:** Australian Health Ministers Advisory Council through the states and Commonwealth Research Issues Forum; Cooperative Research Centre for Aboriginal health (CRCAH) and the Commission for Safety and Quality in Healthcare.	**Design/model:** Action research **Key principles:** • Indigenous health values and ethics • 'No blame' approach • Action research principles – interactive inquiry; problem solving actions in a collaborative context with data-driven collaborative analysis or research to understand underlying causes enabling future predictions about personal and organisational change. **Scope of the project including health conditions targeted:** Initially focused on prevention and management of chronic disease. Later broadened to include maternal and child health, primary mental health care and Rheumatic heart disease. **Key features of the program:** • Assessment of clinical performance across the scope of best practice for chronic disease care • Dialogue with health centre staff for interpreting results, determining priorities, setting goals and planning action • Comprehensive web-based system for collecting and analysing data and comparing data across sites • Development of HFL essential indicators and refining of these over time • Development of qualitative indicators • Protocols for Clinical Audit.

Program implementation	Program measurement
Implemented – how? Implemented via a plan, do, study, act (PDSA) cycle **Tools used:** Each centre uses at least 3 tools. Clinical audit forms include a range of specific services commonly recommended in best practice guidelines for individual conditions. Both paper-based medical records and computerised information systems are audited. The system assessment tool is based on a scale that incorporates a number of system components which have been found to be important in achieving high quality care for people with chronic conditions. The Assessment of Chronic Illness Care (ACIC) scale has been adapted for use in Indigenous primary care settings – uses six components based on chronic care model. **Workforce/staff:** Involves manages, clinicians, administration staff at the local level and engagement of policy and program managers, researchers, clinicians, and other service providers at the broader level. A Hub Coordinator was located in each region to support and facilitate the execution of the QI cycles. **Training, education and feedback:** Training in the use of tools provided to health centre staff. There are detailed protocols to support the use of the clinical audit forms. Health centre staff interprets findings of the system assessment (strengths and weaknesses) and clinical audit via a workshop. Current systems and patterns of clinical care are examined against best practice guidelines. Priorities are developed for the following year with goals and strategies outlined which aim to meet these priorities.	**Method of measurement** • System assessment • Audits of clinical records. **Cycles/frequency:** Annually – each service had to participate in at least 3 cycles. **Types of data collected:** • Process data, impact and intermediate outcome data collected routinely by project participants. • Qualitative data is also collected via structured reports on health centre progress through the steps in the cycle, and clinical audit and systems development data which is used to assess changes in the quality of health centre systems and clinical indicators. **Data management:** Data is entered into a web-based system which provides real time analysis of health centre performance and allows comparison of performance with other de-identified sites in the area. **Evaluation:** 2010 – Menzies School for Health Research and the Lowitja Institute.

Program details	Program description
One21seventy **Administering organisation/s:** Menzies School of Health Research **Aim:** • To strengthen the CQI capability of the Indigenous primary health care workforce • To ensure sustainability in CQI structures and processes within Indigenous primary health care • To produce and deliver evidence-based products and services that are timely, relevant, responsive and respected for their integrity and quality; and • To be a national leader in Indigenous primary health care CQI knowledge production and translation. **National or state:** National **Years:** Current – established 2009 **Services included:** Health centres get access to the One21seventy cycle and tools through their regional, state or territory health authorities, which contract One21seventy to provide CQI support within their jurisdictions. The One21seventy model has successfully been applied in general practice. **Funding:** Supported by funding from the National Health and Medical Research Council (NHMRC) and the Cooperative Research Centre for Aboriginal and Torres Strait Islander Health (the Lowitja Institute), and by in-kind and financial support from a range of Community Controlled and Government agencies.	**Design/model:** The One21seventy CQI cycle was developed in the Audit and Best Practice for Chronic Disease (ABCD) project. **Key principles:** Key principles based on the ABCD project principles. **Scope of the project including health conditions targeted:** Maternal and child health, diabetes services, kidney disease, hypertension, coronary heart disease and chronic heart failure, preventive services, mental health, acute rheumatic fever and rheumatic heart disease. **Key features of the program:** • Program is conducted by the National centre for Quality Improvement in Indigenous Primary Health Care which is Australia's only organization set up specifically to support CQI in Indigenous primary health care. • Protocols for use of clinical audit tools.

Program implementation

Implemented – how?
Implemented via a 6 step cycle –

1. Agreement
2. Orientation/training
3. Data collection
4. Data analysis and reporting
5. Participatory interpretation, goal setting and action planning
6. Implementation

Tools used:

- Clinical audit tools (across health areas). These are based on best practice and updated regularly. Each audit tool has an accompanying protocol, which provides both a detailed step-by-step guide to the use of the tool and a guide to the evidence base for the tool.
- Systems assessment tool (delivery; information and decision support; self-management support; links with the community, other health services and other services and resources; organisational influence and integration)
- Health centre and community survey.

Other

- Training in use of the tools
- Facilitation of action planning and goal setting
- On-line data services for easy interpretation and reporting
- Other services upon negotiation
- On-line system providing access to tools.

Workforce/staff:
General practitioners/ medical officers and health centre managers and associated staff; CQI Facilitators and Regional CQI Coordinator.

Training, education and feedback:
Training is provided as to how to conduct audits, systems assessment facilitation, use of the web based system, use and interpretation of data and goal setting and action planning.

Clinical audits are recognised as professional development activities.

There is a 2 day foundation course for CQI staff, 1/2 day course for senior clinicians and managers and refresher and topic specific courses are available on request.

Program measurement

Method of measurement:

- Clinical audit
- System assessment

Cycles/frequency:
The One21seventy CQI cycle is implemented over a twelve-month period.

Types of data collected:

- Clinical data across a range of health conditions and required for reporting against jurisdictional key performance indicators.
- Information as to the state of the health centres systems that are required to support good clinical care including delivery systems design, information systems and decision support.
- Information on the operating environment of each local health centre including location, population size, and governance arrangements.

Data management:
Comprehensive web based system which is the central repository and provides:

- Access to audit tools, the web-based information system for data input, immediate data analysis and reporting, and access to training resources;
- Data input for HCCS data, systems assessment data, audit data and health centre goals, and reporting functions;
- Reports, such as cross-health centre/jurisdiction comparisons for those health centres consenting to participate in pooled, and de-identified data analyses and trends over time; and
- Resources including documents and links to the evidence base underlying the audit tools.

Evaluation:
Not reported formally.

Program details	Program description
ABCD National Research Partnership Project **Administering organisations:** Menzies School of Health Research leads the project; Northern Territory Department of Health and Families; Aboriginal Medical Services Alliance Northern Territory (AMSANT); University of Queensland (UQ); Department of Health (QLD); Queensland Aboriginal and Torres Strait Islander Health Council; Curtin University; Aboriginal Health Council of South Australia; Mari Ma Health Aboriginal Corporation; WA Department of Health **Aim:** • To continue to develop the evidence base available to one21seventy and health centres enrolled with one21seventy and to answer key questions relevant to quality improvement in the sector; • To provide opportunities and an institutional base for regional researchers to conduct practice based research that is identified as important by participating services. **National or state:** National – works across states and territories. **Years/still running:** Five-year project commencing 2010. **Services included:** Aboriginal community controlled organisations, regional and state/territory primary health care services or agencies and research. To participate, services need to actively participate in one21seventy and agree to the use of data from the one21seventy website in research. **Funding:** National Health and Medical Research Council; Cooperative Research centre for Aboriginal and Torres Strait Islander Health (The Lowitja Institute) and in kind financial support from a range of community controlled and government agencies.	**Design/model:** Builds on the ABCD Project **Key principles:** Refer to ABCD project and one21seventy for core principles. The partnership is working on the principles of collaboration for the collection, analysis and evaluation of data which will inform policy for CQI in Indigenous PHC. **Scope of the project including health conditions targeted:** Three main areas of focus which together aim to improve the quality of Indigenous Primary Health Care and health outcomes. They are: 1. Identifying factors that underlie variation in health care practice (between regions and between centres) 2. Identifying characteristics of health centres and regions that enable them to deliver high quality care 3. Identifying and disseminating specific strategies that have been found to be effective in improving clinical performance in real world implementation settings and; working with health centre staff to enhance effective implementation of successful strategies. **Key features of the program:** • Evidence based • Builds on QI network linking researchers directly to service providers, managers and policy makers • Effective and efficient exchange of data to facilitate evidence based resource allocation, service planning, system development and innovation • Addresses local needs and achieves local change while simultaneously creating knowledge that can be applied more broadly.

Program implementation	Program measurement
Implemented – how? Participatory action research approach/ PDSA cycles **Tools used:** ABCD Project tools including System Assessment Tool (SAT) **Workforce:** The partnership engages a wide network of clinical staff, health service managers, policy makers and researchers. A regional research officer in each area has the task of working directly with participating health services. **Training, education and feedback:** See one21seventy for basic training available to health centre staff.	**Method of measurement:** See One21seventy. The partnership will utilise aggregated data to analyse variation in practice, factors impacting on the delivery of care based on region and local resources and implement strategies which work in the 'real world' setting. **Cycles/frequency:** N/A **Types of data collected:** Collects a wide range of health performance indicators (clinical and system). **Data management:** One21seventy web based system which allows comparison of service activity with other de-identified services and trend analyses. Reports are generated in word which allows for editing and their use for other purposes.

Program details	Program description
Australian Primary Care Collaboratives (APCC) Program **Administering Organisation/s:** Improvement Foundation funded by the Australian Government Department of Health and Ageing **Aim:** To find better ways to provide primary health care services to patients through shared learning, peer support, training, education and support systems **National or state:** National **Years:** **Current** 2003/2004 – Funded for 3 years 2007 – Funding provided for Phase 2 – delivered to Divisions and member practices by the Improvement Foundation 2009 – Additional funding to IF for national wave on two new topics 2011 – additional funding to extend the program to 30th June 2012 **Services included:** General practice and PHC clinics **Funding:** Funded by the Australian Government in 2003–2004, with funding of $14.6 million for the first 3yr period.	**Design/model:** Adapted from Breakthrough Series Collaborative methodology first developed in USA and applied in several other countries. Series of learning workshops, exchange of ideas, use of Model for Improvement (3 fundamental questions and PDSA cycles. Services work together to rapidly test and implement changes). **Key principles:** • The need for appropriate clinical measures which are reviewed for their relevance and appropriateness for Aboriginal and Torres Strait Islander Health. **Scope of the project including health conditions targeted:** The first 'waves' of the program covered access and care re-design, Diabetes and Coronary Heart Disease (CHD). In the 2009 wave Chronic Obstructive Pulmonary Disease (COPD), and Chronic Disease Prevention and Self Management (CDPSM) were added. The extension granted in 2011 incorporates a national APCC Diabetes Prevention and Management wave, and work with the first tranche of Medicare Locals, and their general practices and health services. **Key features of the program:** • Incremental, rapid and locally relevant improvements across a broad range of clinical and practice business issues • Clinically relevant to ATSI population • Expert panels who develop topics and measurement for these topics • Straight forward and structured • Promotes protected time for participants to undertake QI work.

Source: Information contained in this table was sourced from websites, program brochures and information leaflets and program evaluation reports where these were available.

Program implementation	Program measurement
Implemented – how? Uses a model for improvement based on Plan, Do, Study, Act (PDSA) cycles. Implemented via ‘waves’ which focus on specific topics/ health conditions. **Tools used:** • Topic areas developed by expert reference panels – each topic has a specific aim • Tools used are based on the aim of the topic and the data required to track improvements. Data is collected using the Pen Clinical Audit Tool(CAT). **Workforce:** Requires attendance by one clinician and another staff member from each practice. **Training, education and feedback:** Each wave is made up of an orientation session followed by a series of learning workshops. These events are spread out over approximately a nine month period, with activity periods in between, and a further 9 months of data submission after the final workshop.	**Method of measurement:** 1. Identification phase: a change principle that the improvement will relate to. 2. Thinking phase – 3 fundamental questions • What are we trying to accomplish? • How will we know that change is an improvement? • What changes can we make that will lead to an improvement? 3. PDSA Cycle • Description of the idea • Plan – what, when, who, where, predictions and data to be collected • Was the plan executed, barriers • Record, analyse and reflect on the results • What will you take forward from this cycle. 4. Enter onto APCC web portal The APCC Program introduced clinical measures in 2005 based on advice from Expert Reference Panels (ERPs), which are formed to advise on topic content, including appropriate measurement for each topic. During revision of APCC Program topics in 2008, ERPs recommended changes to some measures as well as the introduction of additional measures, all of which would require programming changes within software that support existing APCC Program reports. **Cycles/frequency:** Health services that join the APCC Program participate in a ‘wave’ which involves approximately 18mths. **Types of data collected:** • Clinical data relating to screening and prescribing across a range of conditions • Access measures for closing the gap • Access and care re-design e.g. open access and days to see a GP or nurse/recall and reminder systems • Patient satisfaction • Health service profile e.g. Types and numbers of staff, levels of training, etc. **Data management:** Web based portal developed for the program. Secure, password protected site which allows for monthly data reporting, conversion of raw data into easy to read feedback, or improvement, graphs and to compare their improvement graphs with those of their Division, their wave, and the national averages, access program resources etc. **Evaluation:** No formal report, but progress data available. See Appendix 3.

Appendix 8b. State and Local CQI Programs in Indigenous Primary Health Care

Program details	Program description
Expanding Health Service Delivery Initiative (EDHSI) **Administering organisation/s:** AMSANT/ NT Aboriginal Health Forum (NTAHF). Governance will be through a CQI Planning Committee which includes representatives from the Forum Partners. **Aim:** To improve health outcomes for Aboriginal people through applying continuous quality improvement approaches, and building a culture of CQI within health service delivery. **National or state:** Northern Territory **Years** 2008–2022 **Services included:** Aboriginal Community Controlled Health Services **Funding:** First two years – $99.7 million	**Design/model:** Identification, action planning, measurement and monitoring **Key principles:** • CQI is part of comprehensive PHC • Corporate and clinical governance is crucial for the delivery of effective PHC • Leadership and management • Involvement of consumers and Aboriginal communities with feedback mechanisms to patients and communities • Learning culture • Use of best practice and standards • Rigorous process to collect and use data for CQI • Multidisciplinary team approach to problem solving. **Scope of the project including health conditions targeted:** Children's health **Key features of the program:** • CQI incorporated into strategic and operational planning • Involves all staff including support staff but with clear documentation regarding roles • Protected time for all staff to undertake CQI and attend orientation, training and workshops • Identification of CQI 'champions'/early innovators • Driven by information – Benchmarking with relevant data from similar services.

Program implementation	Program measurement
Implemented – how? CQI Facilitators to work with primary health care services in each Health Service Delivery Area. **Tools used:** Will utilise tools developed by other CQI programs such as ABCD and the APPCC. Staff will be supported to identify the most appropriate tools and trained to use them. **Workforce:** Will include all PHC centre staff including support staff. **Training, education and feedback:** Training of PHC staff will be undertaken by trained CQI Facilitators. Facilitators will in turn be supported by CQI Coordinators (one each in Darwin and Alice Springs). The Facilitators will provide training in the principles of CQI as well as providing hands on technical support to staff in areas such as data cleansing and analysis. Support also includes recognising and rewarding the achievements of individual staff and the team. Specific communication strategies will include CQI teleconferences for PHC staff and CQI Facilitators. Other modes of communication will include newsletters, input into regional and professional meetings and an email network. Regional workshops will be conducted.	**Method of measurement:** Measurement will include clinical auditing, system assessments, team functioning and goal setting among others. **Cycles/frequency:** Ongoing **Types of data collected:** Data relating to 19 Key Performance Indicators being developed. The CQI Facilitators will work with health services on collecting, analysing and evaluating NT KPI and other clinical health data and ensuring data is reliable and timely. A standardised approach will be developed to review and analyse data. **Data management:** Unclear **Evaluation:** Not to date

Program details	Program description
Aboriginal Health Promotion and Chronic Care (AHPACC) partnership initiative **Administering organisation/s** developed in partnership with the Victorian Aboriginal Community Controlled Health Organisation (VACCHO). **Aim:** To provide access to PHC that is culturally respectful and addresses aspects of health including prevention, promotion and treatment, underpinned by principles of self–determination and collaboration, and endeavours to achieve a quality of life for Aboriginal people, equal with all other Victorians. **National or state:** Victoria – 11 sites **Years/still running:** Commenced 2005 and still running **Services included:** Community health services and Aboriginal community-controlled health organisations (ACCHOs) and also general practice. **Funding:** The Victorian government committed $1.7 million per year in 2005–06. Funding is recurrent.	**Design/model** The AHPACC program logic model specifies six types of activities and eight short-term, four medium-term and one long-term outcome that the program intends to impact upon. **Scope of the project including health conditions targeted:** Chronic disease prevention and management. **Key features of the program:** • Community engagement and advocacy • Partnerships and inter-sectoral collaboration • Workforce development • Organisational change and development.

Program implementation	Program measurement
Implemented – how? AHPACC partnerships deliver services and programs to the Aboriginal community, as well as establishing new settings for services and programs and undertaking community engagement, workforce development, organisational change and building partnerships and inter-sectoral collaboration. **Tools used:** AHPACC CQI tool was developed out of the success factors identified in the *2010–11 Developmental Review of the AHPACC program*. The tool is intended to support planning and prioritising of activity by AHPACC partnerships and may also assist other organisations and partnerships implementing Aboriginal health programs. The tool's format and structure are based on the Victorian government's Integrated Health Promotion (IHP) CQI Tool, which is in turn based on the IHP Resource Kit with a number of additions from the NSW Health Department report 'Indicators to help with capacity building in health promotion' and the Deakin University paper 'A Framework for Strengthening Health Promotion in Community Health'. Some of the more general quality criteria or statements in regards to planning and evaluation are also drawn directly from the IHP CQI tool. **Workforce:** Health workers in community controlled and government-managed primary health care services. Not a specialist CQI workforce. **Training, education and feedback:** Initial training in the use of the CQI Tool has been provided by Victorian Dept of Health.	**Method of measurement:** The program requires funded organisations to undertake activity across six areas • Planning • Service and program delivery • Community engagement • Organisational change and leadership • Workforce development and partnerships • Evaluation and dissemination. **Cycles/frequency:** Quarterly – annually **Types of data collected:** • Progress with program implementation • Number of clients receiving • direct services through • AHPACC • Type of service/s provided • Service coordination • Access to services. **Data management:** CQI tool completed on-Aboriginal Health website at <www.health.vic.gov.au/ aboriginalhealth>. **Evaluation:** 2010–2011 AHPACC Review

Program details	Program description
Closing the Gap Collaborative **Administering organisation/s:** The Close the Gap Collaborative is a partnership between the Queensland Aboriginal and Islander Health Council (QAIHC) and General Practice Queensland (GPQ) supported by the Improvement Foundation (IF). **Aim:** PHC QI initiative designed to help clinical teams work together to reduce lifestyle risk, improve clinical outcomes and help maintain good health for all Aboriginal and Torres Strait Islander peoples in Queensland. **National or state:** Queensland **Years/still running:** The Close the Gap Collaborative started in July 2010. It is envisaged that it will be ongoing. **Services included:** Aboriginal and Islander Community Controlled Health Services (AICCHSs) with medical clinics, general practices from 7 Divisions of General Practice in areas with high Aboriginal and Torres Strait Islander populations. **Funding:** Funding is being sought from governments to further support this initiative from 1 July, 2011.	**Design/model:** Based on Primary Care Collaboratives Program. PDSA (Plan, Do, Study, Act) is the model used for testing the ideas generated by question 3. **Key principles:** • Development of a working relationship with general practices and Divisions of General Practice in Queensland • Based on an internationally accepted model of quality improvement • Promotion of team work, knowledge transfer and innovation within and between services and practices • Sustainability. **Scope of the project including health conditions targeted:** Maternal and child health and chronic disease **Key features of the program:** • Flexible orientation and participation for services/practices • Seamless data collection and submission • Short, focused quality improvement cycles with fully flexible implementation that link well with improving daily practice, i.e. small areas that may need improvement that are readily understood by staff at all levels; rapid turnaround that allows momentum to build • Clinical themes for quality improvement selected by a steering committee in keeping with local priorities and national policy • Automated extraction and transmission of de-identified clinical data to the web based information system • Monthly data reports to monitor progress accessible to services/practices through a web portal • Inclusion of data for all clients, not just samples • Comparisons of service/practice data with averages for all services/practices • Reports that are very visual which allows easy presentation to staff at all levels • Data can be interpreted in the context of a global understanding of the service's/practice's clients including access/coverage, numbers of regular clients, disease prevalence etc3 • An associated software package allows services and practices to 'drill down' to see which clients need which interventions • Team work, knowledge transfer and innovation within and between services and practices is promoted and developed, all involving Aboriginal Health Workers and other Indigenous staff • The Collaborative's structures and processes are themselves subjected to ongoing review and improvement.

Program implementation

Implemented – how?
The Collaborative Model for Improvement provides a framework for developing, testing and implementing changes to improve quality.

Tools used:
QAIHC Core Indicators

Aboriginal and Torres Strait Islander adult and child health assessments

Workforce:

- Quality improvement support Coordinators based at QAIHC, GPQ and the IF
- A network of support officers working 'at the coalface' in services, Divisions and practices.

Training, education and feedback:

- 2-day learning workshops every 6 months
- Face-to-face and web based seminars for training (and in future, orientation);
- An electronic discussion forum hosted by the IF
- A monthly electronic newsletter that includes 'hot tips'.

Program measurement

Method of measurement:
The model breaks down the change effort into small, manageable chunks which are then tested to ensure that things are improving and that no effort is wasted. It consists of two equal parts; the first part, the "thinking part", consists of three fundamental questions:

1. What are we trying to accomplish?
2. How will we know that a change is an improvement?
3. What changes can we make that will result in an improvement?

Cycles/frequency:
Ongoing

Types of data collected:
Data relating to a range of QAIHC Core Indicators including

- Numbers of clients and episodes of care
- Prevalence
- Health assessments
- Management plans
- Clinical measures
- Antenatal care access
- Birth weights and pre-term births, etc.

Data management:
A fully functioning information platform with electronic extraction, transmission, analysis and graphic display (including comparisons with other services and practices) of de-identified, routinely collected client clinical data to measure effectiveness.

Evaluation:
Has been evaluated by QAIHC.

Program details	Program description
Counting on your community pilot project **Administering organisation/s:** Victorian Aboriginal Community Controlled Health Organisation (VACCHO) **National or state:** Victoria	**Project is under development** Will potentially use of the OCHRE Streams web portal as a way of using and sharing health service data with the primary purpose of providing support for VACCHO members in their use of their own health service data. The pilot project would support continuous improvement activities around data quality and use for service provision and planning.
The Western Australian Alcohol and Other Drug Sector Quality Framework. **Administering organisation/s:** Quality Framework Steering Committee comprised of alcohol and other drug (AOD) sector representatives, the Drug and Alcohol Office (DAO) and the Western Australian Network of Alcohol and other Drug Agencies (WANADA). **Aim:** To assist program and service development to better meet the needs of consumers and improve outcomes. **National or state:** Western Australia **Years/still running:** 2004–Current **Services included:** Diverse range of service settings **Funding:** Funding from a number of funding bodies in 2011–12 including the Drug and Alcohol Office, the Office for Aboriginal and Torres Strait Islander Health (OATSIH), the Australian Government Department of Health and Ageing, LotteryWest, and the Foundation for Alcohol Research and Education.	**Design/model:** Plan, Do, Check and Act cycle of CQI **Key principles:** • Whole of system perspective—inclusion of consumers, staff and management in improvement processes at an agency level and extending to broader inter-relationships, collaboration and integration between organisations, stakeholders and funders. • Shared ownership of the QF and collective commitment to its success. **Scope of the project including health conditions targeted:** Scope includes program and service development (drug and alcohol) to better meet the needs of consumers and improve outcomes. The framework is designed to be adapted to meet the needs of a diverse range of settings. **Key features of the program:** • Incorporation of a variety of accreditation models that agencies currently use or could • use in the future • Promotes reflective practice on a sector-wide level • Enhances integration options • Supports flexibility and diversity and • Enhances a broad promotion of the sector, aiding referral and through care.

Source: Information contained in this table was sourced from websites, program brochures and information leaflets and program evaluation reports where these were available.

Program implementation	Program measurement
Implemented – how? Plan, Do, Check, Act cycles **Tools used:** Quality Framework includes: 1. The Performance Expectations (PEs) – a set of statements which form the core required areas for Continuous Quality Improvement in the Quality Framework – these have been mapped against core standards or systems of accreditation 2. Self assessment – electronic format 3. Guidelines and support to meet the performance expectations – suggestions for this provided but services may adapt these to meet their own needs. 4. Policy and procedure templates – support materials **Workforce:** WA Alcohol and other Drug Sector Agency staff and management, including those who work in Aboriginal Community Controlled Organisations, Aboriginal Medical Services (AOD incorporated), and DACs. **Training, education and feedback:** Quality Framework Implementation Support Project + interpretive guides and peer reviewer training.	**Method of measurement:** Expectations regarding • consumer focus • evidence based practice • staffing development and support • organisational governance and management • financial management • risk management. **Cycles/frequency:** Three-yearly **Types of data collected:** Standard on Culturally Secure Practice (Alcohol and Other Drug Sector) – define target population; DDCAT, Comorbidity Capacity Building **Data management:** AOD Knowledgebase **Evaluation:** Not available

About the artist

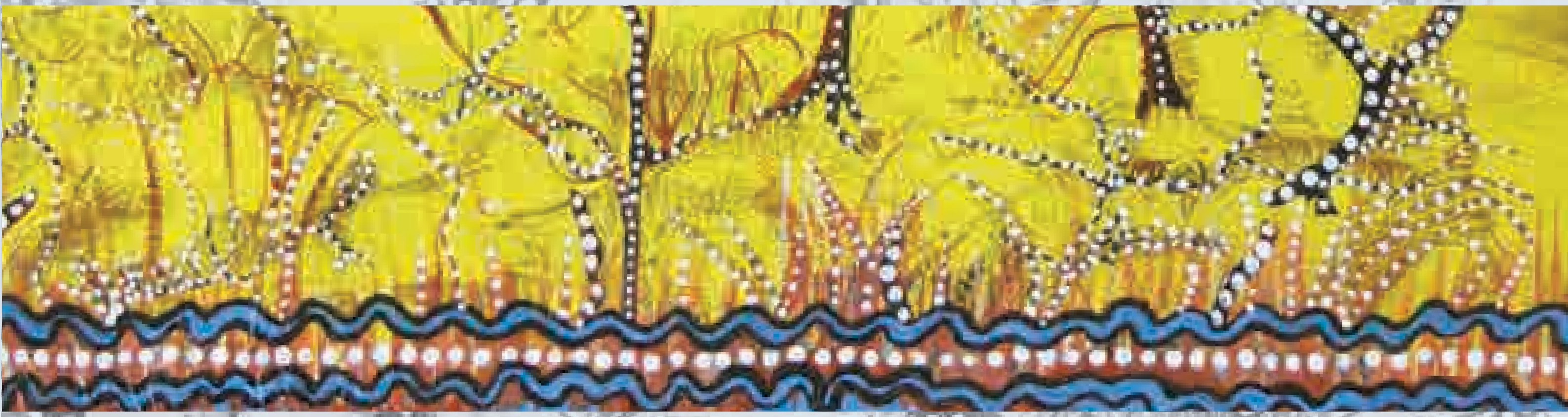
Sandra (Sandy) Kaye Angus is a strong Australian Aboriginal woman who was born in Redcliffe, Queensland on 13 February 1954; her totem is the sand goanna and her traditional mob is Wiradjuri. Sandy's family is linked to the town Narrandera in South West New South Wales through her mother's side and directly from both her maternal great-great-grandparents, Samuel and Rose King. Sandy was born a salt-water 'Murri' through her birthplace, and she remains linked to the sea and to the bush through her mother's family and through her family's Aboriginal heritage.

Recently, Sandy moved closed by to Murrumba Downs, in South East Queensland, with her husband, Alan Berris. She has four children (Nathan, Ryan, Courtney and Jordana) and ten grandchildren. Besides being a mother and grandmother, making authentic Aboriginal arts and crafts has provided much satisfaction for Sandy. She continues to create paintings on canvas, recycled timber, driftwood or any other natural artifacts, as well as pottery, woven baskets, and ornamental fabric floral art displays.

Sandy worked in the health field for more than 20 years, first as a mothercraft nurse, then as one of the first Aboriginal Health Promotion Officers in Queensland, retiring voluntarily from her role as Senior Indigenous Project Officer with Queensland Health in 2010.

In 1994, Sandy graduated with a degree in Social Science (Human Services) from the Queensland University of Technology (QUT). In 2004 she was awarded the QUT Alumni Award for human services. Sandy has worked at the University of Sydney developing the Graduate Diploma in Indigenous Health Promotion; she has also worked for many years at Edith Cowan University, with the Menzies School of Health Research, and, more recently, as part of the University of New South Wales team to research and prepare this report for the Lowitja Institute.

In all of her roles, including that of an artist, Sandy has aimed to remove barriers to health services for all women, especially for Indigenous women and their families by advocating principles of community development and best practice. This includes building social capital in Indigenous communities Australia-wide. Since retiring, Sandy has returned to what she has loved all her life: creating contemporary authentic unique Aboriginal art.



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